



WATER PLAN

2013 to 2018

**Supporting
Document D**

**Environmental Obligations
and Initiatives**

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1.0 ENVIRONMENTAL OBLIGATIONS AND INITIATIVES

In developing the Water Plan, Goulburn Valley Water has given consideration to the EPA Information Bulletin “*EPA Water Plan 3 Guidance, December 2011*”. This document was developed in partnership by the EPA and Victorian Water Industry and clarifies the obligations for the water industry stemming from the Environment Protection Act 1970 and associated policies such as the State Environment Protection Policy (Waters of Victoria) 2003. Obligations detailed in the Joint EPA/Water Industry Paper, the SoO and the Corporation’s standard licence conditions (EPA Corporate Licence) are addressed in this section.

1.1 Water Conservation and Resource Efficiency

The Statement of Obligations requires Goulburn Valley Water to prepare and implement programs for the sustainable use and reuse of water. The programs are to address the best mix of water demand management and water supply availability and need to consider aspects such as the total water cycle, Triple Bottom Line (TBL) costs and benefits and be adaptive to changing situations over a 50 year outlook.

The SEPP (WoV) 2003 requires Goulburn Valley Water to work with communities and businesses to:

- *Avoid water wastage (and sewage generation) by implementing practical water saving practices and measures (particularly in new developments);*
- *Recycle sewage and biosolids; and*
- *Deliver water to customers in an efficient manner and recycle irrigation drainage water.*

The EPA Water Plan 3 Guidance paper also requires the Corporation to have regard to the efficient use of resources such as water and recycled water. It also requires observation of the waste hierarchy when considering resources required for operating a water business, such as chemicals and energy, to those that may impact on the business, such as industrial and domestic discharge.

Goulburn Valley Water’s commitment to meet the obligation of water conservation, including managing water loss and trade waste management has been addressed in Section 1.5.15 of Supporting Document C and Section 1.1 of Supporting Document F to this Water Plan.

Reuse of sewage and biosolids has been addressed in sections 1.2.1, 1.2.2, of this document and sections 1.3 and 1.4.2 of Supporting Document F to this Water Plan.

Goulburn Valley Water has developed a greenhouse action plan that encompasses initiatives to minimise electricity usage and reduce greenhouse emissions, where cost effective and practicable to do so. Section 1.2.6 considers greenhouse management in detail. In addition existing operational practices seek to minimise chemical usage through substitution and optimisation of processes. These are ongoing initiatives and will be met from existing programs for the Water Plan 3 regulatory period.

The Corporation has an active sustainability based program that includes the consideration of the Triple Bottom Line (TBL) and life cycle principles when making business decisions.

1.2 Sewage Management

As per EPA requirements, Goulburn Valley Water has recently updated the Sewerage Management Plan. The purpose of the Sewerage Management Plan is to review each of the Corporation's sewerage systems (sewer pipe network, sewer pumping stations, wastewater management facilities) on a town by town basis to identify system assets that present an unacceptable environmental risk and program actions to mitigate these risks.

Goulburn Valley Water's current Sewerage Management Plan has been completed with an audit to be undertaken during the 2012/13 financial year.

Any mitigation measures which have been identified within the Sewerage Management Plan, requiring capital investment, have been included in the 2013-2018 Water Plan Infrastructure Program. Minor works resulting from the plan will be undertaken as part of business as usual. A review and audit of the Sewerage Management Plan is also programmed during Water Plan 3.

Current Position

Goulburn Valley Water delivers wastewater management services to 30 towns, including major food processing industries at Shepparton, Numurkah, Mooropna, Tatura, Cobram, Tongala and Broadford.

The Corporation has adopted treatment processes that are economic and offer long-term sustainable solutions. Most wastewater from non-domestic sources must be, where possible, pre-treated to achieve similar standards as domestic quality wastewater. There are exceptions for some major industrial customers where Goulburn Valley Water has provided combined wastewater management facilities with financial and other support from the major industries. In all cases, trade waste customers are prohibited from discharging to the sewer system corrosive materials or wastes that would be toxic to the final treatment processes.

Goulburn Valley Water's broad wastewater management objectives are:

- To provide efficient wastewater systems that ensure public health is not at risk from domestic or trade waste discharges; and
- Compliance with EPA requirements, including SEPP (Waters of Victoria).

