Water and Waste Water Prospectus

30 October 2018
The Canberra Region Joint Organisation (CRJO) Water and Waste Water Prospectus presents a summary of priority Water and Waste Water Infrastructure Projects within the Canberra Region, which require funding from NSW State and Federal Governments.

A total of 56 Water and Waste Water Projects are included in this Prospectus; submitted by the eleven councils who are members of the CRJO. Project information was submitted by the Engineering, Infrastructure or Operations Department within each council.

The eleven councils who are members of the CRJO include: Queanbeyan Palerang Regional Council, Snowy Monaro Regional Council, Snowy Valleys Council, Yass Valley Council, Upper Lachlan Shire Council, Wingecarribee Shire Council, Hilltops Council, Goulburn Mulwaree Council, Eurobodalla Shire Council, Bega Valley Shire Council and Wagga Wagga City Council.

Information supplied in this Prospectus indicates that the estimated total cost to take the 56 projects to the “Next Stage” = $23.4M. The estimated total cost to take all projects to “Shovel Ready” = $60.6M. The estimated total cost to take all projects to “Commission” = $905M.

The Prospectus provides a breakdown of the estimated total cost of projects within each council, costs to each stage, external funding required and council contributions. Full project details are communicated through a 2-page summary on each Project. The Project Delivery Framework provides an overview of all projects, indicating the progress and costs for each project.

Projects have been prioritised by the councils according to timeframes and the category under which they fall; "Safe and Secure" associated with issues around water and waste water that impact the community’s health and safety, including WHS and environmental impacts, and; "Regional Growth" associated with water and waste water assets that require work to facilitate development and economic growth.

Priority 1A > falls under Safe and Secure Guidelines > project duration 1-3 years.
Priority 1B > falls under Regional Growth of Significance > project duration 1-3 years.
Priority 1C > falls under Regional Growth Guidelines > project duration 1-3 years.
Priority 2A > falls under Safe and Secure Guidelines > project duration 4-10 years.
Priority 2B > falls under Regional Growth of Significance > project duration 4-10 years.
Priority 2C > falls under Regional Growth Guidelines > project duration 4-10 years.

Cr. Rowena Abbey
Chair, Canberra Region Joint Organisation
Rowena.Abbey@yass.nsw.gov.au
0411 251 018
Canberra Region Joint Organisation

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Total 56  $23,388,530  $60,591,530  $904,930,155

*Information provided indicates that some costs are TBD.
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### Key - Status of Project Funding Definitions

- **Green**: Under preparation, Funding Required
- **Yellow**: Submitted, Awaiting Funding
- **Blue**: Completed
- **Red**: Declined Funding* (Funding denied by State Government. Council chose to 100% self-fund the project due to the critical nature of the infrastructure.)
## Project Priorities

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### PRIORITY 1 (1 - 3 years)

- **Safe and Secure Guidelines (A)**
- **Regional Growth of Significance (B)**
- **Regional Growth Guidelines (C)**

### PRIORITY 2 (4 - 10 years)

- **Safe and Secure Guidelines (A)**
- **Regional Growth of Significance (B)**
- **Regional Growth Guidelines (C)**

### COMMENT

- **Project is required to update aged infrastructure and protect public health.**
- **Project is required to allow growth as current supply has reached its capacity with current population.**
- **Project is required to allow growth as current supply has reached its capacity with current population.**
- **Project is required to improve water quality to meet ADWG.**
- **Project is required to improve water quality and improve level of service to backlog areas. Project is required to improve water quality and improve level of service to backlog areas.**
- **This project is required to allow for further expansion to allow for future developments.**
- **This project is essential in order to unify water and sewer operations and allow for remote monitoring to occur. Remote monitoring allows for greater control of operations which, in turn, prevents any threat to the community’s health.**
- **This project is essential to prevent overflows and potential risks to the community health in peak times. This project is necessary to allow for future growth as the current pump station does not currently have additional capacity and overflows in peak times.**
- **This project is necessary to allow for future growth/development and demand on the Barry Way Reservoir.**
- **Project is required as current infrastructure has deteriorated over time and has become a WHS issue and poses risks to Council.**
- **Project is required to get a thorough understanding of the best method to improve water quality and how this can be achieved.**
- **Project is required to support growth in Kalkite and the need to upgrade existing infrastructure.**
- **Project is required as current infrastructure has deteriorated over time and has become a WHS issue and poses risks to Council. Project is required to also support regional growth and anticipated development due to Snowy 2.0.**
- **Project is required to enable hazards identified in the 2014 IWM to be addressed through upgrades to infrastructure. These hazards involved water quality risks from unprotected and unfiltered supply sources.**
- **Project is required as the area is likely to experience a high demand for growth and is necessary for future developments.**
- **Project is required to improve water quality to meet ADWG.**
- **Project is required to allow further expansion to allow for future developments.**
- **Project is required as current infrastructure has deteriorated over time and has become a WHS issue and poses risks to Council.**
- **Project is required to allow for future potential growth and enhance living standard.**
- **Project is required as current infrastructure has been identified as high risk and has become a WHS issue and poses risks to Council. Also required to ensure public safety is maintained.**
- **Project is required as yield analysis has found that the current source does not meet NSW Office of Water guidelines for Security of Supply. As such, further growth is not supported.**
- **Project is required as current on-site treatment systems have risk of contaminating groundwater.**
- **Project is required to enable growth of the region, which is forecast to be 30,000.**
- **Project is required as there is limited supply of water to residents in dry areas.**
Project Priorities

<table>
<thead>
<tr>
<th>Project</th>
<th>Council</th>
<th>Priority</th>
<th>Significance</th>
<th>Health Risks</th>
<th>On-site Issues</th>
<th>Growth of Regional</th>
<th>Growth of Regional</th>
<th>Comment</th>
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<tr>
<td>Yass Water Treatment Plant Water Quality Improvement</td>
<td>YVC</td>
<td>PRIORITY 1</td>
<td>1 - 3 years</td>
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<td>Project is required as water quality is currently poor and requires significant treatment to meet ADWG.</td>
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<td>WSC</td>
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<td>Project is required as on-site systems are failing and have created significant health risks and environmental issues.</td>
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<td>Project is required as current infrastructure is at capacity. As such, nutrient capacity of the plant is expected to exceed current licence.</td>
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<td>Project is required as water is of poor quality and requires treatment to meet ADWG.</td>
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<td>Project is required as water is of poor quality with excessive natural fluorides and dissolved solids and requires further treatment to meet ADWG.</td>
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<td>Project is required as existing onsite systems are failing and have created significant health risks and environmental issues.</td>
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<td>Southern Tablelands Water Reuse Infrastructure Scheme Stage 2 (Goulburn Reuse Scheme)</td>
<td>GMC</td>
<td>PRIORITY 1</td>
<td>1 - 3 years</td>
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<td>Project is required as implementation will reduce reliance on the potable water supply in Goulburn.</td>
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<td>Project is required to ensure a secure and reliable water supply that meets ADWG for quality and reduces environmental risks.</td>
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<td>Project is required as current treatment does not meet environmental standards and upgrading will allow for reuse of discharge.</td>
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<td>Project is required to increase efficiencies and improve operations of the Raw Water Dam at Marulan.</td>
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<td>Project is required to eliminate the need for septic tank to enable the reduction of health-based risks to the community and pollution of the Clyde River.</td>
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<td>There is an increased demand in peak holiday periods and due to commencement of Water Sharing Plans, alternate arrangements are now required to ensure an adequate, and secure water supply at these times.</td>
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<td>Eurobodalla Southern Water Treatment Plant</td>
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<td>On construction of the additional storage in previous project, treatment will be required to meet requirements of ADWG.</td>
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<td>Project is required to eliminate the need for on-site (septic tank) systems to enable the reduction of health-based risks to the community and pollution of the Wollaga Lake.</td>
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<td>Towns experience significant growth in summer months, and as such, require a sustainable and adequate sewerage system to meet this demand.</td>
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<td>Merimbula Sewage Treatment Plant and Deep Ocean Outfall - State Significant Infrastructure</td>
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<td>Lake Albert Water Harvesting</td>
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<td>Project is required improve the facility as it is used for recreational and sporting activities and has opportunities to contribute to the economic growth of the region</td>
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<td>49</td>
<td>Kooringal Filtration Basin</td>
<td>WWCC</td>
<td>Project is required improve water quality as the Lake currently experiences blue-green algae outbreaks. Project is required improve the water quality in the Lake as it is used for recreational and sporting activities and has opportunities to contribute to the economic growth of the region</td>
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<td>Lake Albert Vegetation Filtration</td>
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<td>51</td>
<td>Tatton Drain Weir Wall</td>
<td>WWCC</td>
<td>Project is required to assist in mitigating major flood events. Project is required improve the facility as it is used for recreational and sporting activities and has opportunities to contribute to the economic growth of the region</td>
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<td>Kooringal Solar Farm Feasibility</td>
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<td>Project is required to increase efficiencies and improve operations of the Kooringal Sewage Treatment Plant and reduce financial burden. The project would also have environmental benefits.</td>
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<td>Glenfield Road Corridor Upgrade. Stage 1 - Drainage Remediation. Stage 2 - Road Widening</td>
<td>WWCC</td>
<td>Project is required as current development is causing significant issues with excessive runoff.</td>
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<td>Adaminaby Water Supply System Upgrade and Extension to Backlog Areas</td>
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<td>7</td>
<td>Unified Telemetry System for SMRC - Option Study and Concept Design</td>
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<td>Kalkite Street and Leesville Sewage Pump Station Augmentation</td>
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<td>Delegate Water Supply Intake Pump Station, Groundwater Option and Associated Infrastructure</td>
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## Summary of all Projects

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<td>Village Groundwater Investigation</td>
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<td>Eurobodalla Water Supply Southern Storage</td>
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**Total** $905M

* This is not the final “Cost to Commission”, this cost has been supplied as the “cost to next stage”. The “Cost to Commission” is TBD.
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*Numbers on map represent internal project number

**These projects are taken from the Water and Waste Water Prospectus
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### Acronym Description

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Queanbeyan Sewage Treatment Plant Upgrade Project

**Design and construct a new Queanbeyan Sewage Treatment Plant at an estimated cost of $136M (P90), with a project duration of 52 months.**

**Project Brief**

The Queanbeyan Sewage Treatment Plant is deteriorating from approximately 85 years of use. The updated plant will provide appropriate level of treatment and disposal of waste, helping to protect public health and the environment while remaining affordable to the community. The STP is located at Oaks Estate, ACT. ACT EPSDD and the NCA regulate in terms of environment, planning, and discharges to watercourses. The NSW Department of Primary Industries – CLAW regulates STP operations. A Masterplan (Options Study) was completed in 2016 and recommends a design for a 60,000 EP STP on the existing Queanbeyan STP site to cater for growth in the catchment over the next 15 years. The new facility must meet requirements of both ACT and NSW EPA and other regulatory bodies to ensure water quality, phosphorous and nitrogen requirements are met and improve discharge into the Molonglo River and Lake Burley Griffin.

**Rationale for Investment**

QPRC prepared a Masterplan which reviewed the condition of the STP future growth in Queanbeyan and alternative options for upgrading / replacing the current STP. The recommendation from the masterplan was to construct a new STP. The masterplan was endorsed by council and NSW CLAW.

**Benefits**

- A modern facility that will service Queanbeyan and Oaks Estate (ACT) for the next 50 years.
- Adaptable design for future users.
- Development of IWCM Strategy.

**Alignment with Regional Strategies**

QPRC IWCM (in progress).
QPRC Community Strategic Plan.

**Location:** Queanbeyan
Queanbeyan Sewage Treatment Plant Upgrade Project

Stage: Plan
Concept design

Now: Under preparation, Funding Required

Approval: SSWP - Council

Status
Completed identification phase. Progress is at 30% for Plan. STP is procuring Design Consulting Services and Project Management Services to assist in this phase.

To next stage
Cost $7.9M
Time 1.5yr

To shovel-ready
Cost $16.6M
Time 22mo

To commission
Cost $136M
Time 52mo

Work underway
Plan

Next body of work
Concept Design

Next steps
1) Engage project manager.
2) Engage designer.
3) Designer to complete basis of design and concept design.

Council Contact:
Derek Tooth
Derek.Tooth@qprc.nsw.gov.au
0408 430 739
Bungendore Water Supply Augmentation

**Project Brief**

This project is for the investigation, design and construction of an augmentation to the Bungendore Water Supply System, including the sourcing of an additional 1 gigalitre of water.

**Rationale for Investment**

The population of Bungendore has reached the capacity of current water extraction licenses and water source (alluvial). To allow the continued increase in population, an additional gigalitre of water must be found.

**Benefits**

The proposed project will provide water security to allow continued development of Bungendore.

**Alignment with Regional Strategies**

Bungendore IWCM.
Bungendore Water Supply Augmentation

**Stage:**
- Plan
- Site Assessment

**Now:** Under preparation, Funding Required

**Approval:** SSWP - Council

**Status**

**Plan**

**To next stage**
- Cost $1M
- Time 2yr

**To shovel-ready**
- Cost $2M
- Time 3yr

**To commission**
- Cost $12M
- Time 52mo

**Work underway**
Plan - Options Assessment

**Next body of work**
Site Assessment

**Next steps**
1) Finalise Management Plan.
2) Complete Options Analysis.
3) Finalise Site Assessment.

---

**Council Contact:**
Derek Tooth
Derek.Tooth@qprc.nsw.gov.au
0408 430 739
Bungendore Sewage Treatment Plant Augmentation

**Project Brief**
Design and construction of an augmentation to the Bungendore Sewage Treatment Plant. The expansion of capacity to the plant needs to meet the development needs of Bungendore.

**Rationale for Investment**
The current capacity of the Bungendore STP limits the development potential for Bungendore.

**Benefits**
The proposed project will provide augmentation of the existing STP to provide safely treated effluent disposal for the expansion of Bungendore.

**Alignment with Regional Strategies**
Bungendore IWCM.

**State:** Monaro  
**Federal:** Eden Monaro

**Cost:** $12M  
**Duration:** 52 months

**Location:** Bungendore
# Bungendore Sewage Treatment Plant Augmentation

<table>
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<tr>
<th>Stage:</th>
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<th>Site Assessment</th>
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<tr>
<td>Now:</td>
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<td>SSWP - Council</td>
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<tr>
<td>Approval:</td>
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</tbody>
</table>

## Status

**Plan**

### To next stage
- Cost: $1M
- Time: 2yr

### To shovel-ready
- Cost: $2M
- Time: 3yr

### To commission
- Cost: $12M
- Time: 52mo

## Work underway

Plan - Management Plan

## Next body of work

Site Assessment

## Next steps

1) Finalise Management Plan.
2) Complete Options Analysis.
3) Finalise Site Assessment.

## Council Contact:

Derek Tooth
Derek.Tooth@qprc.nsw.gov.au
0408 430 739
Berridale Water Quality Improvement, Pressure Reduction Program

**Project Brief**

This project aims to improve water quality in Berridale and increase the life of trunk gravity mains. It is recommended that Pressure Reduction Valves (PRV’s) and Pressure Break Tanks are installed to control the flow of water through the gravity mains. In addition, dosing the system with CO2 and lime at strategic points prior to Mackay Street will assist in balancing water pH and alkalinity. A study is proposed in the initial stage to identify the number and location of Pressure Break Tanks and PRV’s required, along with a Detailed Design and Construction plan of suitable options to protect the Berridale water supply infrastructure. Berridale experienced some fire flow issues at some extremity points of the reticulation network. Creating a connected system at the fringe pipelines enables the Berridale system to pass the fire flow issues.

**Rationale for Investment**

Water quality improvement to meet the Australian Drinking Water Guidelines through water safety assessments. Extension of asset life (DICL pipeline) in East Jindabyne and Berridale by addressing accelerated deterioration of water infrastructure.

