Water main replacement works at Girgarre.

Assets and Infrastructure

Assets

Goulburn Valley Water operates 1,694 kilometres of water mains, 1,170 kilometres of pressure and gravity sewers, 313 pumping stations, 110 tanks and reservoirs, 39 water treatment plants and 26 wastewater management facilities. Details of these facilities are stored in the Asset Register. The same system also manages the maintenance and operation of the Corporation's assets.

The asset register and maintenance management system are used, along with consultation with district managers and operations and maintenance staff, to identify water mains that are in need of replacement and to formulate a sewer inspection program.

Water Main Replacements

Goulburn Valley Water identifies water mains for replacement by their failure history and consequences of failure. During 2007/2008 the Corporation replaced 2,104 metres of water main within the townships of Shepparton, Nagambie, Numurkah and Seymour. These water mains were predominantly replaced using an innovative system comprising "pipe bursting" and the installation of polyethylene water mains.

The Corporation also entered into a three year contract with Infratec during 2007/2008 to design, supply and install water mains under the annual water main replacement and the cast iron water main replacement programs. Under this arrangement the delivery of water main replacement projects has improved in terms of innovation, cost and time for completion of works.

Sewer Main Inspection and Rehabilitation

During 2007/2008 approximately 10,900 metres of sewer mains were cleaned and inspected by Closed Circuit Television (CCTV). This was a continuation of a contract that commenced during 2006/2007 with a total of 16,100 metres of sewer mains inspected. The inspection reports were then assessed and consequently 2,500 metres of sewer mains were relined during 2007/2008. Also included under the relining contract was the repair of five sewer main collapses that were identified in the towns of Seymour (2), Shepparton (2) and Alexandra (1).

Goulburn Valley Water also commenced participation in three Water Services Association of Australia projects regarding asset management of gravity sewer mains during 2007/2008 that will continue into the 2008/2009. These projects have required the Corporation to provide a minor financial contribution to the cost of the projects and to also participate in the project workshops and project working groups. These projects are being supported by other water businesses across Australia and include subjects such as sewer blockages, relining options and condition assessment.

World's First Corporate Licence

L-R: Laurie Gleeson Managing Director - Goulburn Valley Water, Kaye Darveniza - Member for Northern Victoria, The Hon. Gavin Jennings MP – Minister for the Environment, Mick Bourke Chairman – EPA Victoria, Don Cummins Chairman – Goulburn Valley Water

Sustainability Improvement Plan Goal 1 – Ensuring ongoing organisation relevance and effectiveness

Commitment 1.4

Influencing Regulators

Influencing regulatory environment through water industry and regional associations to invest in and promote ongoing regional development and wise use of the region's natural resources.

Action 1.4.1 in Goulburn Valley Water's Sustainability Improvement Plan was to actively pursue opportunities with regulators to influence regulatory policies and instruments to achieve sustainable outcomes.

The negotiation of a single EPA Victoria Corporate Licence covering Goulburn Valley Water's 26 wastewater management facilities is an excellent example of the Corporation working in partnership with the Environment Protection Authority (EPA) to achieve positive results for the environment and community. Goulburn Valley Water and EPA believe that this new approach will improve environmental performance and accountability and provide a platform for greater commitment to sustainability by the Corporation.

In November 2007 EPA Victoria and Goulburn Valley Water signed the world's first corporate licence, which is intended to deliver administration savings and, importantly, improve environmental performance.

This historic event took place at Goulburn Valley Water's regional office in Shepparton and was attended by the Minister for the Environment, The Hon. Gavin Jennings MP and the Chairman of EPA, Mick Bourke.

The Corporate Licence concept offers Goulburn Valley Water a number of benefits including the consolidation of multiple licences into a single document. The Corporation previously operated under 26 separate wastewater management facility licences that were outdated and administratively complex. The new licence, written in plain English and limited to 8 pages, replaces more than 226 pages of licence conditions under the previous arrangements.

The licence streamlines reporting requirements into a single annual performance statement. Previous reporting obligations varied between licences and did not clearly reflect the Corporation's environmental performance. The new licence format retains mandatory compliance requirements, while including opportunities to address long term business sustainability. The new reporting structure is a further means to strengthen the Corporation's communication with the public whilst improving its environmental performance through increased transparency and accountability.

Another key initiative of the Corporate Licence involves the creation of opportunities to invest in projects that offer the most effective environmental and economic returns. Embracing Triple Bottom Line principles (TBL) into the licence format has further integrated sustainability into the Corporation's business culture and operations.