The Corporation utilises lagoon based treatment systems and sustainable land based re-use for management of reclaimed water at all sites in keeping with the Waste Hierarchy. The exceptions to this are Shepparton, Eildon and Alexandra where the major portion of the reclaimed water is used for land irrigation, with winter flows being further treated to a tertiary standard prior to recycling back to the Goulburn River.

The Corporation's EPA Corporate Licence (October 2007) outlines mandatory licence performance criteria, including discharge to land and water conditions, as well as broader sustainability commitments.

A major portion of Goulburn Valley Water's expenditure to date has been directed to the construction of winter storages and irrigation infrastructure designed for exceedance only in a 90th percentile or wetter year.

As a result of the completion of this intensive program of investment, Goulburn Valley Water recycles on average over 70% of reclaimed water produced each year through irrigation schemes. In addition, it is expected that the residual will be recognised as legitimate beneficial reuse in future under revised EPA guidelines for return of reclaimed water to stream.

As shown in Table 1, recent high rainfall years, exceeding the 90th percentile has resulted in additional reclaimed water being discharged to surface waters in the form of emergency discharges.

The range of recycling schemes established by the Corporation and in partnership with 3rd party reclaimed water users has resulted in either creation of "new water" or significant substitution for existing irrigation water. Schemes developed within existing irrigation areas have resulted in substitution of water previously sourced from the Goulburn River and River Murray regulated systems, facilitating alternate beneficial use of these resources.

In the case of new sewerage schemes, where domestic wastewater volumes were previously subject to evaporation and transpiration, new water has been created that is now being beneficially used in irrigated agricultural enterprises. In addition, the water returned to the Goulburn River system at Alexandra, Eildon and Shepparton is fully accounted for in this regulated system, contributing to downstream environmental flows and beneficial uses.

The Corporation will continue to explore higher value substitution opportunities as they arise in a continuing effort toward improved economic, environmental and sustainable outcomes.

Table 1 details the current use of recycled water associated with each facility.

TABLE 1 – CURRENT USE OF RECYCLED WATER

WASTE WATER SYSTEM	PERCENTAGE RECYCLED TO RIVER	PERCENTAGE EMERGENCY DISCHARGE 90%ILE WET YEAR	PERCENTAGE RECLAIMED (2010-2011)	BENEFICIAL USES
Alexandra	62%	-	38%	Irrigated enterprise – lamb, beef, fodder
Avenel	-	67%	33%	3 rd party – lamb, fodder enterprises
Bonnie Doon	-	-	100%	Irrigated enterprise – lamb
Broadford	-	63%	37%	Irrigated enterprise – beef, woodlot
Cobram	-	-	100%	Irrigated enterprise – beef & lamb
Eildon	100%	-	0%	
Euroa	-	81%	19%	Irrigated enterprise – lamb, fodder
Girgarre	-	-	100%	Irrigated enterprise – lamb, fodder
Kilmore	-	84%	16%	Irrigated enterprise – lamb, dairy, fodder
Kyabram/ Merrigum	-	-	100%	3 rd party dairy enterprises
Mansfield	-	39%	61%	3 rd party golf course irrigation. Irrigated enterprise – beef, fodder
Marysville	-	-	100%	Irrigated enterprise – woodlot
Mooroopna	-	-	100%	3 rd party dairy enterprise
Murchison	-	-	-	100% evaporation
Nagambie	-	42%	58%	3 rd party beef enterprise
Nathalia	-	56%	44%	Irrigated enterprise – lamb, fodder
Numurkah	-	49%	51%	3 rd party cropping/fodder enterprise Irrigated woodlot
Rushworth/ Stanhope	-	100%	-	Flood irrigation is under construction
Seymour	-	42%	58%	3 rd party golf course irrigation. Irrigated enterprise – woodlot, fodder, lamb and beef
Shepparton	71%	-	29%	Irrigated enterprise – woodlots, lamb, fodder production
Strathmerton	-	-	-	100% evaporation
Tatura	-	47	53%	3 rd party dairy enterprises. Irrigated enterprise – woodlots, lamb production, fodder
Tongala	-	-	100%	3 rd party dairy enterprise. Irrigated enterprise – fodder
Upper Delatite	-	37%	63%	Irrigated enterprise – lamb
Violet Town	-	-	100%	Irrigated enterprise – lamb
Yea	-	21%	79%	3 rd party golf course & racecourse irrigation Irrigated enterprise – beef, fodder
TOTAL	37%	23%	40%	