**Benefits**

Provide Berridale community with safe and reliable water supply.

**Alignment with Regional Strategies**

N/A
Berridale Water Quality Improvement, Pressure Reduction Program

Stage: Plan

Submitted, Awaiting Funding

Approval: N/A

**Status**

Council has developed a study outlining an analysis of options to reduce water pressure and improve water quality.

**Work underway**

Initial investigation complete. Design and Construction tender preparation and award to follow.

**Next body of work**

Concept design

**Next steps**

1) Design and Construction tender preparation and award of tender.
2) Construction and installation of new infrastructure for pressure reduction.
3) Construction of linked water mains.

---

**Council Contact:**

Suneil Adhikari  
Suneil.Adhikari@snowymonaro.nsw.gov.au  
02 6455 1810
Adaminaby Water Supply System Upgrade and Extension to Backlog Areas

Project Brief

To improve the level of service by improving and providing water supply to the backlog areas in Adaminaby, Old Adaminaby and Anglers Reach. Water is currently fed under pressure from Lake Eucumbene to Gooroodee reservoir, through gravity to Adaminaby Reservoir and subsequently to the township. Old Adaminaby and Anglers Reach are towns very close to the rising main supplying water to the Gooroodee Reservoir. Adaminaby has typically experienced low pressures (lower than 20m pressure head) and does not meet fire flow capacity requirements. Hunter Water Investigation Report has recommended augmentations which is a combination of pipe links and pipe size upgrades to be made to the existing water reticulation system to resolve the fire flow issues.

Rationale for Investment

Augmentation of the existing water supply system and extension to the two backlog towns (Old Adaminaby and Anglers Reach) will provide the community with safe and secure water supply and promote growth in the area. Water supply to these backlog areas is necessary to provide a strong, diverse and sustainable local economy that supports employment within the agriculture, forestry and tourism sectors and to meet the Australian Drinking Water Guidelines.

Benefits

Provide safe and reliable water supply to the backlog areas (Old Adaminaby, Anglers Reach) and improve the level of service in the town of Adaminaby.

Alignment with Regional Strategies

N/A
Adaminaby Water Supply System Upgrade and Extension to Backlog Areas

Status

Initial investigation (Hunter Water Investigation Report) is complete.

To next stage
Cost $100K
Time 6mo

To shovel-ready
Cost $3.276M
Time 1.5yr

Work underway
N/A

Next body of work
Options Study.

Next steps

1) Options Study followed by Tender document preparation.
2) Design and construct pipe network in Adaminaby of 1.7 km.
3) Design and construct water supply infrastructure in Old Adaminaby and Anglers Reach including reticulation network (2 km) and supply reservoir.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowy_monaro.nsw.gov.au
02 6455 1810
Jindabyne Waste Water Treatment Plant Augmentation

Support the anticipated growth in Jindabyne and surrounds by providing reticulated sewerage services at an estimated cost of $11.5M, with a project duration of 2.5 years.

Project Brief

The Jindabyne Waste Water Treatment Plant meets the necessary effluent quality requirements during off-peak times, but it has been failing to meet the targets during the peak winter loading season. A concept design has been developed to upgrade the plant based on the current EPA treated effluent quality requirements for discharge. EPA will be consulted prior to designing upgrade works, in order to identify and meet water quality objectives for sensitive water bodies. Use of existing facilities and maturation ponds, an additional IDEA tank and upgrade of electrical systems will be the key works proposed. Stage 1 work comprises of an Option Assessment Study followed by a Design and Construct through Public Works Advisory, to achieve a 12,000 EP plant capacity. Stage 1 works include: inlet works, twin aeration (IDEA) tanks, provision of a hardstand to allow mobile dewatering facilities, upgrade of current chemical dosing facilities, provision of UV system etc.

Rationale for Investment

Jindabyne has been growing at a faster rate. Even though the plant meets necessary effluent quality requirements during off-peak times, it has been failing to meet the targets during peak winter loading season. As future projected peak loads are expected to increase by about 1.6 - 2% pa over current load, it is necessary to upgrade the plant from the current 8,000 EP capacity to 12,000 EP in stage 1. Similarly, the plant will require a further expansion to 16,000 EP in future as summer load is also expected to increase. Inflows could also exceed current STP capacity in a 1 in 5-year storm event.

Benefits

Provide an efficient sewage reticulation and treatment system and minimise the risk of environmental pollution due to proximity to the water body.
Provide capacity for existing and future residential and commercial developments.

Alignment with Regional Strategies

N/A
Jindabyne Waste Water Treatment Plant Augmentation

Status


To next stage
Cost $200K
Time 6mo

To shovel-ready
Cost $300K
Time 1yr

To commission
Cost $11.431075M
Time 2.5yr

Work underway
N/A

Next body of work

Next steps

1) Design and Construct Tender Document Preparation.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Unified Telemetry System for SMRC - Options Study and Concept Design

Project Brief

Snowy Monaro Regional Council was formed with the amalgamation of former Bombala, Cooma-Monaro Shire and Snowy River Shire councils. The combined geographical area is approximately 15,162 km². Water supply and sewerage services are essential services provided by Snowy Monaro Regional Council. Former councils adopted different telemetry systems to operate and monitor water supply and sewerage services. After the amalgamation, merger of telemetry system is critical to centralise the operation and reduce the cost of operation by remote visibility and control.

Rationale for Investment

Former Cooma Monaro Regional Council used “Radtel” brand telemetry system to operate, monitor and control the operation of water and waste water infrastructure which is no longer supported by the company. Former Snowy River Shire Council used “Elpro-SCADA” for their water and waste water system operation, maintenance and control. The Elpro has been merged and can no longer provide ongoing maintenance and support. Former Bombala Shire Council didn’t have any telemetry system to operate and control the network operations. It is evident that the three former Councils used different systems which are either not supported or nearly defunct. To improve delivery and efficiency of business, it is vital to have a combined telemetry system supported by current advanced technology.

Benefits

Provide more efficient and reliable water and waste water operations and information monitoring system.

Alignment with Regional Strategies

N/A

Location: All areas within SMRC
# Unified Telemetry System for SMRC - Options Study and Concept Design

**Stage:**

<table>
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<tr>
<th>Plan</th>
<th>Options Study</th>
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<td>Now:</td>
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<tr>
<td>Approval:</td>
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**Status**

Investigation stage

**To next stage**
- Cost: $400K
- Time: 6mo

**To shovel-ready**
- Cost: $475K
- Time: 1yr

**To commission**
- Cost: $475K
- Time: 1yr

**Work underway**

N/A

**Next body of work**

Options Study

**Next steps**

1) Options Study and Concept Design.
2) Design and Construct tender preparation and award.

---

**Council Contact:**
Suneil Adhikari  
Suneil.Adhikari@snowymonaro.nsw.gov.au  
02 6455 1810
Kalkite Street and Leesville Sewage Pump Station Augmentation

Support the growth in Jindabyne by providing additional sewerage service capacity at an estimated cost of $1.8M, with a project duration of 2 years.

Project Brief

Jindabyne sewerage network has sufficient dry weather flow capacity, except for Kalkite Street and Leesville Pump Stations. Kalkite Street Sewage Pump Station: In the event of Pump Station failure, the Kalkite Street Pump Station storage does not have enough capacity, and spills are predicted within 45 minutes of a failure (a 4-hour capacity is standard). The proposal is to construct an overflow storage for Kalkite Street Sewage Pump Station, as this pump station is very close to the Jindabyne Foreshore and the CBD area. Leesville Sewage Pump Station: The catchment, in the vicinity of the sewage pump station, is experiencing very high growth, especially from the sport and recreational centre and industrial area of Leesville. There have been a few incidents of overflows from the pump stations in the past as this pump station doesn’t have enough storage. The proposal is to construct a new pump station and an overflow storage.

Rationale for Investment

Jindabyne Sewerage Scheme Report (2016) indicated that Kalkite Street and Leesville Pump Stations do not have enough capacity to cope with increasing demands in their catchment. There is less than 45 minutes of pumps station storage in the event of failure at each location which threatens the water source and public health, as both pump stations are in close proximity to Lake Jindabyne Foreshore. Expected development increase in Kalkite and Leesville areas will only magnify current capacity concerns. Leesville sewage pump station is very close to the water intake pump station which supplies water to the Jindabyne area, which doesn’t have filtration systems to handle any situation due to a spill from the pump station.

Benefits

- Provides an efficient sewage collection and treatment system.
- Minimises the risk of environmental pollution.
- Provides capacity for existing and future residential and commercial developments.

Alignment with Regional Strategies

- N/A
Kalkite Street and Leesville Sewage Pump Station Augmentation

Status
Initial investigation is complete.

Now: Under preparation
Approval: N/A

To next stage
Cost $100K
Time 6mo

To shovel-ready
Cost $150K
Time 1yr

To commission
Cost $1.8M
Time 2yr

Work underway
N/A

Next body of work
Concept Design

Next steps
1) Concept Design.
2) Design and construct overflow storage structure with 310 KL capacity at Kalkite Street Sewage Pump Station.
3) Design and construct new wet well structure of 2.6 m diameter capacity at Leesville Sewage Pump Station including electrical controls.
4) Design and construct new overflow structure of 115 KL capacity at Leesville Sewage Pump Station.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Jindabyne Reticulation System Augmentation – High Zones and Leesville areas

Support the growth in Jindabyne by providing a safe and secure water supply system at an estimated cost of $13.2M, with a project duration of 3 years.

Project Brief

SMRC removed the High Zone Reservoir and associated high lift pumping units and rising main from service, as the reservoir has insufficient elevation to adequately service the elevated areas in Jindabyne. The area of Jindabyne was supplied from this reservoir but was re-zoned to the Barry Way Reservoir, located 500 m east of Barry Way and approximately 2 km south of Jindabyne. Barry Way Reservoir supplies the Leesville Zone, the Department of Sport and Recreation Complex and the remainder of the Jindabyne Township not supplied from the Low Zone Reservoir. The expectation for increased development in Leesville will further increase the demand on the Barry Way Reservoir. To ensure ongoing water supply and delivery, it is proposed to increase the capacity of the Barry Way reservoir by 5 ML. Duplication of water mains to and from Barry Way Reservoir have also been proposed, in order to reduce vulnerability of high zone areas in Jindabyne from mains failure and effects of low pressure due to friction. Upgrade to Leesville pump station is proposed to cater for increased demand expected from future developments.

Rationale for Investment

Fire Flow analysis of Jindabyne indicates that Lakewood Estate and the high country zone are areas of concern meeting pressure requirements. Failure of the link watermains between Barry Way Reservoir and Jindabyne would lead to the cut-off of water supply to all elevated regions in Jindabyne. Higher areas of Jindabyne are experiencing lower residual pressure due to head loss in watermains in Reedys Cutting Road. Duplication of water mains in the existing systems will increase the pressure (tested through modelling). Tests indicate that the Barry Way Reservoir will require augmentation to provided adequate security for ‘intermediate demands’.

Benefits

Provide support to anticipated growth in Jindabyne and Leesville areas with safe and reliable water supply.

Alignment with Regional Strategies

N/A
Jindabyne Reticulation System Augmentation – High Zones and Leesville areas

**Stage:**
- **Plan:**
  - Construction procurement

**Now:** Under preparation

**Approval:** N/A

### Status

**Initial Hydraulic Computer Modelling complete with ultimate demands by Hunter H2O**

**Jindabyne water supply strategy.**

### To next stage
- **Cost:** $175K
- **Time:** 1yr

### To shovel-ready
- **Cost:** $13.111M
- **Time:** 3yr

### Work underway
N/A

### Next body of work
Design and Construct tender document preparation and award.

### Next steps

1) Design and Construct tender document preparation and award.

---

**Council Contact:**

Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Delegate Water Supply Intake Pump Station, Groundwater Option and Associated Infrastructure

Investigate the option of groundwater source to provide reticulated water supply system to Delegate at an estimated cost of $3.2M, to be funded as part of the Government announcement of $15M for Bombala and Delegate Water Supply, with a project duration of 2.5 years.

Project Brief

Delegate water supply draws raw water from the Delegate River which is filtered through screen fitted on the intake pipe, chlorinated at the Delegate Pumping Station and subsequently pumped at a reservoir off Currawong Road. The reservoir feeds to the reticulation system of the Delegate township. Both the pump station facility and access to it need significant upgrades. The river intake structure, which is constructed using a timber structure has deteriorated significantly. The pump equipment has also deteriorated significantly, and pipe work corroded. This is contributing to WHS concerns along with underperformance of the pump station. As part of the project (Stage 1), the option of groundwater source has been discussed with DOI Water and Council has received "in principle" support.

Rationale for Investment

Assessment of the current condition of the Delegate Pump station has indicated significant deterioration of infrastructure and high WHS risks posed to council by current pump station and its access. The area around the chlorination dosing system is cluttered and creates potential hazards. Wiring is not correctly fixed to structure, non-compliance with AS/NZS 3000. The lifting system for the trunnion is badly corroded and requires urgent replacement. The access structure around the pump station is not WHS compliant. The monorail beam and the hoist are corroded. Overhaul and protective coating are needed, non-compliant with AS1418. For chlorine dosing system, pipework requires replacement and doesn't meet with AS/NZS2927. Section of the rising main constructed from AC pipe requires replacement. Unstable plank walkways and access to inlet structure not compliant with AS1657.

Benefits

Provide safe and secure water supply to the town of Delegate.

Alignment with Regional Strategies

N/A
Delegate Water Supply Intake Pump Station, Groundwater Option and Associated Infrastructure

### Status
Options Study to be funded through DPC.

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<thead>
<tr>
<th>Stage</th>
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<th>Options Study</th>
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<tr>
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| To next stage       | Cost $100K | Time 6mo  |
| To shovel-ready     | Cost $625K | Time 1.5yr |
| To commission       | Cost $3.125M | Time 2.5yr |

**Work underway**
N/A

**Next body of work**
Options Study

**Next steps**
1) Options Study.

---

**Council Contact:**
Suneil Adhikari  
Suneil.Adhikari@snowymonaro.nsw.gov.au  
02 6455 1810
Bombala Water Treatment Plant Upgrade and Augmentation

Investigate raw water supply and treatment to provide safe and reliable reticulated water supply to Bombala at an estimated cost of $10.3M, to be funded as part of the Government announcement of $15M for Bombala and Delegate Water Supply, with a project duration of 3 years.

Project Brief

Bombala water supply is sourced from the Coolumbooka River Weir. The water at the weir is visually low in turbidity and colour which increases significantly after a rain event with large inflows to the weir. The area that needs urgent attention to improve treated water quality, is a good understanding of the water supply system from the source to the reticulation system. It is essential to have an in-depth knowledge of how the various processes of this specific water treatment plant should be operated to achieve their design performance under all raw water quality conditions. The project proposes to explore a long-term solution to the Bombala water supply by investigating ground water source to supplement the existing raw water supply from Coolumbooka River Weir. The project also proposes associated water treatment infrastructure improvement.

Rationale for Investment

The water treatment and distribution system has not been reliable to deliver potable water supply to the community due to various issues as follows: raw water quality, storm events upstream of intake weir, underperformance from treatment process units, fluoridation and chemical dosing system doesn’t perform as required, structural issues with the Water Treatment Plant, pipelines within the Water Treatment Plant, poor infrastructures including reticulation network.

Benefits

Provide safe and secure water supply for the town of Bombala.

Alignment with Regional Strategies

N/A
Bombala Water Treatment Plant Upgrade and Augmentation

Stage:

Plan

Options Study

Now: Under preparation

Approval: DPC, RDI

Status

Initial assessment stage: Detail assessment of raw water quality sources and options, detail process review including unit process assessment and detail structural assessment.