Long Term Planning

Sustainability Improvement Plan
Goal 2 – Ongoing Improvement in Business Efficiency

Commitment 2.1

Optimising Operational Systems

Action 2.1.1. of the Corporation's Sustainability Improvement Plan is to optimise investment by reflecting regional growth scenarios and sustainability principles in the 20 year capital expenditure program.

Action 2.1.3 of the Corporation's Sustainability Improvement Plan requires the Corporation to review and optimise the operational efficiency of current delivery and treatment systems.

Goulburn Valley Water develops water network master plans and sewer network master plans for all water supply systems and sewerage systems across the region. These master plans are developed for a 20 year period and establish the water and sewer network infrastructure capacity and requirements over that period based on various growth scenarios

Water Network Master Plans

The water network master plans ensure that capacity is provided for future growth to maintain service levels received by customers.

The main service level driver for master plans is to ensure that all customers receive a minimum water pressure and minimum flow rate as per the Corporation's service levels approved by ESC.

During 2007/2008 water network master plans have been completed for Euroa, Kyabram, Mansfield, Nagambie and Numurkah.

The Euroa master plan is an example of the outcomes that are achieved through the completion of water network master plans. The plan provides for annual growth rates between 0.8% - 1.2% amounting to approximately 430 additional water connections over the next 20 years. Capital works totalling $975,000 have been programmed between 2009 and 2011. The capital works will ensure that capacity is provided for growth and that service levels continue to be maintained for customers.

Sewer Network Master Plans

The sewer network master plans ensure that capacity is provided for future growth to maintain service levels received by customers.

The main service level driver for master plans is to ensure that all sewer flows are fully contained within the sewer system in a 1 in 5 year average recurrence interval rainfall event, which is an EPA compliance obligation.

Sewer network master plans were developed in 2007/2008 for Kyabram, Mooroopna and Numurkah. In addition to the master plans, 1 in 5 year sewer flow containment assessments were undertaken for sewer networks in Alexandra, Broadford, Eildon, Euroa, Kilmore, Mansfield, Marysville, Seymour and Yea.

Facilities Reviews

Goulburn Valley Water also undertakes long term planning for its water treatment plants and wastewater management facilities.

During 2007/2008 the Corporation finalised a 20 year capacity review for all wastewater management facilities (WMF). The review identified upgrade requirements needed to ensure that the capacity of the wastewater management facilities meet growth needs for the next 20 years and resulted in additional projects being incorporated in the 20 year capital works program; including:

- Broadford WMF Irrigation Capacity Upgrade
- Kilmore WMF Irrigation Capacity Upgrade
- Mansfield WMF Irrigation Capacity Upgrade.
- Nagambie WMF Irrigation Capacity Upgrade

Water Security

Corporate Objective
Assets and Infrastructure

L-R Peter Quinn, Don Cummins, Ben Hardman MP– Member for Seymour, Doug Kindred MD DigRite, Lachlan McGregor Project Manager

Strategic Objective 3.1

Efficiently plan and manage the Corporation's infrastructure and assets to enhance our long term capacity to deliver high quality service to our Customers.

During 2007/2008 Goulburn Valley Water has undertaken a number of projects to delivery water security to its customers.

Goulburn Valley Water's water supply demand strategy *GVW2055* identified a number of projects that the Corporation should undertake in the short term to address water security for Mansfield and Broadford.

Mansfield Raw Water Storage

GVW2055 indicated that, in conjunction with the current dry conditions, an additional raw water storage for Mansfield was required immediately. The strategy indicated that additional raw water storage with a capacity of 350 megalitres was required.

As a result the Corporation constructed the new raw water storage close to the existing 180 megalitre Ritchie Reservoir and it was successfully completed on schedule at a cost of $2.7 million.

Filling of the new storage has commenced and this storage will increase the security of water supply for the town of Mansfield.

