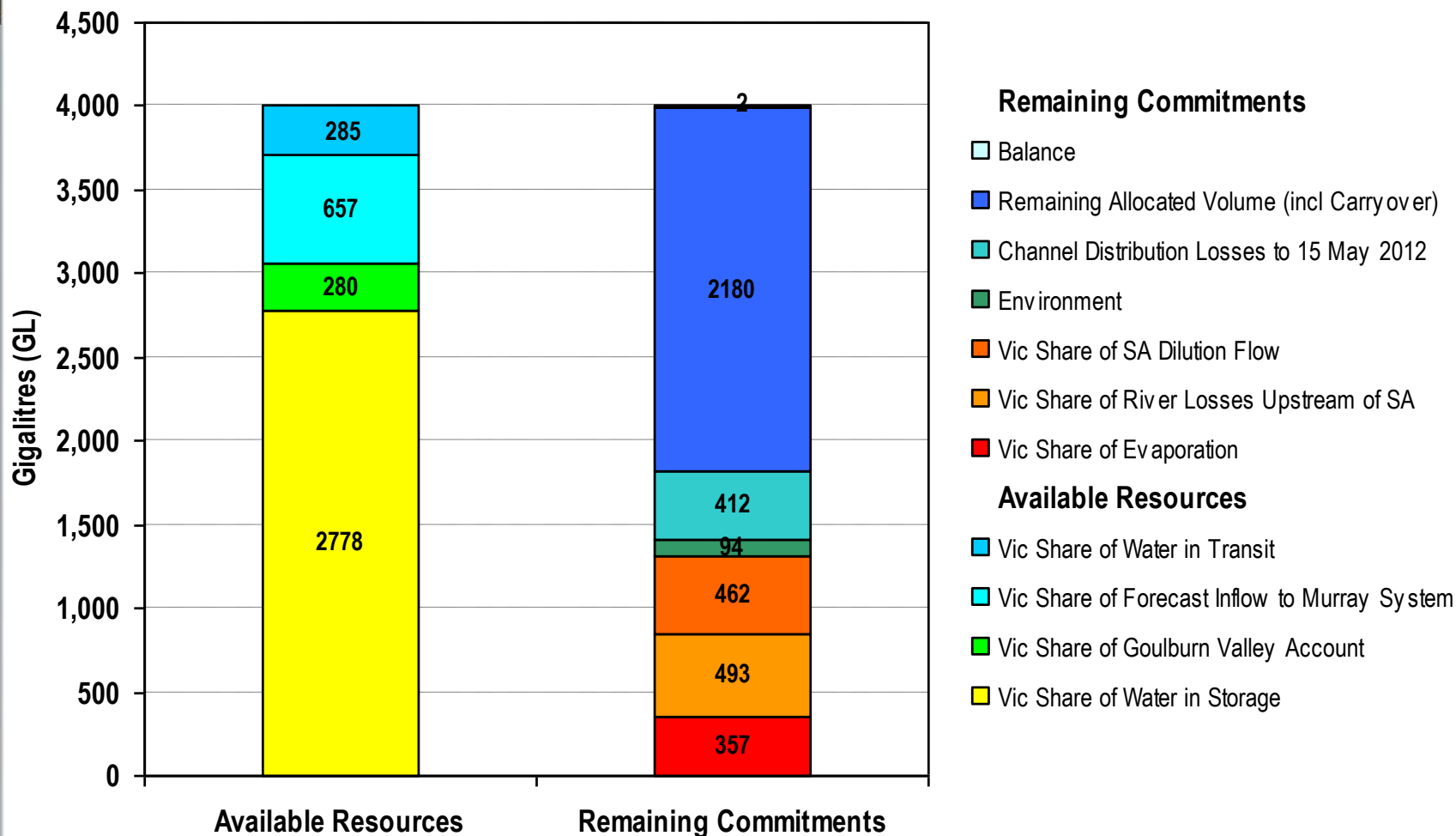


# Murray System

Breakdown of Water in Store and Commitments 1 September 2011



# Murray System

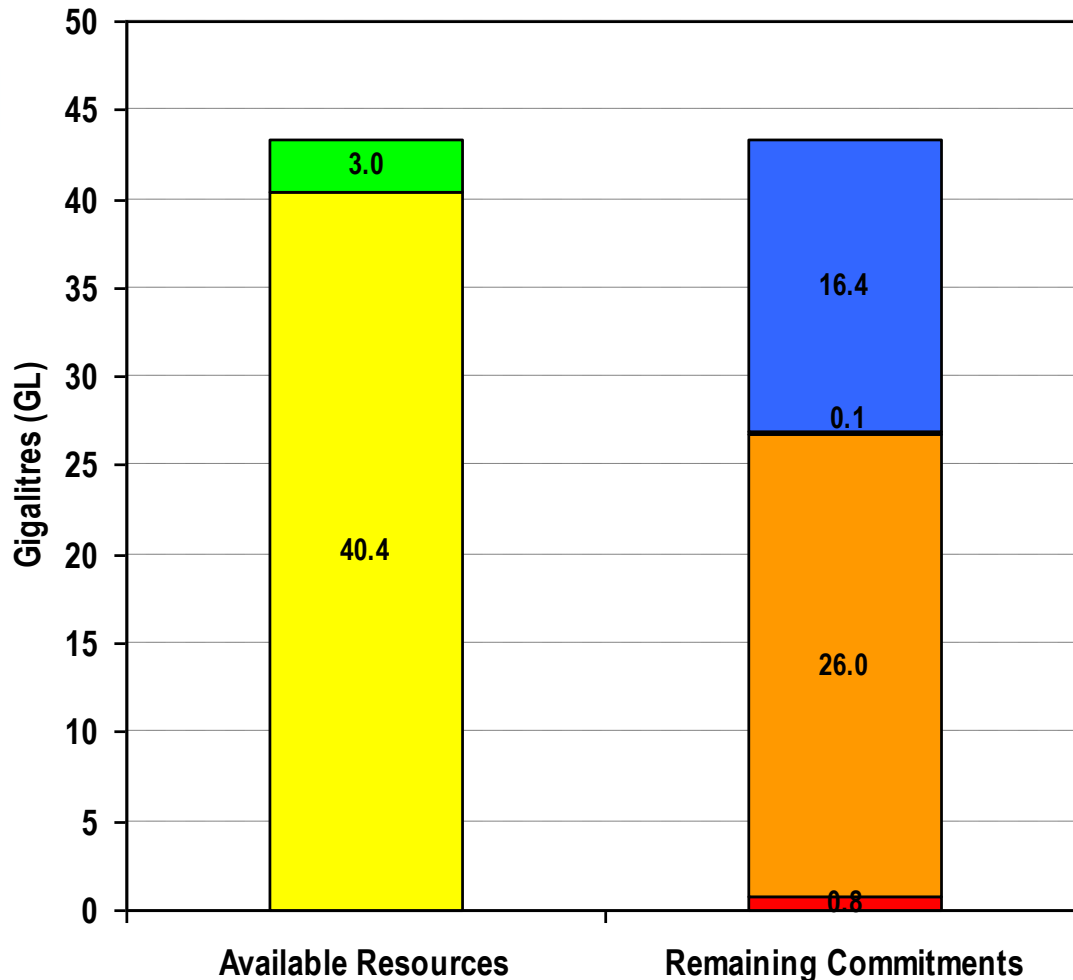
## Breakdown of Water in Store and Commitments: Terms and Definitions

- Vic Share of Water in Storage:** The share of water in the Murray system storages – Dartmouth Dam, Lake Hume, Lake Victoria and the Menindee Lakes – that is owned by Victoria, excluding water that is not available to Victoria under water sharing arrangements at the end of December. The volume held in the Victorian Mid-Murray Storages that is available to meet commitments is also included.
- Vic Share of Goulburn Valley Account:** Total amount of Goulburn system water bought by Victorian Murray system users that is yet to be delivered.
- Vic Share of Forecast Inflow to Murray System:** The Victorian share of forecast inflows in the River Murray and tributaries.
- Vic Share of Water in Transit:** The share of the water flowing in the River Murray that is assigned to Victoria, but has not reached a Murray system storage.
- Vic Share of Evaporation:** The Victorian share of the water needed to account for evaporation from storages.
- Vic Share of River Losses upstream of SA:** The Victorian share of the water needed to account for losses from the River Murray upstream of the South Australian border.
- Vic Share of SA Dilution Flow:** The Victorian share of the water needed to account for the supply of dilution water to South Australia, as required under the Murray-Darling Basin Agreement.
- Environment:** Entitlements held for the environment, including the Barmah-Millewa Forest and lower Broken Creek operation.