To next stage
Cost $200K
Time 6mo

To shovel-ready
Cost $300K
Time 1.5yr

To commission
Cost $10.3M
Time 3yr

Work underway
Request forwarded to relevant secretaries (RDI, DPC) to release funding for Option Study.

Next body of work
Options Study to be funded through DPC.

Next steps

1) Options Study.
2) Detailed Design.
3) Construction.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Kalkite Sewerage System Upgrade

Support growth in Kalkite by providing reticulated sewerage services at an estimated cost of $7.1M, with a project duration of 4 years.

**Project Brief**

Kalkite sewerage system has three pump stations and one Sewage Treatment Plant (STP). The STP is situated on the hill close to the town water reservoir site. The pump station needs structural, mechanical and electrical improvement to prevent possible environmental impact due to sewage surcharges. As highlighted in the Integrated Water Cycle Management document developed for former Snowy River Shire Council in 2014, this project proposes to improve and secure the sewerage system in Kalkite by replacing the three pump stations and possible augmentation or relocation of the STP.

**Rationale for Investment**

As future projected loads are expected to increase due to growth, it is necessary to upgrade the plant. The treatment system at Kalkite STP is an old Pasveer channel which doesn’t produce modern discharge quality standards. The pump station and the electrical switchboards within the pump station pose WHS risks to workers. There is higher operations and maintenance cost due to pumping sewage to the STP which is uphill. The reticulation system also needs assessment and subsequent upgrade in certain areas of town.

**Benefits**

Provide an efficient sewage collection and treatment system.

Minimise the risk of environmental pollution.

Provide capacity for existing and future residential and commercial developments.

**Alignment with Regional Strategies**

N/A
Kalkite Sewerage System Upgrade

**Stage:**

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**Status**

Initial investigation.

**To next stage**
Cost $350K
Time 6mo

**To shovel-ready**
Cost $425K
Time 1yr

**To commission**
Cost $7.075M
Time 4yr

**Work underway**
IWCM Strategy document completed.

**Next body of work**
Options Study

**Next steps**

1) Option Study.

---

**Council Contact:**
Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Adaminaby Sewage Treatment Plant Augmentation

Augment the existing Sewage Treatment Plant and support anticipated growth (Snowy 2.0) in Adaminaby at an estimated cost of $5.3M, with a project duration of 50 months.

Project Brief

The existing plant does not meet the necessary effluent quality requirements and the plant requires significant structural repairs for reliable operation. A concept has been developed for the proposed plant upgrade on the basis of maintenance of current EPA treated effluent quality requirements for discharge. Asset condition: Plants of this age typically exhibit deterioration of concrete and metallic structures. The following deficiencies are reported: Inlet works and sludge digesters – corrosion of metal screens and deterioration of the concrete channels, concrete corrosion of the roof slab and transfer structures; Trickling filters – major structural cracking; Sedimentation and humus tanks – concrete cracking and deterioration of the surfaces; The current plant has potential for odour due to the use of anaerobic digesters; There are a number of work, health and safety issues with the present plant. Therefore, it has been proposed that the plant be upgraded with a capacity of 1000 EP with a modern technology.

Rationale for Investment

A new waste water treatment facility will address the existing issues at the site and provide crucial infrastructure for Adaminaby. After the upgrade the plant will: Support regional growth and anticipated development due to Snowy 2.0; Provide a long lasting asset for the community; Provide Council with an efficient plant which will require a low level of operator input to its operation; Produce a high quality effluent which will meet future EPA requirements will not limit reuse opportunities.

Benefits

Provide an efficient sewage collection and treatment system. Minimise the risk of environmental pollution. Provide capacity for existing and future developments.

Alignment with Regional Strategies

N/A
Adaminaby Sewage Treatment Plant Augmentation

Status

Concept design has been completed along with Bombala STP. SSWP Detailed Application declined. Council will self-fund the Detailed Design.

To next stage
Cost $481.53K
Time 26mo

To shovel-ready
Cost $581.53K
Time 32mo

To commission
Cost $5.22708M
Time 50mo

Work underway
Detailed Design

Next body of work
Advertise construction tender.

Next steps

1) Complete Detailed Design.
2) Award of tender.
3) Construction.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Snowy Monaro Villages Water Safety Program

Provide safe and secure water supply to outlying villages of SMRC at an estimated cost of $4.9M, with a project duration of 3 years.

Project Brief

This project addresses issues to deal with water filtration and associated infrastructure required to mitigate water quality risks in five villages in the Snowy Monaro LGA. Works includes a treatment options assessment, subsequent business case and design and construction of a package filtration plants. Bredbo: 1) Install package water filtration plant and reservoir site retro-fitting; 2) Upgrade civil, mechanical and electrical components. Nimmitabel: 1) Install package water filtration plant and reservoir site retro-fitting; 2) Upgrade civil, mechanical and electrical components. Kalkite: 1) Install package water filtration plant and reservoir site retro-fitting; 2) Install dedicated single rising main to optimise Kalkite Chlorine Dosing System; 3) Upgrade civil, mechanical and electrical components. Eucumbene Cove: 1) Install package water filtration plant and upgrade of rising main, chlorination system and reservoir site retro-fitting; 2) Upgrade civil, mechanical and electrical components. Adaminaby: 1) Install package water filtration plant and reservoir site retro-fitting; 2) Upgrade civil, mechanical and electrical components.

Rationale for Investment

Five villages in the Snowy Monaro LGA face water quality risks from unprotected and unfiltered water supply sources. The 2014 IWCM Strategy identified several hazard events that require mitigation through water infrastructure. Contaminant risks include bacteria, viral and protozoan loadings, algae, turbidity, dissolved organic matter, iron and manganese. Generally, the small townships draw their raw water from ground or surface sources in unprotected catchments. The ADWG recommend more than one barrier be applied to prevent contamination risk events and these systems have only disinfection as a barrier. The economy is highly dependent on tourism with many attractions including access to clean air and water. Potential water quality risks and boil water alerts endanger the pristine clean image. Council needs to ensure high water quality and reliability of water supply is maintained to support the tourism industry and residents.

Benefits

Mitigation of contaminant risks including bacteria, viral and protozoan loadings, algae, turbidity, dissolved organic matter, iron and manganese through appropriate water infrastructure.

Alignment with Regional Strategies

N/A
Snowy Monaro Villages Water Safety Program

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<td>Approval:</td>
<td>SSWP, RDI</td>
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**Status**

SSWP EOI approved. Preparing Detailed Application to submit.

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<th>To shovel-ready</th>
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<th>To commission</th>
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**Work underway**

Preparing SSWP Detailed Application to submit, and will await SSWP approval for next stage.

**Next body of work**

Options Study

**Next steps**

1) Options Study.
2) Detailed Design.
3) Construction.

---

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowymonaro.nsw.gov.au
02 6455 1810
Michelago Water and Sewerage Infrastructure Options Study

Mission Brief

Commission a scoping study to identify, assess and prioritise water sources, sewer discharge and/or effluent re-use in Michelago at an estimated cost of $120K, with a project duration of 6 months. Cost to commission estimated at $8.12M, with a project duration of 3 years.

Rationale for Investment

Michelago is likely to experience high demand for growth in the future because of its proximity to Canberra and generally high underlying land values, however a reticulated sewerage and water supply is required for development. Preparation of a scoping study to determine preferred options for Michelago water and sewerage infrastructure is proposed. Residents currently have tank or private bore water and use a variety of on-site septic systems for sewage and waste water disposal. The options study will be a key information resource for community engagement and consultation regarding infrastructure identification for the township and provide guidance to Council in preparing a Section 64 contribution developer charges to assist funding of future water and sewerage infrastructure.

Benefits

Provision of a safe and secure water and sewerage services for the existing and anticipated future growth of the Michelago Township.

Alignment with Regional Strategies

N/A

Location: Michelago

Map: Michelago Township

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<th>State</th>
<th>Federal</th>
<th>Cost</th>
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<td>Monaro</td>
<td>Eden Monaro</td>
<td>$8.12M</td>
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Michelago Water and Sewerage Infrastructure Options Study

Status
SSWP EOI submitted.

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<th>Options Study</th>
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<td>Approval</td>
<td>SSWP, RDI</td>
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To next stage
Cost $120K
Time 8mo

To shovel-ready
Cost $8.12M
Time 44mo

Work underway
Awaiting SSWP approval for next stage.

Next body of work
Options Study

Next steps
1) Options Study.
2) Detailed Design.
3) Construction.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowyomonaro.nsw.gov.au
02 6455 1810
Water Treatment Plants at Jindabyne and East Jindabyne

Provide safe and secure water supply in Jindabyne and East Jindabyne to meet the Australian Drinking Water Guidelines at an estimated cost of $16.4M, with a project duration of 5 years.

Project Brief

Jindabyne and East Jindabyne do not have a safe and secure water supply and water treatment is required to mitigate risks to drinking water quality. The Australian Drinking Water Guidelines recommend that more than one barrier is applied during the water treatment process. Currently, the Jindabyne and East Jindabyne supplies are disinfected, but not filtered, implementing only one barrier for drinking water quality protection. A water treatment Options Assessment Study is required to investigate the water treatment options available for Jindabyne and East Jindabyne. This would be followed by a Concept Design, Business Case, Detailed Design and Construction of a suitable water treatment option to achieve the required risk reduction in potential bacteria, viral and protozoan loadings and improve protection of the Jindabyne and East Jindabyne drinking water supplies.

Rationale for Investment

Jindabyne, East Jindabyne and surrounding areas extract their town water supply from Lake Jindabyne, which is not protected by controls or restrictions on activities. There have been incidents of water complaints, water testing, boil water alerts, unprotected water sources, water safety assessment results, and a need to meet the Australian Drinking Water Guidelines. In August 2009 a 15-day boil water alert was issued by Council in conjunction with NSW Department of Health in response to concerns for contamination of drinking water following the unintended discharge of approximately 0.8ML of raw sewage into Lake Jindabyne. An Integrated Water Cycle Management (IWCM) strategy identified the major issue requiring action was Lake Jindabyne being an unprotected water source and posing a potential high risk to drinking water quality with current water treatment. The priority action from the strategy was the construction of a Water Treatment Plant to supply Jindabyne and East Jindabyne.

Benefits

Provision of a safe and secure water supply for the existing and anticipated future growth of the Jindabyne and East Jindabyne Township. Ensure Council can reliably provide residents, businesses and visitors quality drinking water that is free from pathogens, meets legislative requirements and is delivered in the most cost effective and efficient way.

Alignment with Regional Strategies

N/A
Water Treatment Plants at Jindabyne and East Jindabyne

Stage:

- **Plan**
- **Options Study**

Now: Awaiting approval

Approval: SSWP, RDI

**Status**

SSWP EOI approved.

**To next stage**

- Cost $70K
- Time 6mo

**To shovel-ready**

- Cost $870K
- Time 2yr

**To commission**

- Cost $16.37M
- Time 5yr

**Work underway**

Detailed application submitted under SSWP.

**Next body of work**

Options Study

**Next steps**

1) Options Study.
2) Detailed Design.
3) Construction.

Council Contact:
Suneil Adhikari
Suneil.Adhikari@snowy_monaro.nsw.gov.au
02 6455 1810
Khancoban Water Treatment Plant Upgrade

**Secure the Khancoban water supply with a fit for purpose, modern Water Treatment Plant at an estimated cost of $3.5M, with a project duration of 3 years.**

**Project Brief**

Khancoban does not have a safe and secure water supply that maintains water quality to desired levels. The 2013 IWCM Evaluation identified that there is an urgent need for a suitable treatment process within the Water Treatment Plant for the Khancoban water supply system. A water treatment Options Assessment Study is required to determine a fit for purpose treatment plant, considering factors of seasonal peak demand and plant efficiency that meets Australian Drinking Water Guidelines. The project will ultimately realise the delivery of a new Water Treatment Plant to treat the varying raw water quality from the Khancoban Creek, to supply the potable water to Khancoban.

**Rationale for Investment**

A need to meet the Australian Drinking Water Guidelines. The current raw water source of Khancoban Creek has inconsistent quality characteristics, requiring high emphasis on chemical dosing in treatment. Upgrade of the current Water Treatment Plant allows for automation in the plant operations, thus reducing labour intensive monitoring to be undertaken. Khancoban has some potential future growth due its location. Access to safe and reliable drinking water will not only provide positive health outcomes and minimise the cost to the public health system, it will enhance the living standard among the residents as well as the visitors, particularly during seasonal peaks where the population can increase by 6 times its regular population.

**Benefits**

Secure water supply.  
Safe drinking water.  
Support expansion areas.  
Support Snowy Hydro 2.0.

**Alignment with Regional Strategies**

SVC IWCM 2013.  
SVC Community Strategic Plan.  
Regional Economic Development Strategy.

---

**Location:** Khancoban

**Snowy Valleys Council**

State: Albury  
Federal: Eden Monaro

$3.5M  
3yr
Khancoban Water Treatment Plant Upgrade

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### Status

Need identified and defined in Councils IWCM Evaluation (2013).

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<td>Cost $95K</td>
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<td>Time 3yr</td>
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### Work underway

Identification and Brief

### Next body of work

Options Study

### Next steps

N/A

---

**Council Contact:**
Matthew Christensen
MChristensen@svc.nsw.gov.au
02 6941 2555
Khancoban Waste Water Treatment Plant Upgrade

Safeguard the environment with the construction of a modern, fit for purpose Waste Water Treatment Plant at an estimated cost of $8M, with a project duration of 3 years.

Project Brief

Khancoban Waste Water Treatment Plant was commissioned in 1965 and maintains much of the same treatment infrastructure from this time. The 2013 IWCM Evaluation identified that there is an urgent need for a suitable treatment process within the Waste Water Treatment Plant for Khancoban, given the out-dated nature of the current infrastructure. An Options Assessment will be required to ascertain a fit for purpose treatment plant configuration that factors in seasonal peak demand and that meets current EPA and public health guidelines. The project will ultimately realise the delivery of a new Waste Water Treatment Plant to replace the existing facility in Khancoban.

Rationale for Investment

The current Waste Water Treatment Plant process and associated infrastructure is based on that of the originally commissioned plant. There is an urgent need to bring the plant to a modern standard to take advantage of rationalisation of process and automation of monitoring to reduce operational costs of the plant. Khancoban has some potential future growth due its location. Access to safe and reliable drinking water will not only provide positive health outcomes and minimise the cost to the public health system, it will enhance the living standard among the residents and visitors, particularly during seasonal peaks where the population can increase by 6 times its regular population.

Benefits

Safe guarding of environment.
Support peak demand periods.
Support Snowy Hydro 2.0.

Alignment with Regional Strategies

SVC IWCM 2013.
SVC Community Strategic Plan.
Regional Economic Development Strategy.
Khancoban Waste Water Treatment Plant Upgrade

Stage:

<table>
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<th>Plan</th>
<th>Options Study</th>
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Now: Under preparation

Approval: N/A

Status

Need identified and defined in Councils IWCM Evaluation (2013).

To next stage

Cost $160K
Time 1yr

To shovel-ready

Cost $800K
Time 2yr

To commission

Cost $8M
Time 3yr

Work underway

Identification and Brief

Next body of work

Options Study

Next steps

N/A

Council Contact:
Matthew Christensen
MChristensen@svc.nsw.gov.au
02 6941 2555
Tumbarumba Storage Dam

Secure the Tumbarumba water supply, by addressing critical risk issues with the Tumbarumba Storage Dam at an estimated cost of $2.3M, with a project duration of 3 years.

Project Brief

Tumbarumba Dam is an off-stream storage dam with 68 megalitre capacity, providing water storage for the Tumbarumba Water Supply Scheme. Tumbarumba Dam has been prescribed under the Dams Safety Act, as HIGH C for the Sunny Day Consequence Category (SDCC) and HIGH C for the Flood Consequence Category (FCC). A recent reassessment of piping risk indicated a high probability of internal erosion (piping) in the embankment. An Options Assessment will bring together geotechnical, hydrology and survey investigations to present a series of options to address the piping and erosion risk. The project will ultimately ensure public safety is maintained, and ongoing reliability in water supply for the Tumbarumba township.