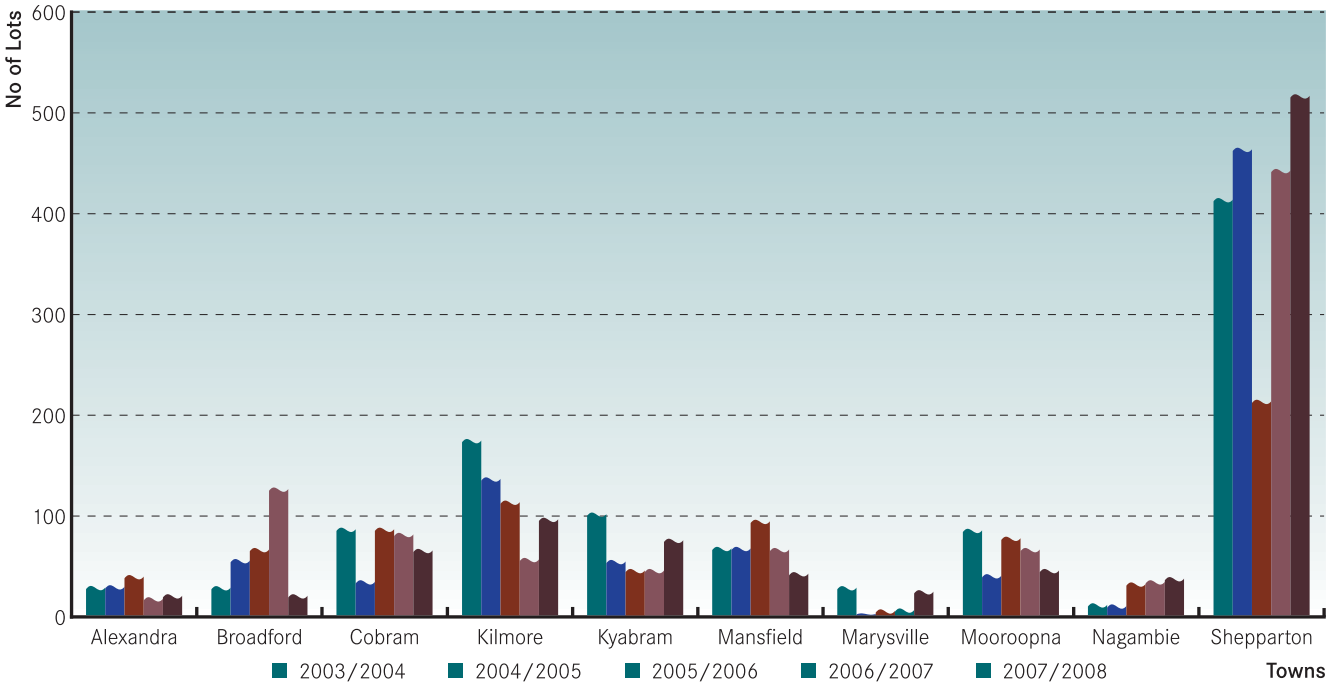
Broadford Water Supply Pipeline

GVW2055 recommended the construction of a pipeline and ancillary works to supply raw water to Broadford and, in future, Kilmore from the Goulburn River to supplement water supply for the stressed Sunday Creek Reservoir.

A pumping station on the Goulburn River near Tallarook will be built during the second half of 2008. The 23 km pipeline connecting the pump station to the Broadford water treatment plant commenced in June 2008. It is anticipated that both the pump station and pipeline will be completed by December 2008

This project will ensure the security of water supply for Broadford and will increase the security in the Sunday Creek System. The estimated capital cost of the project is $15.2 million.

Developments



Development

In accordance with Goulburn Valley Water's statutory obligations and policies, new development in the region is provided with reticulated water and sewerage services at the time of development wherever it is possible to do so.

During 2007/2008 a total of 1,152 new lots were created across the Corporation's region. The chart indicates the distribution of these lots across the major growth areas and compares this years results with those for the previous four. As shown in the chart the dominant growth area continues to be Shepparton which accounts for 45% of all new lots.

Dam Management

Goulburn Valley Water owns thirteen water storages that are deemed significant and subject to annual review. These dams are an essential component of the systems supplying water to many towns in our southern region such as Broadford, Euroa, Kilmore, Marysville and Longwood.

The Corporation undertakes regular inspection of these dams and reports annually to the Department of Sustainability & Environment regarding dam condition and intended works.

A comprehensive dam portfolio review was undertaken in 1998 and since this time the upgrade of many dams has occurred, with further works programmed. Some points of interest include:

Kilmore No.3 Reservoir

With the recent construction of a 16 megalitre concrete storage tank to supply water to Kilmore, the Kilmore No.3 Reservoir is no longer required and was decommissioned this year.

Sunday Creek Reservoir

As discussed in the Dam Safety case study, upgrade works costing $4.1 million have occurred to the Sunday Creek Reservoir and these were completed this year.