The Corporation is strongly of the view that the return of tertiary treated reclaimed water to the Goulburn River provides benefits to the river environs and downstream beneficial uses. Goulburn Valley Water has been involved in the working groups surrounding this issue and will continue to pursue recognition of this valuable resource.

Goulburn Valley Water expects to gain recognition of the recycling status of return to stream at Alexandra, Eildon and Shepparton, which will result in 100% of reclaimed water produced by the Corporation being recognised as legitimately recycled each year.

Saline Wastewater

The salinity of the reclaimed water at all of the Corporation's WMF's is relatively low, with a small number of sites ranging up to approximately 2500 EC. Irrigated water is diluted to 800 EC and is irrigated sustainably for agricultural production and other applications. Reclaimed water returned to stream is diluted significantly and also presents negligible risk to downstream beneficial uses. Consequently, the Corporation has made no additional provision in the Water Plan for this obligation beyond existing commitments.

1.2.1 Sewage Treatment and Disposal

Obligations relevant to Goulburn Valley Water that are detailed in the EPA Water Plan 3 Guidance paper are as follows:

- *Discharge of surface waters must be in accordance with the limits set in the 'discharge to water' table in the water business's EPA licence;*
- *EPA expects that, by the end of the current regulatory period, 2008-13, for all ongoing discharges to waters ways that:*
 - ◆ *An ecological risk assessment will have been undertaken.*
 - ◆ *Where identified as necessary via the ecological risk assessment, a program will have been implemented to progressively reduce mixing zones.*
 - ◆ *A consultation program will have been developed and implemented to inform the community on mixing zones and sacrificed beneficial uses, and to ensure appropriate controls are in place to prevent inappropriate uses within mixing zones.*
- *Treatment plants must have a management framework enabling the land based reuse of all effluent up to a 90th percentile.*

With reference to discharge of surface waters, current limits as set within the Corporations EPA Victoria Corporate License are as follows:

- BOD: 10 mg/L;
- Suspended Solids: 20 mg/L;
- Total Phosphorus: 0.5 mg/L;
- pH: Range between 6.0 and 9.0; and

- E Coli: 200 orgs/100 mL.

As shown in Table 2, Goulburn Valley Water is currently meeting all of the requirements as set out in the current EPA Corporate Licence, hence providing adequate protection of the receiving environment. Therefore, no allowances have been made for additional treatment of recycled water at the Shepparton, Alexandra and Eildon wastewater management facilities.

TABLE 2: ACTUAL DISCHARGE INDICATOR VALUES – 2010/11

Indicator	Unit	Annual Median: Shepparton	Annual Median: Alexandra	Annual Median: Eildon
Biochemical Oxygen Demand	mg/L	4	4	4
Suspended Solids	mg/L	7	4	4
Total Phosphorus	mg/L	0.09	0.03	0.03
pH	pH units	6.5	6.4	6.8
E coli	Orgs/100 mL	10	10	10

Goulburn Valley Water engaged a consultant early in Water Plan 2 to undertake an ecological risk assessment for each of the ongoing discharge to waterways sites; Alexandra, Eildon and Shepparton, which confirmed the necessary mixing zone requirements to ensure compliance. Ongoing monitoring of the mixing zones, and in turn revision of the ecological risk assessments is undertaken via consultancy, which is included in the current business as usual expenditure.

Based on recent consultant reports, Goulburn Valley Water has not allowed for any sewerage treatment plant upgrades, as adequate protection to the receiving environment is currently being addressed via business as usual expenditure. This is not surprising due to the insignificant volumes discharged relative to the dilution effects of the very high flows in the receiving Goulburn River.

Discussion with the EPA has highlighted that the current Corporate Licence could be reviewed during 2013. Goulburn Valley Water has made no allowance within the draft Water Plan for any impacts relating to potential licence changes.