Rationale for Investment

Tumbarumba Dam provides off-stream storage for water to the Tumbarumba Township, and is therefore determined as critical infrastructure. The dam presented as a HIGH C risk and needs to be considered urgently to ensure water supply is maintained to the township. Furthermore, the storage dam has been identified in the Integrated Water Catchment Management Evaluation (2013) as being subject to a high level of siltation and seepage, equating to a below optimum operation of the critical infrastructure.

Benefits

- Secure water supply.
- Critical dam infrastructure.
- Support expansion areas.
- Support Snowy Hydro 2.0.

Alignment with Regional Strategies

- SVC IWCM 2013.
- SVC Community Strategic Plan.
- Regional Economic Development Strategy.

Location: Tumbarumba

Snowy Valleys Council

State: Albury
Federal: Eden Monaro

$2.3M
3yr
Tumbarumba Storage Dam

Stage:

- Plan
- Options Study

Now: Declined approval

Approval: SSWP

Status

Need identified and defined in Councils IWCM Evaluation (2013).

To next stage
Cost $130K
Time 1yr

To shovel-ready
Cost $250K
Time 2yr

To commission
Cost $2.3M
Time 3yr

Work underway
Identification and Brief

Next body of work
Options Study

Next steps

N/A

Council Contact:
Matthew Christensen
MChristensen@svc.nsw.gov.au
02 6941 2555
**Tumbarumba Raw Water Supply**

**Project Brief**

Tumbarumba township accesses water supply from the Burra Creek primarily, and in instances where supply is low, from Tumbarumba Creek. The 2013 IWCM Evaluation has identified secure supply as a concern. A secure yield analysis was undertaken and found that the current raw water sources are not capable of meeting the 306 megalitres per annum water demand, nor satisfy the NSW Office of Water guidelines for Security of Supply. An Options Assessment will provide a basis of feasibility to construct a new 10.4 km pipeline connecting Mannus Lake to the Tumbarumba Water Supply Storage Dam in Tumbarumba.

**Rationale for Investment**

A pipeline from Mannus Lake will secure the water supply to the Tumbarumba township. Current supply points cannot provide water security in accordance with NSW Office of Water guidelines for security of supply, and therefore do not support further growth in the township. Initial indications for alignment will situate the pipeline in the vicinity of the industrial expansion area of Tumbarumba, particularly Hyne Mill, which is the largest employer within the Tumbarumba township. Investigation of a water supply scheme to Rosewood may propose this pipeline as an access point to raw water.

**Benefits**

Secure water supply.
Support expansion areas.
Support Snowy Hydro 2.0.

**Alignment with Regional Strategies**

SVC IWCM 2013.
SVC Community Strategic Plan.
Regional Economic Development Strategy.

---

**Location:** Tumbarumba
Tumbarumba Raw Water Supply

**Stage:**
- **Plan**
- **Options Study**

**Now:** Under preparation

**Approval:** N/A

**Status**

Need identified and defined in Councils IWCM Evaluation (2013).

**To next stage**
- Cost $475K
- Time 2yr

**To shovel-ready**
- Cost $1M
- Time 3yr

**To commission**
- Cost $10M
- Time 5yr

**Work underway**

Identification and Brief

**Next body of work**

Options Study

**Next steps**

N/A

**Council Contact:**
Matthew Christensen
MChristensen@svc.nsw.gov.au
02 6941 2555
Rosewood Water and Sewerage Scheme

Explore the feasibility and develop a business case to provide water and sewerage schemes in Rosewood at an estimated cost of $210K, with a project duration of 2 years.

Project Brief

The Rosewood township does not have a safe and secure water supply, nor a waste water scheme. Current access to water is through access to bore water, of which the township maintains informal subscription to neighbouring properties bores. Furthermore, the treatment of waste water from these residences happens in the vicinity of the bores, providing a risk to public health. An Options Assessment will provide preliminary assessment and concepts to explore to provide modern water and sewerage schemes, including treatment, to the Rosewood township. These options will provide the basis of a business case to determine the scope of the project and quantify the benefits to the community.

Rationale for Investment

Security of water supply presents the highest priority for Rosewood’s future expansion as an alternative place of residence to Tumbarumba. Construction of a water supply scheme will service the current 214 residents of the township. Provision of waste water will further support expansion efforts in the township.

Benefits

Secure water supply.
Support expansion areas.
Safeguard the environment.

Alignment with Regional Strategies

SVC Community Strategic Plan.
Regional Economic Development Strategy.

Location: Rosewood
Rosewood Water and Sewerage Scheme

Status

Need identified and defined in Councils IWCM Evaluation (2013).

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To next stage

- Cost $210K
- Time 2yr

To shovel-ready

- Cost TBD
- Time TBD

To commission

- Cost TBD
- Time TBD

Work underway

Identification and Brief

Next body of work

Options Study

Next steps

N/A

Council Contact:
Matthew Christensen
MChristensen@svc.nsw.gov.au
02 6941 2555
Gundaroo Sewerage Scheme

Provide a reticulated sewerage scheme for the village of Gundaroo at an estimated cost of $8M, seeking a contribution of $4M, with a project duration of 4 years.

Project Brief

Provide a centralised reticulated sewerage scheme and sewage treatment plant to service the existing village of Gundaroo, 175ET and cater for potential expansion of the village of an additional 200ET. (Maximum 400 ET). Council will manage this centralised system to ensure reliable operation and effluent management. Gundaroo does not currently have a centralised treatment system. Sewage and treated effluent are currently managed by on-site treatment systems which require residents to operate and manage. Water supply to individual village properties is sourced from privately owned bores and rainwater tanks. The village relies on using on-site sewage management systems which carries the risk of contaminating the drinking (bore) water supply of the village.

Rationale for Investment

There is no centralised sewerage scheme, with all sewage currently managed by resident’s onsite treatment systems. An audit of on-site systems indicated 12% require minor works and 15% require major upgrade. 4 of 9 bore water samples collected in April 2015 yielded E. Coli levels higher than the recommended levels in the ADWG. This represents a risk of contaminated water supply with many properties utilising private bores for domestic water use. Potential developers have proposed small individual schemes to manage sewage for their developments. These individual schemes potentially increase ground water contamination, they don’t allow for future expansion nor connection of others, they may quarantine development or make other areas uneconomical to develop. A centralised reticulated sewerage scheme planned and operated by the Council will have the benefit of reliable and safe sewage management, which is why Council is currently investigating this project.

Benefits

Reduce groundwater pollution from on-site disposal systems.
Minimise the risk of environmental pollution through provision of an efficient and reliable sewage collection and treatment system.
Enhance the amenity of the existing village.
Allow for future servicing of village development and expansion of business activities including tourism.

Alignment with Regional Strategies

YVC IWCM 2008.
Strategic Business Plan 2014.
# Gundaroo Sewerage Scheme

## Status

Phase 1 approval Granted (SSWP120) to proceed to detailed application including consideration of community engagement, affordability and details of effluent management.

### To next stage
- Cost $150K
- Time 9mo

### To shovel-ready
- Cost $1M
- Time 18mo

### To commission
- Cost $8M
- Time 4yr

## Work underway

Refined Options Assessment detailing reuse options and a staged project to include CBD potential expansion areas.

## Next body of work

Business Case/Concept Design

## Next steps

1) Environmental Studies.
2) Concept Design/Business Case.
3) Land Acquisition.
4) Detailed Design and Specification.
5) Tendering.
6) Construction.

---

### Council Contact:
Kuga Kugaprasatham
Kuga.Kugaprasatham@yass.nsw.gov.au
02 6226 9246
Yass and Murrumbateman Water Security

Provide long term water security for Yass and Murrumbateman by conducting a scoping study at an estimated cost of $200K, seeking a contribution of $100K. The scoping study has a project duration of 9 months, and time to commission has a project duration of 15 years.

Project Brief

Undertake an investigation to develop a Yass Water Supply Source Strategy to support the directions of the recently adopted Yass Valley Settlement Strategy which plans for a population of 30,000. In 2006, Council made the decision to increase the capacity of the Yass Dam to rectify the short and medium-term water supply issues, which had seen severe water restrictions imposed and a moratorium on major developments. The Yass Dam now has a capacity to supply a 15,000 population. In 2006, Council identified that the preferred long-term water supply strategy was a pipeline from Canberra. Council needs to review this strategy and develop long term plans for water security. The scope of the study will be to: Analyse the capacity of the existing system taking account historical data and climate modelling; Determine the capacity required to meet future demands; Identify and evaluate options for additional water supply security including a preferred option.

Rationale for Investment

The millennium drought, which resulted in severe water restrictions being imposed on both Yass and Murrumbateman water consumers, also saw Council making the difficult decision to place a moratorium on development in 2004. As a medium-term solution, the Yass Dam was raised and can now supply a population of 15,000. Estimated growth as outlined in the 2017 Yass Valley Settlement Strategy forecasts a population of 30,000 in the Yass and Murrumbateman area. It is necessary to augment the water supply to achieve this and to diversify the water sources to increase the water security.

Benefits

Sound identification of water sources and infrastructure required to improve the long-term water security. Informed planning of Yass and Murrumbateman area based on a reliable water supply strategy.

Alignment with Regional Strategies

Yass and Murrumbateman Water Security

Status

N/A

To next stage
Cost $200K
Time 9mo

To shovel-ready
Cost $5M
Time 10yr

To commission
Cost $50M
Time 15yr

Work underway
Brief for Options Assessment

Next body of work
Options Study

Next steps

1) Environmental Studies.
2) Concept Design/Business Case
3) Land Acquisition.
4) Detailed Design and Specification.
5) Tendering
6) Construction.

Council Contact:
Kuga Kugaprasatham
Kuga.Kugaprasatham@yass.nsw.gov.au
02 6226 9246
Village Groundwater Investigation

Investigate the development of groundwater sources to provide reticulated water supplies to the villages of Gundaroo and Sutton at an estimated cost of $450K, seeking a contribution of $350K. The investigation has a project duration of 1.5 years, and time to commission has a project duration of 5 years.

Project Brief

Undertake hydrogeological investigations in the proximity of Gundaroo and Sutton villages, including the drilling of up to 12 test sites. There are no reticulated water supplies available to these villages.

Yass Valley Council

State: Goulburn
Federal: Eden Monaro

$12M
5yr

Rationale for Investment

Residents rely on rainwater tanks and private bores for their water supply needs. During dry periods, water is carted to fill rainwater tanks. There are no centralised safe water supplies available to these villages. Supply sourced from the river is not feasible due to very low flow during dry periods. Reliable and safe water supply is essential for the health and well-being of the community.

Benefits

Council operated water supply system will provide a safe and reliable water to the residents and to community facilities/business activities. Eliminate the need for private bores. Controlled withdrawal of groundwater and protect the groundwater source.

Alignment with Regional Strategies

Strategic Water Business Plan 2014.
Village Groundwater Investigation

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Status

N/A

To next stage
Cost $450K
Time 1.5yr

To shovel-ready
Cost $1M
Time 3yr

To commission
Cost $12M
Time 5yr

Work underway
Detailed Application for Site Assessment

Next body of work
Site Assessment

Next steps

1) Environmental Studies.
2) Concept Design/Business Case.
3) Land Acquisition.
4) Detailed Design and Specification.
5) Tendering.
6) Construction.

Council Contact:
Kuga Kugaprasatham
Kuga.Kugaprasatham@yass.nsw.gov.au
02 6226 9246
Yass Water Treatment Plant Water Quality Improvement

Project Brief

There is a need to upgrade the Yass Water Treatment Plant and improve water quality to remove high hardness, high dissolved solids, manganese, iron, colour, taste and organic matter. Drinking water supplied from Yass Water Treatment Plant suffers from poor palatability due to high hardness, high dissolved solids and organic matter causing taste, odour and scaling on hot water systems and appliances. Future water quality issues include worsening of taste, odour and increase in trihalomethanes formation. Council engaged NSW Public Works Advisory in 2016 for an Options Study, which needs to be revisited to prepare a business case for water quality improvement.

Rationale for Investment

Drinking water supplied from Yass Water Treatment Plant suffers from poor palatability due to high hardness, high dissolved solids and organic matter causing taste, odour and scaling on hot water systems and appliances. There are longstanding community concerns about the quality and safety of drinking water and persistent demand to improve, and a number of residents rely on bottled water and rainwater tanks for their drinking and cooking purposes. By reducing the risk of THMs formation due to the presence of organic matters, this will enhance the safety of water supply in the future. Improving the quality of water will address community concerns and comply with the Australian Drinking Water Guidelines.

Benefits

Improved water quality will provide drinking water acceptable to consumers and in compliance with Australian Drinking Water Guidelines.
Reduce the risk of THMs formation and potential health costs.
Reduce the economic cost on relying on bottled water.
Reduce the expense of replacement and repair of hot water systems.

Alignment with Regional Strategies

YVC IWCM 2007.
Strategic Water Business Plan 2014.
Yass Water Treatment Plant Water Quality Improvement

Stage: Plan

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To next stage
- Cost $250K
- Time 1yr

To shovel-ready
- Cost $1M
- Time 3yr

To commission
- Cost $11M
- Time 5yr

Work underway
- Concept Design

Next body of work
- Business Case

Next steps
1) Environmental Studies.
2) Concept Design/Business Case.
3) Land Acquisition
4) Detailed Design and Specification.
5) Tendering.
6) Construction.

Council Contact:
Kuga Kugaprasatham
Kuga.Kugaprasatham@yass.nsw.gov.au
02 6226 9246
Collector Water Supply and Sewage Treatment Plants

Explore the feasibility of Collector Water and Sewage Treatment services, seeking a contribution of $70K initially. The feasibility has a project duration of 6 months, and time to commission has a project duration of 33 months.

Project Brief

Undertake feasibility study and community consultation for Water Supply and Sewage Treatment Plant and Services to the village of Collector.

Rationale for Investment

There is strong community support for the supply of water and sewage treatment services to the village of Collector, however a feasibility study needs to be undertaken, which explores economic and social rates, and the community willingness to pay.

Benefits

The feasibility study will inform whether Council and the community should proceed with the provision of the proposed services.

Alignment with Regional Strategies

ULSC Community Strategic Plan.
Collector Water Supply and Sewage Treatment Plants

**Stage:**
- Identify
- Identify and define

**Now:** Plan

**Approval:** N/A

**Status**
Council has identified the need for feasibility study to take place

**To next stage**
- Cost $70K
- Time 4mo

**To shovel-ready**
- Cost $490K
- Time 14mo

**To commission**
- Cost $10M
- Time 33mo

**Work underway**
N/A

**Next body of work**
Feasibility Study

**Next steps**
1) Feasibility Study - Economic and Social rates and community willingness to pay.
2) Feasibility Study and Whole of Life cost analysis for Water and Sewer in Collector.
3) Community Consultation regarding service levels and maintenance costs and impacts on rates.
4) Engineering Design Development.
5) Construction.
6) WAE and Commissioning.

**Council Contact:**
Mursaleen Shah
MShah@upperlachlan.nsw.gov.au
02 4830 1063 or 0409 050 451
Moss Vale Sewage Treatment Plant Upgrade

Project Brief

Moss Vale Sewage Treatment Plant has a design capacity of 9,000 EP and utilises two IDEA reactors for secondary treatment, chemical phosphorus removal and UV disinfection to treat sewage. Treated effluent is discharged to Whites Creek. The project includes detailed design and construction to increase the plant capacity to 19,600 EP. Components include: new inlet works with grit removal, additional IDEA reactor with Dissolved Oxygen control, improved alum and caustic dosing systems, catch pond modifications, upgrade filtration system, new chlorination/de-chlorination, additional sludge lagoon and new mechanical sludge dewatering. The upgrade is supported by the IWCM Strategy and Options Assessment Study. Concept Design and Business Case are currently being completed. Detailed grant application will be submitted for 25% funding for detailed design and construction under the SSWP. Moss Vale Sewage Treatment Plant is within the Sydney Water Catchment and is subject to Neutral or Beneficial Effect (NorBE) compliance. The planned upgrade aims to improve the effluent quality discharged to the environment and meet NorBE compliance. The level that the upgrade will meet NorBE will be determined during Concept Design.