Nine Mile Creek Reservoir

The 27 megalitre Nine Mile Creek Reservoir supplies Longwood and has been identified as being in poor condition. To increase safety, a new $1.7 million concrete dam is to be constructed immediately downstream of the existing earthen embankment. This project should commence in 2008/2009 and be completed in 2009/2010.

Abbinga Reservoir

The 565 megalitre Abbinga Reservoir is part of the Euroa supply system and does not fully comply with current standards. As the reservoir has a low hazard rating, construction of a new $5.4 million dam can occur in the medium term and is presently programmed for around 2020. However, location and engineering investigations have already commenced and will continue during 2008/2009.

New Mansfield Reservoir

At a cost of $2.7 million, a new 350 megalitre reservoir was constructed in Mansfield this year to augment the current raw water storage capacity for the town (refer to the Water Security case study).

Mansfield No. 3 Reservoir

The existing 45 megalitre Mansfield No. 3 Reservoir requires upgrade and the scope and timing of these works will be confirmed during 2008/2009.

Engineering studies are programmed for 2009/2010 for the 100 megalitre Aub Cuzens Reservoir near Marysville and the 117 megalitre Hollowback Reservoir near Kilmore. A study is also required for the 200 megalitre Waterhouse Reservoir near Euroa by 2012/2013. These studies may result in future works at some sites.

There are no studies or works currently required at the 55 megalitre Bonnie Doon Reservoir, the 14 megalitre Mountain Hutt Reservoir near Euroa, the 40 megalitre Pyalong Reservoir the 115 megalitre Broadford No. 3 Reservoir or the 180 megalitre Ritchie Reservoir near Mansfield.

Dam Safety

Corporate Objective
Assets and Infrastructure

Lachlan McGregor at the top of the Spillway–
Sunday Creek Reservoir

Strategic Objective 3.2

Maintain and develop the Corporation's assets to minimise risk to the community, environment and the Corporation.

Goulburn Valley Water undertakes regular inspection of dams and reports annually to the Department of Sustainability & Environment regarding dam condition and intended works.

During 2007/2008 Goulburn Valley Water upgraded the Sunday Creek Reservoir and decommissioned the Kilmore No. 3 reservoir.

Sunday Creek Reservoir

Sunday Creek reservoir is the Corporation's largest storage with a capacity of 1,650 megalitres. Changes to ANCOLD guidelines meant that the dam no longer complied fully with current design criteria.

In March 2008 Goulburn Valley Water completed a $4.1 million upgrade of the Sunday Creek Reservoir which satisfied the ANCOLD dam safety standards.

Works included the upgrading of the spillway to increase flow capacity in the event of a flood and the installation of a downstream filter to prevent piping failure. Approximately 26,000 cubic metres of additional material was placed on the downstream embankment to provide additional weight to the structure to hold the dam in place.

Kilmore No. 3 Reservoir

Increasing residential development downstream of the Kilmore No. 3 Reservoir, a 66 megalitre off stream balancing storage, has increased the hazard rating of this dam. Furthermore the open storage posed a risk to water quality. Rather than upgrade the dam embankment by the provision of a downstream filter, a decision was made to construct a new 16 megalitre water storage tank adjacent to the reservoir. This allowed both Kilmore No. 3 and the smaller Kilmore No. 1 reservoirs to be decommissioned and to provide major water quality benefits for Kilmore residents.

The new tank was completed in March 2008, and the reservoirs were decommissioned in June 2008.

Risk Management

Corporate Objective
Assets and Infrastructure

Strategic Objective 3.2

Maintain and develop the Corporation's assets to minimise risk to the community, environment and the Corporation.

One of the initiatives under Goulburn Valley Water's Strategic Objective 3.2 is to undertake a minimum of one live simulation based emergency event per year.

In October 2007 the Corporation held a table top emergency exercise in conjunction with the Moira Shire Municipal Emergency Management Planning Committee. The exercise examined various agency responses to a chlorine drum leak at the Cobram water treatment plant.

The exercise allowed the different agencies such as the CFA, Red Cross, Ambulance, Police, Hospital and SES and Goulburn Valley Water staff to better understand their various roles and interactions in the event of an emergency. The scenario assisted participants to understand the nature of the essential services delivered by the Corporation, the complexities involved and the cascading issues that can arise during an emergency. Importantly, it reinforced the need for ongoing communication between the agencies when planning, managing and recovering from emergencies. Goulburn Valley Water actively participates on a range of emergency management forums, particularly at regional level, to assist in maintaining open communications and peer networks.