During the current regulatory period, ongoing modelling of the Corporation’s wastewater management facilities has been undertaken. This modelling has identified that the majority of waste water facilities are capable of meeting the 90th percentile rainfall year requirements. However, the Mansfield and Kilmore facilities will require augmentation to continue to meet this requirement due to ongoing development in the towns. These projects have been included in the draft Water Plan Infrastructure Program.

1.2.2 Sludge and Biosolids Management

Section 1(i) of the Environment Protection Act obligates the Corporation to implement the waste hierarchy in its management of bio-solids.

In addition, the EPA 'Water Plan 3 Guidance' publication states that water corporations “will include implementing programs for treatment of sludges and reuse of continuously produced biosolids, with an ultimate aim of 100 per cent biosolids reuse, including the reduction and reuse of existing stockpiles over time”.

Management of biosolids from wastewater management facilities is a significant commitment. Goulburn Valley Water has recently reviewed its Sludge Management Strategy to ensure that current and future activities are in line with the aforementioned Act and EPA guidance publication.

In essence, the strategy has set direction for the management of sludge and biosolids from all of the Corporation's wastewater management facilities, addressing issues such as:

- Establishing management practices for individual facilities, including projected frequency for desludging lagoons and temporary storage arrangements;
- Identifying options for biosolids beneficial use;
- Setting direction for developing third party use markets, including public information sharing.

The Corporation has been monitoring the performance of treatment systems and accumulation of biosolids in major plants for some time. In 2007 and 2011 surveys of the primary lagoons at most treatment plants were undertaken to evaluate the accumulation rate of sludge within the lagoon systems.

Table 3 shows the estimated annual sludge production, sludge volumes contained within the lagoons and volumes of biosolids stored in stockpiles as at December 2011.

**TABLE 3 –
 ESTIMATED SLUDGE/BIOSOLIDS INVENTORY AT INDIVIDUAL WASTEWATER MANAGEMENT
 FACILITIES (DEC, 2011)**

Wastewater Management Facility	Annual Production (dry tonnes)	Volumes in Lagoons (dry tonnes)	Volume in Stockpiles (dry tonnes)
Alexandra	108	432.0	1,402
Avenel	9.0	91.0	0
Bonnie Doon	5.0	15.0	0
Broadford	60.4	604.0	3,250
Cobram	176.2	1,059.0	0
Eildon	10	10.0	0
Euroa	30	90.0	300
Girgarre	10	15.0	0
Kilmore	13.5	127.3	1780
Kyabram	70	663.6	0
Mansfield	16.5	164.6	3910
Marysville	3	22.3	0
Mooroopna	228.6	3,348.0	2,000
Murchison	18.2	223.2	0
Nagambie	22.9	68.7	5,000
Nathalia	21.6	367.1	252
Numurkah	167	835.1	0
Seymour	135	405.0	3000
Shepparton	1042	7,360.6	43,400
Stanhope	15	55.9	0
Strathmerton	5.6	98.6	0
Tatura	326.6	302.2	14,400
Tongala	421.8	126.6	4260
Upper Delatite	1.1	204.5	0
Violet Town	8.0	8.5	0
Yea	8.7	17.4	4000
Total	2,934	17,536	86,954

For the past four years the Corporation has dredged and dried sludge from primary lagoons at Alexandra, Euroa, Mansfield, Nagambie, Seymour, Tatura, Numurkah, Tongala and Yea. Of the biosolids produced and stockpiled, approximately 34,068 dry tonnes¹ has been used in 1st and 3rd party applications. This programmed work has cost some \$1.60 million².

Data collected on biosolids from stockpiles confirm that the biosolids meet the T1³/C2⁴ criteria as per the EPA Biosolids Use Guidelines, although confirmation that a Treatment (T) classification of T1 can be achieved by air drying is still to be established by EPA. The biosolids are suitable for use in applications such as dry land improvement, site rehabilitation and conditioning, revegetation projects, urban landscaping, agriculture and forestry.

Goulburn Valley Water is continuing to work closely with regulatory bodies to develop appropriate, safe and cost effective strategies for beneficial use of biosolids. The Corporation is also maintaining its involvement in biosolids management working groups at a State and National level.