Rationale for Investment

Regulatory Compliance Issue - Exceedance of the total load limits for nitrogen due to extra flows at the STP.
Capacity Issue - The current estimated EP of 8,988 treated by the plant means that the plant is operating at its current design capacity of 9,000 EP.
Regulatory Compliance Issue - The biological/nutrient loading rates measured in the 2009 Influent Sewage Monitoring Report were lower than the Sewage Treatment Plant design loading rates hence the biological/nutrient capacity of the plant is expected to be exceeded around 2018.
Regulatory Compliance Issue – NorBE compliance is not assured.

Benefits

- Improved effluent quality and protection of the environment.
- Improved protection of Sydney Drinking Water Catchment.
- Support future development including residential, commercial and industrial growth in Moss Vale.
- Reduce the risk of financial loss (from fines) for not meeting regulatory compliance.
- Improved public relations and level of service provision.
- Provide economic benefit during construction.

Alignment with Regional Strategies

- WSC Community Strategic Plan.
- South East and Tablelands Regional Plan.
Moss Vale Sewage Treatment Plant Upgrade

Stage:

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<th>Concept Design</th>
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Now: Under preparation

Approval: SSWP, Dol Water, EPA, WaterNSW

Status

Concept Design, Business Case, SSWP Detailed Application for detailed design and construction to be submitted by February 2019.

To next stage
Cost $100K
Time 6mo

To shovel-ready
Cost $2.5M
Time 1.5yr

To commission
Cost $28.7M
Time 3yr

Work underway
Concept Design

Next body of work
Business Case

Next steps

1) Complete concept design and Environmental Impact Assessment; Obtain s60 approval from Dol Water; Obtain approval from EPA and WaterNSW with regard to the EIA and NorBE compliance.
2) Business Case and detailed grant application (SSWP).
3) Detailed design and construction.

Council Contact:
Michael Herraman
Michael.Herraman@wsc.nsw.gov.au
0422 293 581
Bowral Sewage Treatment Plant Upgrade

Bowral Sewage Treatment Plant is approaching capacity and needs to be upgraded to ensure regulatory compliance at an estimated cost of $34.1M, seeking a contribution of $8.5M, with a project duration of 2.5 years.

**Project Brief**

Bowral Sewage Treatment Plant is a 14,600 EP capacity plant that utilises one IDEA reactor (10,600 EP) and two Pasveer channels (2 x 2,000 EP) for secondary treatment, and chemical phosphorus removal to treat sewage. The effluent is filtered and disinfected via a UV unit prior to discharge to Wingecarribee River. The project includes detailed design and construction to increase the plant capacity to 19,000 EP. Components included in the upgrade are: new lift pump station, new inlet works with grit removal, additional IDEA reactor, improved alum and caustic dosing systems, catch pond modifications, new wet weather storage, upgrade filters, chlorination/de-chlorination, additional sludge lagoons and mechanical sludge dewatering. The upgrade is supported by the Integrated Water Cycle Management Strategy and Options Assessment Study. Concept Design and Business Case are currently being completed. Detailed grant application will be submitted for 25% funding for detailed design and construction under the SSWP. The plant is within the Sydney Water Catchment and is subject to Neutral or Beneficial Effect (NorBE) compliance. The planned upgrade aims to improve the effluent quality discharged to the environment and meet NorBE compliance. The level that the upgrade will meet NorBE will be determined during Concept Design.

**Rationale for Investment**

Regulatory Compliance Issue - Regular exceedance of the 50th percentile limit of total nitrogen and some exceedances of the 90th percentile for total phosphorus. The plant is currently operating past its capacity for total nitrogen.

Capacity Issue - The plant has a hydraulic design capacity of 14,600 EP based on a loading of 240 L/EP/d. The current estimated EP of about 15,000 exceeds the design capacity.

Benefits

- Improved effluent quality and protection of the environment.
- Improved protection of Sydney Drinking Water Catchment.
- Support future development including residential, commercial and industrial growth in Bowral.
- Reduce the risk of financial loss (from fines) for not meeting regulatory compliance.
- Improved public relations and level of service provision.
- Provide economic benefit during construction.

Alignment with Regional Strategies

- WSC Community Strategic Plan.
- South East and Tablelands Regional Plan.
Bowral Sewage Treatment Plant Upgrade

Stage:

| Plan | Concept Design |

Now: Under preparation

Approval: SSWP, DoI Water, EPA, WaterNSW

Status

Concept Design, Business Case, SSWP Detailed Application for detailed design and construction to be submitted by February 2019.

To next stage
Cost $100K
Time 6mo

To shovel-ready
Cost $2.9M
Time 1.5yr

To commission
Cost $34.1M
Time 2.5yr

Work underway
Concept Design

Next body of work
Business Case

Next steps

1) Complete concept design and Environmental Impact Assessment; Obtain S60 approval from DoI Water; Obtain approval from EPA and WaterNSW with regard to the EIA and NorBE compliance.
2) Business Case and detailed grant application (SSWP).
3) Detailed design and construction.

Council Contact:
Michael Herraman
Michael.Herraman@wsc.nsw.gov.au
0422 293 581
Mittagong Sewage Treatment Plant Upgrade

Project Brief

Mittagong STP has a design capacity of 14,000 EP and utilises two IDEA reactors for secondary treatment, chemical phosphorus removal and UV disinfection to treat sewage. Treated effluent is discharged into Mittagong Creek, with some effluent reused at the Highlands Golf Course. The project includes detailed design and construction to increase the plant capacity to 18,500 EP. Components included: new inlet works with grit removal, additional IDEA reactor, improved alum and caustic dosing systems, catch pond modifications, new wet weather storage, upgrade filters, chlorination/de-chlorination, additional sludge lagoons and mechanical sludge dewatering. The upgrade is supported by the IWCM Strategy and Options Assessment Study. Concept Design and Business Case are currently being completed. Detailed grant application will be submitted for 25% funding for detailed design and construction under the SSWF program. The plant is within the Sydney Water Catchment and is subject to Neutral or Beneficial Effect (NorBE) compliance. The planned upgrade aims to improve the effluent quality discharged to the environment and meet NorBE compliance. The level that the upgrade will meet NorBE will be determined during Concept Design.

Rationale for Investment

Regulatory Compliance Issue - Exceeded 50th percentile concentration limit for total nitrogen. Capacity Issue - The plant has a hydraulic design capacity of 14,000 EP based on a loading of 230 L/EP/d. The current estimated EP of about 16,500 exceeds the design capacity. Capacity Issue - The plant is currently operating past its capacity for total nitrogen and total phosphorus.

Benefits

Improved effluent quality and protection of the environment.
Improved protection of Sydney Drinking Water Catchment.
Support future development including residential, commercial and industrial growth in Bowral.
Reduce the risk of financial loss (from fines) for not meeting regulatory compliance
Improved public relations and level of service provision.
Provide economic benefit during construction.

Alignment with Regional Strategies

WSC Community Strategic Plan.
South East and Tablelands Regional Plan.
Mittagong Sewage Treatment Plant Upgrade

Status
SSWP EOI to be submitted for detailed design and construction (October 2019). Concept Design and Business Case to commence within six months.

To next stage
- Cost $100K
- Time 10mo

To shovel-ready
- Cost $2M
- Time 22mo

To commission
- Cost $23.3M
- Time 5.5yr

Work underway
Tender brief being finalised for Concept Design and Business Case.

Next body of work
Concept Design and Business Case

Next steps
1) Complete concept design and Environmental Impact Assessment; Obtain s60 approval from DoI Water; Obtain approval from EPA and WaterNSW with regard to the EIA and NorBE compliance.
2) Business Case and detailed grant application (SSWP).
3) Detailed design and construction.

Council Contact:
Michael Herraman
Michael.Herraman@wsc.nsw.gov.au
0422 293 581
Wingecarribee Water Treatment Plants Process Improvements

Process improvements are required to mitigate the risk of poor quality drinking water at an estimated cost of $6M, seeking a contribution of $1.5M, with a project duration of 4 years.

Wingecarribee Shire Council

State: Goulburn
Federal: Whitlam

$6M
4yr

Rationale for Investment

Incidents of water complaints, poor raw water quality and increased operational costs.

Benefits

Secure water supply that meets the drinking water guidelines and health standards. Improved operating efficiency and risk management.

Alignment with Regional Strategies

WSC Community Strategic Plan.
South East and Tablelands Regional Plan.
Wingecarribee Water Treatment Plants Process Improvements

Status
Options review and concept design underway. Application to SSWP for detailed design and construction following completion of concept design and business case.

Now: Under preparation
Approval: SSWP, DoI Water

To next stage
Cost $50K
Time 1yr

To shovel-ready
Cost $600K
Time 2yr

To commission
Cost $6M
Time 4yr

Work underway
Options Assessment and Concept Design

Next body of work
Business Case

Next steps
1) Complete options assessment, concept design and business case.
2) Complete detailed design.
3) Complete construction.

Council Contact:
Michael Herraman
Michael.Herraman@wsc.nsw.gov.au
0422 293 581
Bundanoon Water Treatment Plants Process Improvements

**Project Brief**

Bundanoon Water Treatment Plant supplies approximately 10% of Wingecarribee Shire Councils water supply. Upgrade the treatment plant to ensure effective management of water quality including, algae, manganese, backwash and run to waste facilities.

**Rationale for Investment**

Incidents of water complaints, poor raw water quality and increased operational costs.

**Benefits**

Secure water supply that meets the drinking water guidelines and health standards. Improved operating efficiency and risk management.

**Alignment with Regional Strategies**

Bundanoon Water Treatment Plants Process Improvements

Stage: Plan
Concept Design

Now: Under preparation

Approval: SSWP, DoI Water

Status
Options review and concept design underway. Application to SSWP for detailed design and construction following completion of concept design and business case.

To next stage
Cost $50K
Time 1yr

To shovel-ready
Cost $400K
Time 2yr

To commission
Cost $4M
Time 3.5yr

Work underway
Options Assessment and Concept Design

Next body of work
Business Case

Next steps
1) Complete options assessment, concept design and business case.
2) Complete detailed design.
3) Complete construction.

Council Contact:
Michael Herraman
Michael.Herraman@wsc.nsw.gov.au
0422 293 581
Boorowa Water Security Project

Provide long term water security for Boorowa with 1) a scoping study at an estimated cost of $500K, seeking a contribution of $250K and 2) construction, seeking a contribution of $70M, with a project duration of 44 months.

Project Brief

The existing water sources that provide water to Boorowa are unable to meet the current and future demand and are severely affected by drought conditions within the region. The reliability of the multiple existing water sources is severely impacted by drought conditions and have excessively high concentrations of natural fluorides and dissolved solids which are not able to be removed by the existing water treatment plant. This project is to develop a replacement reliable town water supply for the Boorowa community by constructing a pipeline between Boorowa and the Goldenfields Water Supply trunk network system. An Options Assessment has been completed and a preferred direction (one single pipeline) has been determined, however SSWP require further options assessment works to be completed before they approve the preferred option. Council must confirm the works as part of the extended study before SSWP will release funds to carry out the additional investigations.

Hilltops Council

State: Goulburn

Federal: Hume

$70M

44mo

Rationale for Investment

Level 3 and 4 water restrictions have been in place every summer over the last 3 years. Since 2003, Boorowa community has experienced as much as 519 consecutive days on high level restrictions. The existing water treatment plant is past its economic life and is need of complete replacement with more modern technology, it is unable to treat and deliver a reliable potable source of water that will consistently meet the Australia Drinking Water guidelines. The limitations with the quantity and quality of the existing water supply is restricting growth within the Boorowa area.

Benefits

Reliable supply of high-quality potable water that meets the requirements of the ADWG. Remove potential public health concerns by eliminating all existing water sources from the supply network. Reduce or eliminate the future need for water restrictions being imposed during periods of drought and prevent water restrictions from being permanently established within Boorowa. Meet the future water demand for local industry and other commercial enterprises by allowing them to be established in and around Boorowa in the future. Currently, they are not permitted due to water restrictions.

Alignment with Regional Strategies

HC Community Strategic Plan. Draft IWCM.
Boorowa Water Security Project

**Stage:**
- **Plan**
- **Site assessment**

**Now:** Awaiting approval

**Approval:** SSWP

**Status**
Options assessment study completed, but still needs to be developed further and resubmitted to SSWP.

**To next stage**
- Cost: $500K
- Time: 8mo

**To shovel-ready**
- Cost: $3.3M
- Time: 20mo

**To commission**
- Cost: $70M
- Time: 44mo

**Work underway**
Options Assessment including Site Assessment

**Next body of work**
Additional Options Assessment study to confirm the preferred option and develop the Business Case.

**Next steps**
1) Complete Options Assessment.
2) Confirm preferred option
3) Community Consultation.
4) Develop Business Case.
5) Seek Funding approval (unknown timeframe).
6) Develop Design and Construct tender document and tender works.
7) Project Construction.
8) Project commissioning.

**Council Contact:**
Ken Fox
Ken.Fox@hilltops.nsw.gov.au
0448 565 463
Jugiong Sewerage Scheme

Provide a new community sewerage scheme to address serious public health concerns with 1) a Scoping Study estimated at $100K, seeking a contribution of $50K and 2) project design and construction seeking an estimated contribution of $7M, with a project duration of 1.5 years.

Project Brief

Develop a Sewerage Scheme for the Jugiong Community to replace all the privately-owned aging septic tanks in the community which are failing. A large proportion of the existing septic tank sewerage systems are overloaded or at the end of their economic lives, which results in significant illegal discharges, overflows and seepage. In many cases the effluent disposal fields from these existing tanks have failed or become overloaded which created a significant public health risk within the Jugiong area. This could potentially impact on water quality within the Murrumbidgee River catchment and with the Goldenfields Water Treatment facilities. While the current base population for Jugiong is approximately 150, the seasonal population on any one day rises to between 500-1000 visitors due to the local caravan park and visitors coming to this area.

Rationale for Investment

The community has experienced considerable growth from Hume Highway traffic that use Jugiong as a stopover area. It has also become a popular day-trip destination. It is located on the banks of the Murrumbidgee River, a very sensitive waterway with multiple water extraction permits issued downstream from Jugiong, which could be impacted by sewerage overflows. There is a significant creek that flows through the centre of the community and discharges into the Murrumbidgee River, immediately upstream of the Goldenfields WTP which supplies water to over 20,000 residents and significant intensive agricultural industries in the region (horticulture, poultry, piggeries, viticulture, orchards, and abattoirs). Due to the condition of existing septic tanks, frequency of sewage overflows, and seepage from the effluent disposal fields that have become overloaded due to failure, much of this runoff is finding its way into nearby water courses and the local creek system.

Benefits

Health benefits for Jugiong community and the region. Urgent need to secure and improve the overall water quality within the Murrumbidgee River catchment that rely on Goldenfields Water to supply potable water throughout this region. Preserve the local economy and businesses in the Jugiong area that would otherwise be adversely impacted if this sewerage scheme wasn’t to proceed.