Biosolids management is a significant ongoing obligation. It involves the Corporation in annual operational expenditure associated with desludging, drying, community consultation and beneficial use. This turn impacts on wastewater charges.

Goulburn Valley Water is meeting its various obligations through the implementation of its Sludge Management Strategy. Ongoing average annual operating expenditure of \$617,000 has been identified in the Strategy and been allocated in the draft Water Plan.

1.2.3 Sewerage Planning

The EPA Water Plan 3 Guidance publication requires water businesses, where appropriate, to include provision within the water plan for sewerage to unsewered areas where risks are identified in domestic wastewater management plans.

Refer to Section 1.5.12 of Supporting Document C of this Water Plan for detail on how Goulburn Valley Water is addressing the commitment.

¹ Includes 14,400t biosolids ex-Tatura WMF and 3,000t biosolids ex-Seymour WMF scheduled for reuse in 2012.

² 5,968t removed from existing stockpiles by 1st and 3rd party users at no cost to Goulburn Valley Water.

³ T1 – Highest treatment grade, unrestricted use

⁴ C2 – Contaminant Rating, restricted use

1.2.4 Management of the Sewerage System

To meet the requirements of SEPP (WoV), EPA requires sewerage systems to be designed and managed to:

- Work toward eliminating dry-weather spills and chronic leaks, with action prioritised on the basis of risk; and
- Contain flows associated with a one-in-five year event or a comparable design standard.

Modelling projects were funded during Water Plan 2 to assess compliance with the above requirements. The outcomes of the assessments completed were as follows:

- All sewer networks currently have adequate capacity to avoid dry-weather spills; and
- Sewer networks which service Kilmore, Seymour and Wandong are currently predicted to spill in a one-in-five year event, albeit at minor levels. All other sewer networks are predicted to achieve full flow containment in a one-in-five year event.

Sewer network augmentation works have been programmed at Kilmore, Seymour and Wandong for the Water Plan 3 period to address existing capacity constraints. In addition to improving flow containment, the proposed capital works will also provide capacity for future growth in each town.

For towns with growth, sewer network models and master plans will need to be updated on a regular basis to assess compliance with the obligations to eliminate dry weather spills and to contain flows associated with a one-in-five year rainfall event. Sewer network models also provide a tool for Goulburn Valley Water to efficiently assess the servicing requirements for new developments.

For towns with moderate or high growth, sewer network models and master plans are proposed to be updated every 5-7 years. For towns with low growth, sewer network models and master plans are proposed to be updated every 10 years.

Based on this approach a number of sewer network models and master plans will require updating during Water Plan 3. The expected costs for the Water Plan 3 period to undertake model calibration monitoring and to update models and master plans will be funded from business as usual expenditure.

1.2.5 Management of Odour and Noise

Odour

Clause 18 of the Victorian Environment Protection Policy (Air Quality Management) refers to managing odours via the Waste Hierarchy and the need for continuous improvement in odour management.

The Corporation's EPA Corporate Licence also requires that there be no emission of odours offensive to the senses of human beings beyond the boundaries of the premises. EPA's 'Water Plan 3 Guidance, December 2011' also re-affirms the position noted in the Corporate Licence.

Goulburn Valley Water has achieved significant air quality improvement gains over many years through the upgrade of wastewater management facilities and collection systems. Of note are the innovative high rate anaerobic processes developed at the Shepparton, Mooroopna and Tatura wastewater management facilities that capture biogas and use it for the generation of 'green power' or flare it at high temperature.

The Corporation also operates and maintains a number of odour control facilities within collection systems. There has been various odour mitigation works completed over the Water Plan 2 period. These include works at Eildon, Alexandra, Mansfield, Seymour and Mooroopna WMF sites. These projects have helped to overcome odour concerns for neighbouring communities.

Odour can be a difficult issue for planning. It is subject to sensitivity of individual neighbours, which can be subject to change and abnormal and often rare, environmental conditions. Consequently, odour associated with a facility or installation may not currently be evident, but may arise during the regulatory period, necessitating remedial action and investment in control works. Goulburn Valley Water manages these situations in conjunction with EPA and affected members of the public to resolve an acceptable outcome and plan for necessary works within budget constraints.