Alignment with Regional Strategies

HC Community Strategic Plan. Draft IWCM.
Jugiong Sewerage Scheme

Stage: Plan
Options study

Now: Under preparation

Approval: N/A

Status
Council is in the process of investigating the range of possible options for the development of a community scheme

To next stage
Cost $100K
Time 6mo

To shovel-ready
Cost
Time

To commission
Cost $7M
Time 1.5yr

Work underway
Project Scope

Next body of work
Options Assessment

Next steps
1) Complete Options Assessment.
2) Confirm preferred option.
3) Community Consultation.
4) Develop Business Case.
5) Seek Funding approval (timeframe unknown).
6) Develop Design and Construction tender document and tender works.
7) Project construction and commissioning.

Council Contact:
Ken Fox
Ken.Fox@hilltops.nsw.gov.au
0448 565 463
Southern Tablelands Water Reuse Infrastructure Scheme Stage 2 (Goulburn Reuse Scheme)

**Project Brief**

Council is close to completing the construction of a new Waste Water Treatment Plant. This highly treated effluent will be reused with existing customers as well as used on sporting grounds and parks in Goulburn, reducing reliance on potable water in Goulburn and provide high quality sporting fields. The reuse water will also be available along the pipe network for industrial use or third pipe use that will promote "wet" industry to Goulburn.

**Rationale for Investment**

This project was identified as a key recommendation in Council's IWCM Evaluation in 2010. The existing effluent irrigation scheme was determined to be environmentally unsustainable at the current treatment and irrigation quantities. The IWCM also recommended to augment the existing treatment plant for centralised reuse.

**Benefits**

- Reduction of current environmental impacts from our current undersized irrigation farm.
- Reuse of effluent onto sporting fields improving water security.
- Increase the potential for industry using recycled effluent.

**Alignment with Regional Strategies**

Southern Tablelands Water Reuse Infrastructure Scheme Stage 2 (Goulburn Reuse Scheme)

**Stage:**
- Develop
- Concept Design

**Now:** Awaiting approval

**Approval:** Design requires DOI, Water approval and SSWP business case approval.

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**Status**

Contract in place for concept design, detailed design and construction support. Currently the project is in concept design. SSWP application has been made for the business case.

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**To next stage**
- Cost $250K
- Time 6mo

**To shovel-ready**
- Cost $600K
- Time 15mo

**To commission**
- Cost $9.2M
- Time 37mo

---

**Work underway**

Concept Design

**Next body of work**

Detailed Design

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**Next steps**

1) Completion of concept design.
2) Detailed design and approvals.
3) Construction.
4) Commissioning.

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**Council Contact:**
Marina Hollands
Marina.Hollands@goulburn.nsw.gov.au
02 4823 4451
Goulburn Water Augmentation Scheme

Five separate projects to ensure the Goulburn Water Treatment Plant meets water security, reliability and water quality objectives, at an estimated cost of $10.65M, with a project duration of 3 years.

Goulburn Mulwaree Council

State: Goulburn
Federal: Hume

$10.65M
3yr

Project Brief

The project has five components: Raw water augmentation for pre-treatment; backwash water recovery and sludge handling; River Street water pump station upgrade; construction of an additional reservoir at Addison Street; new rising main to Addison Street.

Rationale for Investment

Pre-treatment allows flexibility of source selection and treatment during varying water quality scenarios; the sludge handling allows greater efficiency in sludge drying and disposal with reuse of backwash water through the plant. The pump station upgrade, reservoir and rising main will allow for existing reservoir refurbishment and improve current levels of service.

Benefits

The raw water augmentation will allow council to continually pump from Wingecarribee Reservoir to maximise our yield and complete pre-treatment when required. Improved sludge handling processes will reduce our current environmental risks from current operations and will facilitate faster drying and less mechanical intervention. The other works will improve capacity and supply.

Alignment with Regional Strategies

GMC IWCM 2010.
Delivery Program 2017-2021.
HSP Operational Plan.
# Goulburn Water Augmentation Scheme

## Status

Drying beds and backwash recovery facilities were designed in 2009 and the specification requires an update. Other components require concept design. SSWP application has been made for the business case.

## Stage

<table>
<thead>
<tr>
<th>Plan</th>
<th>Concept Design</th>
</tr>
</thead>
</table>

**Now:**

- Awaiting approval

**Approval:** Council, DoI Water, s60 approval

## Work underway

Options Review and Concept Design

## Next body of work

Options Review

## Next steps

1. Concept design.
2. Detailed design.
3. Construction and Commissioning.

## Cost

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<tr>
<th>To next stage</th>
<th>To shovel-ready</th>
<th>To commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost $200K</td>
<td>Cost $1M</td>
<td>Cost $10.65M</td>
</tr>
<tr>
<td>Time 7mo</td>
<td>Time 1.5yr</td>
<td>Time 3yr</td>
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</tbody>
</table>

## Council Contact

Marina Hollands  
Marina.Hollands@goulburn.nsw.gov.au  
02 4823 4451
Marulan Waste Water Treatment Plant Upgrade

**Project Brief**

Currently the Marulan Waste Water Treatment Plant has very simple treatment that requires improvement to meet contemporary standards for sewage treatment and sustainable discharge or reuse of effluent. This upgrade would provide treatment to improve current sustainability of operations and to produce effluent of a quality for discharge or reuse.

**Rationale for Investment**

The Marulan Waste Water treatment system is designed for an equivalent population of 1000. The current plant provides very simple treatment that does not meet current environmental standards. A new plant will provide local environmental benefits and will provide an effluent suitable for sustainable reuse or discharge.

**Benefits**

- Provision of appropriate treatment for sewage in Marulan.
- Improved environmental results from sewage treatment.
- A resource for reuse.

**Alignment with Regional Strategies**

- GMC IWCM 2010.
- Delivery Program 2017-2021.
Marulan Waste Water Treatment Plant Upgrade

Status
Investigations to commence.

Work underway
Investigation to commence this financial year

Next body of work
Concept Design

Next steps
1) Concept design.
2) Detailed design.
3) Construction.

Council Contact:
Marina Hollands
Marina.Hollands@goulburn.nsw.gov.au
02 4823 4451
Marulan Water Treatment Plant Alternate Energy

The installation of floating solar panels in the Raw Water Dam at Marulan at an estimated cost of $2.5M, with a project duration of 26 months.

Project Brief

The installation of floating solar panels on the Raw Water Dam to allow the generation of power for the operation of treatment plant, to reduce evaporation, reduce heat in the storage, reduce algal issues and to reduce wind erosion of the storage.

Goulburn Mulwaree Council

State: Goulburn
Federal: Hume

$2.5M

26mo

Rationale for Investment

Council has money budgeted towards solar energy installation in order to improve Council’s sustainability in our larger powered sites.

Benefits

Environmental benefits from using green power. The floating panels have benefits in reducing erosion of the storage dam. Reduced penetration of light through the storage reducing algae generation. Substantially improving raw water quality.

Alignment with Regional Strategies

GMC Delivery Program 2017-2021.

Location: Marulan
Marulan Water Treatment Plant Alternate Energy

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<td>Investigations complete. Further detailed analysis required prior to design.</td>
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</table>

<table>
<thead>
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<th>Stage</th>
<th>To next stage</th>
<th>To shovel-ready</th>
<th>To commission</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost $100K</td>
<td>Cost $200K</td>
<td>Cost $2.5M</td>
</tr>
<tr>
<td></td>
<td>Time 1yr</td>
<td>Time 17mo</td>
<td>Time 26mo</td>
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</table>

Work underway
Concept Design

Next body of work
Detailed Design

Next steps
1) Design and specification preparation suitable for procurement.
2) Design and Construction.

Council Contact:
Marina Hollands
Marina.Hollands@goulburn.nsw.gov.au
02 4823 4451
Nelligen Water Supply and Sewerage Schemes

Project Brief

Nelligen is a village situated on the Clyde River approximately 9 kilometres by road north-west of Batemans Bay. The village has a permanent population of approximately 250 residents, and the village swells to more than 800 residents during the Christmas and Easter holiday periods. Nelligen is presently serviced by on-site water supply (rainwater tank) and sewerage (septic tank) systems. Due to relatively small lot sizes, soil conditions and topography, water carting and overloaded septic absorption trenches are a regular feature, with failing septic systems being a significant point source of pollution of the Clyde River. Council proposes to provide a potable water supply to the village by constructing a pipeline from Batemans Bay, two service reservoirs, and a water supply reticulation system within the village. Council also proposes to construct a pressure sewer collection system, a sewage pumping station and a pipeline to transfer sewage to the Batemans Bay Sewerage Scheme.

Rationale for Investment

The Clyde River is home to the Clyde River Oyster Industry and significant tourism and recreational activity. The proposed Nelligen Sewerage Scheme offers a significantly higher protection to the Clyde River and those that depend upon it. The proposed Nelligen Water Supply Scheme will provide better water security for the Nelligen community and improved health outcomes through access to improved water quality.

Benefits

- Public health.
- Environmental health.
- Protection of downstream aquaculture industries.
- Security of water supply.

Alignment with Regional Strategies

- NSW 2021.
- South East NSW Regional Action Plan 2021.
Nelligen Water Supply and Sewerage Schemes

<table>
<thead>
<tr>
<th>Stage</th>
<th>Deliver</th>
<th>Construction procurement</th>
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<tbody>
<tr>
<td>Now:</td>
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<td>Approval:</td>
<td>SSWP</td>
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**Status**

Concept design and environmental assessment completed. Detailed design scheduled for completion in early 2019.

**Work underway**

Environmental Assessment, Detailed Design and Business Case.

**Next body of work**

Construction Procurement and Delivery.

**Next steps**

1) Complete detailed design.  
2) Obtain project approvals.  
3) Prepare business case.  
4) Construction procurement.  
5) Construction delivery.

---

**Council Contact:**
Brett Corven  
Brett.Corven@esc.nsw.gov.au  
02 4474 7458
Eurobodalla Water Supply Southern Storage

Secure Eurobodalla Region’s water supply by constructing a pumping station, off-river water storage and pipelines at an estimated cost of $100M, seeking a contribution of $25M, with a project duration of 3 years.

Project Brief

Eurobodalla’s water supply system stretches from Maloney’s Beach to Mystery Bay (90 kilometres), servicing approximately 20,000 properties including the main population centres of Batemans Bay, Moruya and Narooma. The water supply draws from the Deua River which feeds a 4,900 megalitre off-river storage (Deep Creek Dam). The Tuross River is used to supplement supply during peak holiday periods. In July 2016, the commencement of Water Sharing Plans in the Clyde, Deua and Tuross River water sources (under the NSW Water Management Act) has reduced access to the low flow portion of river discharges, reducing the secure yield of the region’s water supply, and requiring additional water storage to provide a secure water supply. Council proposes to construct a 26 megalitre per day pumping station accessing the Tuross River, a 3,000 megalitre off-river storage and associated pipelines to enable compliance with NSW policy and to secure the region’s water supply.

Rationale for Investment

The Eurobodalla Shire is home to approximately 38,000 residents but swells to more than 100,000 over the Christmas and Easter holiday periods. This means that water supply infrastructure must have a capacity that far exceeds the needs of the people that must pay for it. Additional water storage will enable Eurobodalla Shire Council to secure the region’s water supply, to respond and adapt to climate change and variability, and to enable economic development within the Eurobodalla including associated population growth, while protecting the riverine environment by enabling compliance with state government Water Sharing arrangements.

Benefits

Securing the future of the region's water. Compliance with Water Sharing Plans - managing the region's natural resources to deliver long-term sustainability. Responding to and addressing climate risk. Infrastructure that supports growth and regional economic development.

Alignment with Regional Strategies


Location: All towns and villages in the ESC LGA
**Eurobodalla Water Supply Southern Storage**

**Stage:** Deliver

- Construction procurement

**Now:** Under preparation

**Approval:** Independent Planning Commission

---

**Status**

Options assessment and concept design completed and exhibited to the public. Detailed design 60% complete. Environmental impact statement to be exhibited to the community during September/October 2018.

---

### To next stage

- **Cost:** 
- **Time:**

### To shovel-ready

- **Cost:** $1M
- **Time:** 1yr

### To commission

- **Cost:** $100M
- **Time:** 3yr

---

**Work underway**

Environmental Assessment, Detailed Design, Project Approval and Business Case.

**Next body of work**

Construction Procurement and Delivery.

---

**Next steps**

1. Complete detailed design.
2. Obtain all project approvals.
5. Construction delivery.

---

**Council Contact:**

Brett Corven
Brett.Corven@esc.nsw.gov.au
02 4474 7458
Eurobodalla Southern Water Treatment Plant

Project Brief

Following the construction of the Eurobodalla Water Supply Southern Storage (please refer to previous project), a new Water Treatment Plant will be required to maximise the secure yield provided by the water storage. Council proposes to construct a 25 megalitre per day Water Treatment Plant, pumping station and associated transfer pipelines to meet the requirements.

Rationale for Investment

The Eurobodalla water supply system draws from the Deua River which feeds a 4,900 ML off-river storage (Deep Creek Dam), from which water is treated at the 20 ML/day Northern Water Treatment Plant and distributed throughout the system. The Tuross River and 4 ML/day Southern Water Treatment Plant is used to supplement supply during peak holiday periods. The Southern Water Treatment Plant is a packaged type facility designed as a short-term solution to accommodate peak holiday demand. The Southern Water Treatment Plant provides satisfactory treatment for current water quality requirements but is not expected to meet proposed microbial health targets (Australian Drinking Water Guidelines: Draft Framework on Microbial Health Based Targets). Council proposes to construct a 25 ML/day water treatment plant that meets the water quality and minimum treatment requirements of the revised ADWG, and that accommodates current and future peak day demands.

Benefits

Securing the future of the region's water. Infrastructure that supports growth and regional economic development. Public health - improved water quality standards.

Alignment with Regional Strategies

Eurobodalla Southern Water Treatment Plant

### Status


### To next stage

- Cost: $200K
- Time: 5yr

### To shovel-ready

- Cost: $1M
- Time: 7yr

### To commission

- Cost: $50M
- Time: 9yr

### Work underway

Options Assessment.

### Next body of work

Concept Design.

### Next steps

1. Carry out options study.
2. Prepare concept design.
3. Carry out environmental assessment.
4. Prepare detailed design.
5. Obtain project approvals.
6. Construction procurement.
7. Construction delivery.

### Council Contact:

Brett Corven
Brett.Corven@esc.nsw.gov.au
02 4474 7458
Akolele Sewerage Scheme

Provide a Sewerage Scheme to the village of Akolele at an estimated cost of $3M, seeking a contribution of $750K, with a project duration of 3 years.

Eurobodalla Shire Council

State: Bega
Federal: Eden Monaro

$3M
3yr

Location: Akolele

Project Brief

Akolele is a village situated on the northern bank of Wallaga Lake, which forms Eurobodalla Shire Council’s southern border with Bega Valley Shire. The village has a permanent population of approximately 150 residents. Bega Valley Shire Council presently provides reticulated water to Akolele as an extension of the Bermagui/Walla Lake Water Supply Scheme. Sewage within the village is managed by on-site (septic) systems. Due to relatively small lot sizes, soil conditions and topography, overloaded septic absorption trenches are a regular feature, with failing septic systems being a significant point source of pollution of Wallaga Lake. Council proposes to construct a pressure sewer collection system, and a pipeline to transfer sewage to the Bermagui/Wallaga Lake Sewerage Scheme for treatment and disposal.

Rationale for Investment

Wallaga Lake is home to significant cultural heritage, oyster and recreational fishing industries, significant tourism and recreational activity. The proposed Sewerage Scheme offers significantly higher protection of Wallaga Lake and those who depend upon it.

Benefits

Public health.
Environmental health.
Protection of adjacent aquaculture industries.

Alignment with Regional Strategies

ESC IWCM Strategy 2016.
NSW 2021.
South East NSW Regional Action Plan 2021.
# Akolele Sewerage Scheme

## Status

**Concept Design completed.**

## To next stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cost</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Develop</td>
<td></td>
<td></td>
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<tr>
<td>Design and specification</td>
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## To shovel-ready

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<th>Stage</th>
<th>Cost</th>
<th>Time</th>
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<td>2yr</td>
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## To commission

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<th>Stage</th>
<th>Cost</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
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<td>$3M</td>
<td>3yr</td>
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</tbody>
</table>

## Work underway

N/A

## Next body of work

Environmental Assessment and Detailed Design.

## Next steps

1. Carry out community consultation.
2. Carry out environmental assessment.
3. Prepare detailed design.
5. Construction delivery.

---

**Council Contact:**

Brett Corven  
Brett.Corven@esc.nsw.gov.au  
02 4474 7458
Batemans Bay / Tomakin Region Sewerage Augmentation

Increase sewage treatment through the augmentation of the Batemans Bay ($10M) and Tomakin ($25M) Sewage Treatment Plants, and the realignment of sewage collection systems ($10M), seeking a contribution of $10M, with a project duration of 3 years.

**Project Brief**

The seaside towns of Batemans Bay, Tomakin, Broulee and surrounding suburbs experience a significant influx of tourists during the summer months, resulting in both the Batemans Bay and Tomakin Sewage Treatment Plants exceeding capacity and discharging poorly treated effluent into the local environment. Council proposes to augment both sewage treatment plants to accommodate seasonal increases in demand and population growth into the future. The suburbs of Lilli Pilli and Malua Bay which currently discharge to the Batemans Bay Sewage Treatment Plant will have sewage loads diverted to the Tomakin Sewage Treatment Plant to take advantage of land availability and hence scalability at the site.

**Rationale for Investment**

Additional sewage treatment capacity will enable Eurobodalla Shire Council to manage the extra sewage load experienced during the tourist season, and to enable economic development including associated population growth, while protecting the environment by enabling compliance with Environment Protection License conditions.

**Benefits**

- Public health.
- Environmental health.

**Alignment with Regional Strategies**

- NSW 2021.
- South East NSW Regional Action Plan 2021.

**Location:** Various towns and villages in the ESC LGA
Batemans Bay / Tomakin Region Sewerage Augmentation

Status

Concept Designs Completed.

Work underway
Detailed Design and project approvals.

Next body of work
Construction Procurement and Delivery.

Next steps

1) Complete detailed design.
2) Obtain all project approvals.
3) Prepare business case.
4) Construction procurement.
5) Construction delivery.

Council Contact:
Brett Corven
Brett.Corven@esc.nsw.gov.au
02 4474 7458
**Bemboka Water Treatment Plant**

*Provide filtered potable water for the Bemboka water supply system (required by NSW Health) at an estimated construction cost of $4M, with no contribution, with a project duration of 10 months.*

---

**Project Brief**

The Bemboka water system is currently supplied by a category 4 catchment (from a dairy farm), with the opportunity for pathogen loading primarily from agriculture, in the catchment above the extraction point. Water treatment will reduce the risk of catchment hazards and hazardous events, to drinking water, by establishing due diligence and credibility through a multi-barrier approach to water treatment. The ability to treat variable quality water will remove the need to isolate the source water during poor quality events, relieving constraints on demand and providing a dependable supply of high quality potable water to Bemboka residents. The challenge with the delivery of water treatment in Bega Valley is the impact on typical residential bills (up to 40%). The projects are at risk of capacity-to-pay generational delays for safe water supply, in the absence of significant external funding support.

---

**Rationale for Investment**

There have been incidents of water complaints, boil water alerts, unprotected water sources, water safety assessment results, and a need to meet the Australian Drinking Water Guidelines. This project will improve community health needs and economic growth in the region.

---

**Benefits**

- Ability to manage specific catchment risks.
- Consistently meet the ADWG.
- Ability to treat variable water quality.
- Improved resident perception of water quality and safety.
- Tourism and economic benefits from reduced exposure to poor water quality events.

**Alignment with Regional Strategies**

- BVSC Strategic Business Plan.
- BVSC Operation Plan.
- Drinking Water Quality Management Plan.

---

**Location:** Bemboka
Bemboka Water Treatment Plant

Status
Self-funded construction underway.

To next stage
Cost $2.5M
Time 7mo

To shovel-ready
Cost
Time

To commission
Cost $4M
Time 10mo

Work underway
Construction.

Next body of work
Commissioning.

Next steps
1) Complete construction.
2) Commission plant.
3) Proof of performance period.

Council Contact:
Anthony McMahon
AnthonyMcMahon@begavalley.nsw.gov.au
02 6499 2245
**Brogo-Bermagui Water Treatment Plant**

**Project Brief**

Construction of Brogo Water Treatment Plant will enable the treatment of variable quality river water, to a standard that consistently meets the Australian Drinking Water Guidelines 2011, and ensure the consistent supply of safe and high quality drinking water to users, which also includes significant tourist areas. It will minimise health risks from drinking water from catchment hazards and hazardous events, by establishing a multi-barrier approach to water treatment. It will aid in ensuring consistency of water throughout the system and ensure adequate chlorine residuals. The presence of a WTP in the Brogo-Bermagui water supply system will help enhance customers’ confidence in the safety of their potable water supply, eliminate the inconvenience caused by the need to boil water and mitigate the loss of productivity and economic impact this has on local business and Council. The challenge with the delivery of water treatment in Bega Valley is the impact on typical residential bills (up to 40%). The projects are at risk of capacity-to-pay generational delays for safe water supply, in the absence of significant external funding support.

**Rationale for Investment**

There have been incidents of water complaints, boil water alerts, unprotected water sources, water safety assessment results, and a need to meet the Australian Drinking Water Guidelines. This project will improve community health needs and economic growth in the region.

**Benefits**

- Ability to manage specific catchment risks.
- Consistently meet ADWG.
- Ability to treat variable water quality.
- Improved resident perception of water quality and safety.
- Tourism and economic benefits from reduced exposure to poor water quality events.

**Alignment with Regional Strategies**

- BVSC Strategic Business Plan.
- BVSC Operation Plan.
- Drinking Water Quality Management Plan.
## Brogo-Bermagui Water Treatment Plant

### Stage:
- **Develop**
- **Design and Specification**

### Now:
- Awaiting approval

### Approval:
- SSWP

### Status
Awaiting outcome of detailed SSWP funding application (Round 2) for Design and Construction.

### To next stage
- Cost $40K
- Time 3mo

### To shovel-ready
- Cost $200K
- Time 4mo

### To commission
- Cost $10.3M
- Time 2yr

### Work underway
Development of technical specifications.

### Next body of work
Procurement.

### Next steps
1. Write technical specifications.
2. Procurement, including writing of RFT and tender schedules, advertising, evaluation and award of contract.
3. Construction.
5. Proof of performance period.

### Council Contact:
Anthony McMahon
AnthonyMcMahon@begavalley.nsw.gov.au
02 6499 2245
Bega-Tathra Water Treatment Plant

Provide filtered potable water to the Bega-Tathra water supply system (required by NSW Health) at an estimated construction cost of $15M, with a project duration of 3 years.

Bega Valley Shire Council

State: Bega
Federal: Eden Monaro

$15M
3yr

Project Brief

Bega-Tathra Water Treatment Plant services a permanent population of approximately 7,500 residents in the central portion of the Bega Valley Shire LGA. This facility is required to fulfill Council’s need to deliver treated water at a quality that consistently meets Australian Drinking Water Guidelines, including health and aesthetic guideline values for microbial, chemical and physical characteristics. The majority of dirty water complaints in the Bega Valley Shire are from customers with a connection to the Bega-Tathra water supply system. The newly established South East Regional Hospital in Bega has also experienced issues with water quality in recent times. With Tathra struggling to overcome a devastating bush fire whilst simultaneously dealing with consistently brown and orange water, this project is a genuine boost to the tourist perception of the coastal town. The challenge with the delivery of water treatment in Bega Valley is the impact on typical residential bills (up to 40%). The projects are at risk of capacity-to-pay generational delays for safe water supply, in the absence of significant external funding support.

Location: Bega

Rationale for Investment

There have been incidents of water complaints, unprotected water source, water safety assessment results, and a need to meet the Australian Drinking Water Guidelines.

Benefits

Ability to manage specific catchment risks.
Consistently meet the ADWG.
Ability to treat variable water quality.
Improved resident perception of water quality/safety.
Tourism and economic benefits from reduced exposure to poor water quality events.

Alignment with Regional Strategies

BVSC Strategic Business Plan.
BVSC Operation Plan.
Drinking Water Quality Management Plan.
Bega-Tathra Water Treatment Plant

Stage:

- **Plan**
- **Concept Design**

**Status**

Awaiting outcome of detailed SSWP funding application (Round 2) for Scoping Phase.

**To next stage**

- Cost $15K
- Time 3mo

**To shovel-ready**

- Cost $400K
- Time 1yr

**To commission**

- Cost $15M
- Time 3yr

**Work underway**

Preparation to seek quotes for preliminary site studies and concept design.

**Next body of work**

Procurement of site studies and concept design.

**Next steps**

1) Advertise and engage consultant for Option Assessment/Concept.
2) Undertake site studies (REF, Heritage, Noise, Geotech).
3) Write technical specifications.
4) Procurement, including writing of RFT and tender schedules, advertising, evaluation and award of contract.
5) Construction.
6) Commission.
7) Proof of performance period.

**Council Contact:**

Anthony McMahon
AnthonyMcMahon@begavalley.nsw.gov.au
02 6499 2245
Yellow Pinch Water Treatment Plant

Provide filtered potable water to the Wolumla, Merimbula, Pambula, Tura and Eden water supply systems (required by NSW Health) at an estimated construction cost of $23M, with a project duration of 42 months.

Project Brief

Yellow Pinch Dam (YPD) is the primary source of stored water for the system and the nominated location for a Water Treatment Plant. It currently supplies drinking water to Merimbula, Tura Beach and Pambula areas throughout the year. The strategy for YPD WTP is to enable the YPD to supply drinking water as the primary source to the Eden area in the south. This will require strategic configuration of Eden water supply assets, currently served by the Kiah Borefield and Ben Boyd Dam water sources. YPD WTP will reduce the risk to drinking water from catchment hazards and hazardous events by establishing due diligence and credibility through a multi-barrier approach to water treatment. The ability to treat variable quality water will remove the need to isolate source water during poor quality events, improve drought security, relieve constraints on demand and provide a dependable supply of high quality drinking water to residents and visitors. The challenge with the delivery of water treatment in Bega Valley is the impact on typical residential bills (up to 40%). The projects are at risk of capacity-to-pay generational delays for safe water supply, in the absence of significant external funding support.

Rationale for Investment

There have been incidents of water complaints, boil water alerts, unprotected water sources, water safety assessment results, and a need to meet the Australian Drinking Water Guidelines. This project will improve community health needs and economic growth in the region.

Benefits

- Ability to manage specific catchment risks.
- Consistently meet the ADWG.
- Ability to treat variable water quality.
- Improved resident perception of water quality and safety.
- Tourism and economic benefits from reduced exposure to poor water quality events.

Alignment with Regional Strategies

- BVSC Strategic Business Plan.
- BVSC Operation Plan.
- Drinking Water Quality Management Plan.
Yellow Pinch Water Treatment Plant

**Stage:**
- Plan
- Site Assessment

**Now:** Under preparation

**Approval:** BVSC

**Status**
Finalising the detailed SSWP funding application (Round 2) for Scoping Phase.

**To next stage**
- Cost $2K
- Time 1mo

**To shovel-ready**
- Cost $450K
- Time 2yr

**To commission**
- Cost $23M
- Time 42mo

**Work underway**
Preparation to seek quotes for site selection assessment, preliminary site studies and options assessment (subject to the outcome of the SSWP detailed application).

**Next body of work**
Submit Detailed Application, Site Selection Assessment and Treatment Options Assessment.

**Next steps**
1) Complete Site Assessment process.
2) Advertise and engage consultant for Options Assessment/Concept.
3) Undertake site studies (REF, Heritage, Noise, Geotechnical assessment).

---

**Council Contact:**
Anthony McMahon
AnthonyMcMahon@begavalley.nsw.gov.au
02 6499 2245
Merimbula Sewage Treatment Plant and Deep Ocean Outfall - State Significant Infrastructure

Protect Far South Coast NSW beaches and bays with a treatment plant upgrade and replacement of the beach face effluent-outfall with a deep ocean outfall (required by NSW EPA) at an estimated cost of $40.7M, with a project duration of 3 years.

Project Brief

Merimbula Sewage Treatment Plant (STP) Deep Ocean Out-Fall is State Significant Infrastructure. It includes a new effluent disposal outlet for the Merimbula STP and an upgrade to the treatment process. The outfall will be built to allow effluent from the STP to be discharged away from the aboriginal heritage in the Merimbula dunes. The project includes consideration of recycled water at the local Golf Course, reuse at farms, abolishment of dunal exfiltration and the beach-face outfall. The project will guarantee a sustainable outfall during wet weather into the future, it will protect the tourism industry, and the sensitive and beautiful environment in the beaches and bays of the Far South Coast.

Rationale for Investment

The project will deliver on community expectations, NSW EPA Licensing Requirements and increase economic growth in the region.

Benefits

- Full capacity to dispose all effluent discharged for the STP including wet weather flows.
- Proven technology.
- Potential to meet relevant environmental objectives, particularly if built to the 30-metre depth distance offshore.
- Does not impact on Merimbula Beach shoreline or sensitive receptors such as Merimbula and Pambula Lakes, if built to the 30-metre depth distance offshore.
- Relatively low landward construction footprint.

Alignment with Regional Strategies

- BVSC Strategic Business Plan.
- BVSC Operation Plan.
- EPA Licence.
- State Significant Infrastructure.
Merimbula Sewage Treatment Plant and Deep Ocean Outfall - State Significant Infrastructure

Status

Finalising SSWP EOI (Round 1) for Detailed Design and Construction Phase.

To next stage
Cost $3.5M  Time 2yr

To shovel-ready
Cost $3.8M  Time 27mo

To commission
Cost $40.7M  Time 3yr

Work underway
Options Assessment and Environmental Impact Assessment.

Next body of work
Approvals.

Next steps

1) Complete Concept Design and EIS.
2) Detailed Design.
3) Construction.

Council Contact:
Anthony McMahon
AnthonyMcMahon@begavalley.nsw.gov.au
02 6499 2245
Lake Albert Water Harvesting

Secure additional inflow by diverting Tatton drain into Lake Albert, at an estimated cost of $1M, with a project duration of 1 year.

Project Brief

Lake Albert is made up of multiple surrounding catchments and the Lake itself acts as a stormwater retention and sedimentation basin. Over the years, it has been made evident that the level of the lake is not consistent increasing both safety and environmental issues to the community and wildlife. Council proposes harvesting Tatton stormwater catchment and diverting it directly into the lake to help maintain optimum water level. The diversion method will be done using actuated penstocks on downstream headwall to re-route stormwater directly into the lake with an additional pump installed for dewatering in small rain events.

Rationale for Investment

Lake Albert is iconic resource for residents of the Riverina and visitors that participate in recreational and sporting activities, and Council’s desire is to continue to maintain and improve this facility for the stakeholders.

Benefits

- Achieve optimum water level.
- Promote good general health and wellbeing.
- Preserve an iconic resource of the Riverina.
- Ongoing support of recreational activities.

Alignment with Regional Strategies

- WWCC Community Strategic Plan 2040.
Lake Albert Water Harvesting

Stage: Develop
Design and Specification

Now: Awaiting approval
Approval: WWCC

Status
Final Proposal out for comment. Options for funding explored.