Going forward, Goulburn Valley Water has made provision in Water Plan 3 to undertake further works at the Eildon and Mansfield WMF sites along with significant investment in the sewerage collection network at prioritised locations including Tatura, Cobram, Kyabram, Seymour and Shepparton.

The Corporation is to complete a WMF Buffer Zone review in 2012. Preliminary work has identified the need to complete a number of odour modelling studies for the larger WMF's to better define the required buffer zones. Budget for odour modelling has been included in Water Plan 3.

This review will also most likely identify the need to liaise with the various Councils in the Corporation's region to enact planning scheme changes and possibly elevate the issue to the Victorian water industry level. At this stage no budget allowance has been included in draft Water Plan 3 for this and this may be required before Plan finalisation.

Noise

Goulburn Valley Water has noise control obligations established in the SEPP (Control of Noise from Commerce, Industry and Trade) 1989.

Noise and vibration associated with infrastructure is an existing risk for Goulburn Valley Water. The Corporation proposes to manage these issues within existing programs in the Water Plan.

While customer enquiries attributable to noise and vibration are minimal, the Corporation's 'Environmental Stewardship Framework' includes a site overview of noise risk with budget allocated in Water Plan 3.

1.2.6 Management of Greenhouse Gas Emissions

The SEPP has established a framework for managing air emissions in the Victorian environment. It currently requires current and proposed sources of emissions, including greenhouse gas emissions, to be managed so as to:

- *Avoid and minimise emissions in accordance with the principles of the waste hierarchy;*
- *Pursue continuous improvement; and*
- *Apply best practice to the management of emissions.*

In response to this and other greenhouse gas regulation and reporting requirements, the Greenhouse Action Plan originally developed in 2007 has recently been updated. Although Goulburn Valley Water does not trigger any legislative reporting thresholds, as described in Section 6.7.2 of the Water Plan, an approach which is in line with the ESC requirement that "any carbon mitigation programs proposed by businesses must be justified through commercial cost-benefit analysis" has been adopted.

The Greenhouse action plan identified a range of potential carbon reduction opportunities, these were investigated and a cost benefit analysis was undertaken. From this "cost effective" opportunities were recommended for implementation, that is, opportunities which present a net financial gain to the Corporation within an acceptable timeframe. These opportunities are:

- Greenhouse emission and impact awareness training for all relevant staff, with a select group trained in project selection decisions;
- Pump efficiency analysis/monitoring and targeting;
- IT efficiencies;
- Voltage optimisation;
- Use of VSD technology and VSD optimisation;
- Office based efficiencies, including a lighting upgrade;
- Real time control of aerators at waste water treatment plants; and
- Engagement of the supply chain to ensure most efficient products are selected.

In order to ensure the recommended opportunities are truly cost effective, pilot tests will be completed within the initial stages of the Water Plan 3 regulatory period. Where it is shown that improvement works are viable and cost effective, the Corporation will consider undertaking the projects within business as usual expenditure.

1.2.7 Consideration of Climate Change

The Corporation is very aware of the impacts that climate variability can have on the Corporation's assets and operations and has contended with drought, fire and floods in the recent past.

The Corporation adaptively plans for the future adopting various mechanisms including variable water supply and demand scenarios via the Water Supply Demand Strategy. In terms of adaptive sewerage system management, the Corporation adopts relevant design guidelines and requires reticulation and WMF assets to achieve and then maintain a level of service that is prescribed by the EPA.

EPA's 'Water Plan 3 Guidance, December 2011' notes a need to work with individual businesses through Water Plan 3 discussions to consider adaptive management issues and develop a plan to address them over time. In this regard, the Corporation is not aware of any particular issues that require special budget allocation and no further allowance has been made in the draft Water Plan.

1.2.8 Licence Compliance

Section 20 of the Environment Protection Act 1970 requires the Corporation's 26 Schedule 4 wastewater management facility premises to be licensed. Goulburn Valley Water is obliged to comply with all licence requirements.

In October 2007 the Corporation was the first water business in Victoria to be issued a Corporate EPA Licence covering the operation of all 26 WMF's. The revised licence methodology has proven successful and incorporated general sustainability commitments as well as WMF environmental performance requirements. EPA has advised that it is planned to review of the existing Corporate Licence in 2013.

Goulburn Valley Water's proactive relationship with EPA, focussed operations and continued investment in new and improved infrastructure as part of the Corporation's Wastewater Management Strategy has maintained ongoing licence compliance. As an example, the Corporation again achieved 100% compliance for the 2010/2011 reporting period and is on track to a similar performance outcome for 2011/2012.

Goulburn Valley Water is planning for timely capacity augmentation of facilities within the 20 Year Infrastructure Program and has made provision for staged and efficient augmentation in the draft Water Plan to facilitate continued licence compliance.

1.3 Catchment, Waterway and Groundwater Management

EPA has not set explicit obligations for Goulburn Valley Water in relation to waterway management, except to allude to the price of water incorporating the costs associated with environmental impacts on waterways attributable to the Corporation's activities.

The SoO requires Goulburn Valley Water to monitor the impact of its activities on waterways and wetlands, including the impact of dams on the thermal regime of waterways.

Goulburn Valley Water has a close cooperative relationship with the Goulburn-Broken Catchment Management Authority, and is an active participant and supporter of actions required to improve the natural environment.

The Corporation recognises the importance of sustainable waterway management, and actively participates on several working groups including; the Regional Water Quality Group, Regional Basin Plan working group, Victorian Basin Plan Working Group, VicWater Catchment Planning Group, Lake Eildon Land and On Water Management Plan group and the Nagambie Waterways Recreational and Commercial Stakeholders Advisory Committee.

For the regulatory period, Goulburn Valley Water's plans for works impacting on waterways are based on the Corporation's Environmental Stewardship Framework. Resultant works from the investigations undertaken as part of the Environmental Stewardship Framework include, business as usual activities along with:

- Development of land management plans for each of Goulburn Valley Water's reservoir sites; and
- Update of existing biodiversity management plans and integrate biodiversity management into broader facility management plans.

The actions mentioned above will be undertaken during the Water Plan 3 period and are included in the consultancy business as usual budget.

Groundwater Management

Clause 46 of SEPP (WoV) 2003 provides for the protection of groundwater quality from the impact of the Corporation's operations.

Clause 12 of the SEPP (Groundwaters of Victoria) requires that all practicable measures must be undertaken to prevent pollution of the groundwater. EPA licenses for wastewater management facilities require adequate groundwater monitoring to be undertaken at the plants and re-use sites. To ensure contamination of Goulburn Valley Water sites is not occurring.

Goulburn Valley Water has established a groundwater monitoring program for the 26 wastewater management facilities and reclaimed water irrigation sites encompassing an extensive groundwater monitoring bore network. The monitoring results are assessed by an independent groundwater specialist, who provides an annual report on the groundwater impacts and risks associated with wastewater facility operations and reclaimed water irrigation.

This report is made available to EPA prior to the submission of the Corporation's annual report. Included in the annual groundwater monitoring report is an assessment of the current risk level of the site in terms of groundwater management. The risks to groundwater at each site was found to vary, supporting more frequent monitoring at sites with elevated risk and reduced monitoring at other sites. Provision has been made in the draft Water Plan to undertake the revised program, which is considered a business as usual cost.

1.3.1 Water Industry Reporting

EPA Licence Monitoring

The Goulburn Valley Water EPA Licence for wastewater management facilities includes requirements for monitoring of effluent quality, receiving waters and groundwater.

Goulburn Valley Water has established monitoring programs complying with licence requirements at all wastewater management facilities, including additional programs for the monitoring of soils. These monitoring programs are essential to ensure compliance with EPA requirements. These are an existing commitment and will be met from existing programs for the Water Plan.

Water Industry Reporting

Existing EPA Licencing requires annual reporting of wastewater management facility licence performance. This is currently undertaken by the Corporation.

EPA's 'Water Plan 3 Guidance, December 2011' includes a requirement for community and stakeholder reporting of Corporation impacts and activities. The Corporation has already undertaken engagement regarding mixing zones during Water Plan 2.

Having regard to the EPA advice, Goulburn Valley Water believes existing resource allocation is sufficient to meet the possible increase in community and stakeholder engagement over Water Plan 3 and this obligation will be met from existing programs.