To next stage
Cost
Time 2wk

To shovel-ready
Cost
Time

To commission
Cost $1M
Time 1yr

Work underway
Design Review, Funding Source

Next body of work
Funding deed submission

Next steps
1) Existing drain earthworks, reshape of batters and invert of drain to suit new design.
2) Foreshore protection, installation of concrete mattress in existing drain.
3) Penstock installation, actuated penstocks to be installed on existing weir and headwalls in Tatton drain and Lake Albert.
4) Pump installation, installation of pump station and pump. 5) Installation of rising main discharge to lake.
6) Electrical connection, power connection from overhead power line to proposed pump and actuated penstocks. 7) SCADA connection, telemetry connection for commissioning and operation.

Council Contact:
Caroline Angel
Angel.Caroline@wagga.nsw.gov.au
02 6926 9400
Kooringal Filtration Basin

Preparation of concepts and scope to remediate ponds in the Kooringal Sewage Treatment Plant to store and filter water for use in Lake Albert, at an estimated cost of $30K, with a project duration of 4 weeks, and time to commission has a project duration of 1 year.

**Project Brief**

Unused ponds in the Kooringal Sewage Treatment Plant provide an opportunity to store and filter water that can be used to ‘top up’ Lake Albert when natural inflows are low or in some cases non-existent. The detention basin capacity will be 800ML which is approximately 23% of Lake Albert’s capacity and will be utilised as a filtration system for Lake Albert with the ability to store additional water during rainfall events.

**Rationale for Investment**

Lake Albert is one of Wagga Wagga’s key destinations for aquatic sports, competitions and other recreation activities. Historically the lake is filled via two creeks, but these are irregular and rely on large rain events, often with long periods with no inflow at all. There is also stormwater runoff from surrounding development. Due to the lack of inflow and hot conditions there is blue-green algae growth which makes the lake unusable and forces the lake to be closed due to health reasons (e.g. during 2017/18 summer). Upgrading the Kooringal treatment ponds to a storm water detention/ filtration basin will capture additional flow that can be treated and pumped back into Lake Albert to assist in maintaining optimum water level and improve water quality. This would make the lake usable for longer periods and provide certainty to users. This is one of two projects which could co-exist and provide two significant outcomes. The other project is ‘Kooringal Solar Farm Feasibility’.

**Benefits**

- Achieve optimum water level.
- Promote good general health and wellbeing.
- Preserve an iconic resource of the Riverina.
- Ongoing support of recreational activities.

**Alignment with Regional Strategies**

- WWCC Community Strategic Plan 2040.
Kooringal Filtration Basin

### Status

**Project Concept and Brief**
- **Concept Design**
- **Project feasibility**

### Stage

**Plan**
- **Concept Design**

**Now:** Under preparation

**Approval:** WWCC

### To next stage

- **Cost:** $30K
- **Time:** 4wk

### To shovel-ready

- **Cost:** TBD
- **Time:** TBD

### To commission

- **Cost:** TBD
- **Time:** 1yr

### Work underway

Concept Design

### Next body of work

N/A

### Next steps

1. Preparation of Concepts and Scope to identify risks (environmental, design).
2. Approval of concept and scope.
3. Investigation and design.
4. Preparation of final designs.
5. Tender for construction.
6. Construction.
7. Closure.

---

**Council Contact:**
Caroline Angel
Angel.Caroline@wagga.nsw.gov.au
02 6926 9400
Lake Albert Vegetation Filtration

Preparation of concepts and scope to provide clean water inflow into Lake Albert to manage sediment build up and alleviate blue-green algae growth, at an estimated cost of $30K, with a project duration of 8 weeks, and time to commission has a project duration of 1 year.

Project Brief

Stringybark and Crooked Creeks provide the significant inflow into Lake Albert. This project would see the existing dedicated wetland/bio-filters at Stringybark Creek cleaned and upgraded to manage the inflows. The Stringybark Creek catchment is highly erodible and consequently inflows can be heavily sediment laden potentially causing siltation when it enters the lake. Increased development within the catchment together with agricultural practices have increased the nutrient load entering the lake causing the growth of blue-green algae. Crooked Creek does not have any wetland/bio-filters at its outflow. Again, development in the catchment and agricultural practices have contributed to high nutrient loads and the growth of blue-green algae. This funding would allow for the design and development of a suitable wetland/bio-filter to alleviate the nutrient load and allow cleaner water to enter the lake. Blue-green algal blooms occur when nutrient laden inflows occur. It is exacerbated by warm weather and the lack of fresh inflows into the lake.

Rationale for Investment

Lake Albert is one of Wagga Wagga’s key destinations for aquatic sports, competitions and other recreation activities. The use of natural biofilters is beneficial to the current environment by enhancing biodiversity and habitat. Vegetation placed in the storm water flow path directly targets organic nutrients from upstream pollutants. The root system uptake nutrients such as nitrogen and Phosphorus as they are a major component of chlorophyll, the compound which plants use sunlight energy to produce sugar (Photosynthesis) thus competing for these nutrients the resulting leftover pollutants struggle to develop algae that can be damaging to the health of recreational users and wildlife thus improving water quality for recreational use.

Benefits


Alignment with Regional Strategies

WWCC Community Strategic Plan 2040.
Lake Albert Vegetation Filtration

Status
Full investigation, design and preparation of drawings to enable construction of the project.

Stage:
Plan
- Concept Design

Now:
Under preparation, Funding Required

Approval:
WWCC

To next stage
Cost: $30K
Time: 8wk

To shovel-ready
Cost: TBD
Time: TBD

To commission
Cost: TBD
Time: 1yr

Work underway
Concept Design

Next body of work
N/A

Next steps
1) Preparation of Concepts and Scope to identify risks, (environmental, design).
2) Approval of concept and scope.
3) Investigation and design.
4) Preparation of final designs.
5) Tender for construction.
6) Construction.
7) Closure.

Council Contact:
Caroline Angel
Angel.Caroline@wagga.nsw.gov.au
02 6926 9400
Tatton Drain Weir Wall

Funding for installation of a temporary weir wall, once detailed design is approved, at an estimated cost of $40K, with a project duration of 6 weeks.

Project Brief

Proposed compacted clay structure positioned upstream of the Lake Albert Tatton drain culvert entry point. The temporary weir eliminates the need for the operation of penstocks/shutters by directly rerouting flow into Lake Albert. The weir wall acts as a spill way in the event of major storm. As a precaution additional 450-pipe culvert installed at the invert to release pressure due to major flooding events.

Rationale for Investment

Lake Albert is a key destination for aquatic sports. Capturing additional storm water flow from Tatton drain and diverting via gravity to Lake Albert increases the sustainability of maintaining optimum water level for recreational use and combat evaporation in the warmer months. Tatton can potentially produce 20% of the Lake’s capacity over a normal year of rain fall.

Benefits

Achieve optimum water level within the lake.
Support ongoing recreational activity.
Promote good general health and wellbeing.
Preserve an iconic resource of the Riverina.
Ongoing support of recreational activities.

Alignment with Regional Strategies

N/A

Location: Wagga Wagga
Tatton Drain Weir Wall

Status

Detailed Application (1.08.2018) seeks approval for detailed design and funding for construction stage.

To next stage

- Cost
- Time 2wk

To shovel-ready

- Cost
- Time

To commission

- Cost $40K
- Time 6wk

Work underway

Design Review, Funding Source

Next body of work

N/A

Next steps

1) Existing drain earthworks, reshape of batters and invert of drain to suit new design.
2) Deliver and place compacted clay along alignment.
3) Compact clay to technical specification to the designed height of the weir wall.
4) Install 450mm storm pro culvert at invert of weir wall.
5) Install Geofabric and anchor over new structure.
6) Site clean-up and establishment.

Council Contact:

Caroline Angel
Angel.Caroline@wagga.nsw.gov.au
02 6926 9400
Kooringal Solar Farm Feasibility

Investigate the installation of solar panels at the Kooringal Sewage Treatment Plant to supplement the electricity needs of Wagga, at an estimated cost of $50K, with a project duration of 12 weeks, and time to commission has a project duration of 1 year.

Project Brief

Council have resolved to implement a program of carbon reduction. This project will actively pursue that goal with the installation of a floating solar farm. There is approximately 10 ha of unused land at the Kooringal Sewage Treatment Plant (Kooringal STP). The opportunity exists to utilise this site either in conjunction with another project or as a standalone project to construct a solar farm to assist in easing the ongoing financial burden associated with electricity usage.

Rationale for Investment

Council currently has an electricity bill of approximately $3M. This is one of two projects which could co-exist and provide two significant outcomes. The other project is ‘Kooringal Filtration Basin’. This would involve the installation of a floating solar panel system rather than the traditional ground mounted system. This innovative proposal would allow the site to be used for two purposes. Other Councils in New South Wales and South Australia have successfully undertaken similar projects. There are significant cost savings associated with this project. The energy cost avoidance to council is in the order $22M over 25 years based on a 5MW system. The project also mitigates potential climate change impacts.

Benefits

- Align with Council's resolution.
- Reduce Council’s reliance on purchased electricity.
- Promote cleaner renewable energy strategies.
- Upgrade Council technology/infrastructure to meet new renewable energy goals.

Alignment with Regional Strategies

- WWCC Community Strategic Plan 2040.
Kooringal Solar Farm Feasibility

**Stage:**
- **Identify**
- **Identify and Define**

**Now:** Under preparation, Funding Required

**Approval:** WWCC

---

**Status**

Full investigation, design and preparation of drawings to enable construction of the project.

---

**To next stage**
- Cost $50K
- Time 12wk

**To shovel-ready**
- Cost TBD
- Time 12wk

**To commission**
- Cost TBD
- Time 1yr

---

**Work underway**

Full investigation, design and preparation of drawings to enable construction of the project.

---

**Next body of work**

N/A

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**Next steps**

1) Project Scope.
2) Electricity Profile Analysis.
3) Site Constraints Assessment.
4) Network Connection Feasibility.
5) Technical Feasibility.
6) Financial Modelling Options.

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**Council Contact:**
Caroline Angel
Angel.Caroline@wagga.nsw.gov.au
02 6926 9400
Glenfield Road Corridor Upgrade. Stage 1 - Drainage Remediation. Stage 2 - Road Widening.

Concept Design of stage 1 and stage 2, at an estimated cost of $450K, with a project duration of 8 months. Design and construction of stage 1 and stage 2, seeking a contribution of $18M, with a project duration of 3 years.

Wagga Wagga City Council

State: Wagga Wagga
Federal: Riverina

$18M
3yr

Project Brief

Stage 1: Design and implement appropriate remediation of existing drainage and provide a safe exit for stormwater flows to the Murrumbidgee River. Currently the flow path exits a detention basin and flows overland across carparks and sporting fields to an open drain running parallel to Glenfield Road. There are safety issues associated, along with significant erosion (and ongoing maintenance costs) occurring along the open drain. This will involve the hydraulic investigation of the existing detention basin and drainage path and investigate alternative drainage routes together with the implementation of design outcomes. Stage 2: Design and construct all aspects associated with the widening of Glenfield Road from Redhill Road to Dobney Avenue (widening of the 2.65 km of road, the treatment of three intersections and the widening/duplication of the railway overpass on Glenfield Road). It will be necessary to work with the owners of the Great Southern Railway Line to ensure that the works comply with their requirements whilst achieving the broader outcomes of the project.

Rationale for Investment

Stage 1: Increasing urban development has caused significant issues with excessive runoff from new developments occurring more frequently and at greater volumes. The existing drainage is unable to meet these requirements. Stage 2: The Glenfield Road Corridor between Dobney Avenue and Redhill Road is a major interconnecting road linking the rapidly developing southern part of Wagga Wagga. There has been a significant increase in traffic volumes along this road, and the widening of this road is critical in managing current and future traffic volumes. This cannot be completed until Stage 1 has been completed.

Benefits

Improved drainage.
Reduced maintenance costs.
Improved traffic flow.

Alignment with Regional Strategies

N/A
Glenfield Road Corridor Upgrade. Stage 1 - Drainage Remediation. Stage 2 - Road Widening.

<table>
<thead>
<tr>
<th>Stage:</th>
<th>Plan</th>
<th>Concept Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now:</td>
<td>Under preparation</td>
<td></td>
</tr>
<tr>
<td>Approval:</td>
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**Status**

Concept Design

**To next stage**

- Cost $450K
- Time 8mo

**To shovel-ready**

- Cost TBD
- Time 15mo

**To commission**

- Cost $18M
- Time 3yr

**Work underway**

Concept and Scope

**Next body of work**

N/A

**Next steps**

1) Full concept and scope prepared – all environmental, planning, property issues identified and resolved.
2) Survey of entire site.
3) Full design and issue for comment drawings.
4) Tender phase.
5) Construction phase.
6) Site remediation.

**Council Contact:**

Caroline Angel

Angel.Caroline@wagga.nsw.gov.au

02 6926 9400
Gunning Sewage Treatment Plant

Refurbish the Gunning Sewage Treatment Plant at an estimated cost of $4.95M, with a project duration of 27 months.

Project Brief

Refurbishment of Gunning Sewage Treatment Plant.

Upper Lachlan Shire Council

State: Goulburn

Federal: Hume

$4.95M

27mo

Rationale for Investment

Benefits

Alignment with Regional Strategies

Location: Gunning
Gunning Sewage Treatment Plant

Status

<table>
<thead>
<tr>
<th>Stage:</th>
<th>Identify and define</th>
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<tbody>
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<td>Plan</td>
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</table>

To next stage
Cost $250K
Time 6mo

To shovel-ready
Cost $550K
Time 13mo

To commission
Cost $4.95M
Time 27mo

Work underway

Next body of work
Site identification and land acquisition.

Next steps

1) Site identification and land acquisition.
2) Gunning Sewer Works - detail scope development and study.
3) Design development and planning.
4) Consultation and regulatory approvals.
5) Construction.
6) Commissioning.

Council Contact:
Mursaleen Shah
MShah@upperlachlan.nsw.gov.au
02 4830 1063 or 0409 050 451
Taralga Water Augmentation Works

Undertake Taralga Water Augmentation Works at an estimated cost of $3.4M, with a project duration of 16 months.

Project Brief

Undertake Taralga Water Augmentation Works.

Upper Lachlan Shire Council

State: Goulburn

Federal: Hume

$3.4M

16mo

Rationale for Investment

Benefits

Alignment with Regional Strategies

Location: Taralga
Taralga Water Augmentation Works

Stage: Identify

| Now: Plan | Approval: N/A |

To next stage
- Cost $200K
- Time 2mo

To shovel-ready
- Cost $500K
- Time 7mo

To commission
- Cost $3.4M
- Time 16mo

Work underway

Next body of work
Detail scope development and study.

Next steps

1) Detail scope development and study.
2) Design development and planning.
3) Consultation and regulatory approvals.
4) Construction.
5) Commissioning.

Council Contact:
Mursaleen Shah
MShah@upperlachlan.nsw.gov.au
02 4830 1063 or 0409 050 451
Crookwell Sewer Augmentation Works

Undertake Crookwell Sewer Augmentation Works at an estimated cost of $4.8M, with a project duration of 22 months.

Project Brief

Undertake Crookwell Sewer Augmentation Works.

Rationale for Investment

Upper Lachlan Shire Council

State: Goulburn
Federal: Hume

$4.8M
22mo

Benefits

Location: Crookwell

Alignment with Regional Strategies
Crookwell Sewer Augmentation Works

Stage: Identify

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<th>Now:</th>
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Status

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<th>To next stage</th>
<th>Cost $250K</th>
<th>Time 3mo</th>
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<tbody>
<tr>
<td>To shovel-ready</td>
<td>Cost $600K</td>
<td>Time 9mo</td>
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<tr>
<td>To commission</td>
<td>Cost $4.8M</td>
<td>Time 22mo</td>
</tr>
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Work underway

Next body of work
Detail scope development and study.

Next steps

1) Detail scope development and study.
2) Design development and planning.
3) Consultation and regulatory approvals.
4) Construction.
5) Commissioning.

Council Contact:
Mursaleen Shah
MShah@upperlachlan.nsw.gov.au
02 4830 1063 or 0409 050 451
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