- Channel Distribution Losses to 15 May 2012:** Estimate of the amount of water required to operate Victorian Murray system rural water corporations' channel and pipeline delivery systems to deliver allocation to customers and urban water corporations.
- Remaining Allocated Volume (including Carryover):** The volume assigned to all Victorian Murray entitlement holders under a 61% allocation of high-reliability water shares plus the carried over resources that were allocated to entitlement holders in 2010/11, that is yet to be delivered. The volume remaining includes resources held by rural water customers and urban water corporations.

Source: Resource Manager

# Broken System

Breakdown of Water in Store and Commitments 1 September 2011



- Remaining Commitments**
- Remaining Allocated Volume (incl Carry over)
  - Urban & Environment
  - Storage and River Losses
  - Volume Below Minimum Operating Level
- Available Resources**
- Forecast Inflows
  - Water in Storage

# Broken System

## Breakdown of Water in Store and Commitments: Terms and Definitions

**Water in Storage:** The volume of water held in Lake Nillahcootie.

**Forecast Inflows:** The volume of forecast inflows in tributaries above Lake Nillahcootie that are yet to flow into the storage and the volume of forecast tributary flows downstream of Lake Nillahcootie that can meet river loss commitments. This estimate of inflows assumes there are no further rain events for the year.

**Volume Below Minimum Operating Level:** The volume of water that cannot be released through existing infrastructure under gravity.

**Storage and River Losses:** The volume of evaporation and other water losses from the storages and from the natural rivers, lakes and waterways that are part of the irrigation network. Also called headworks losses.

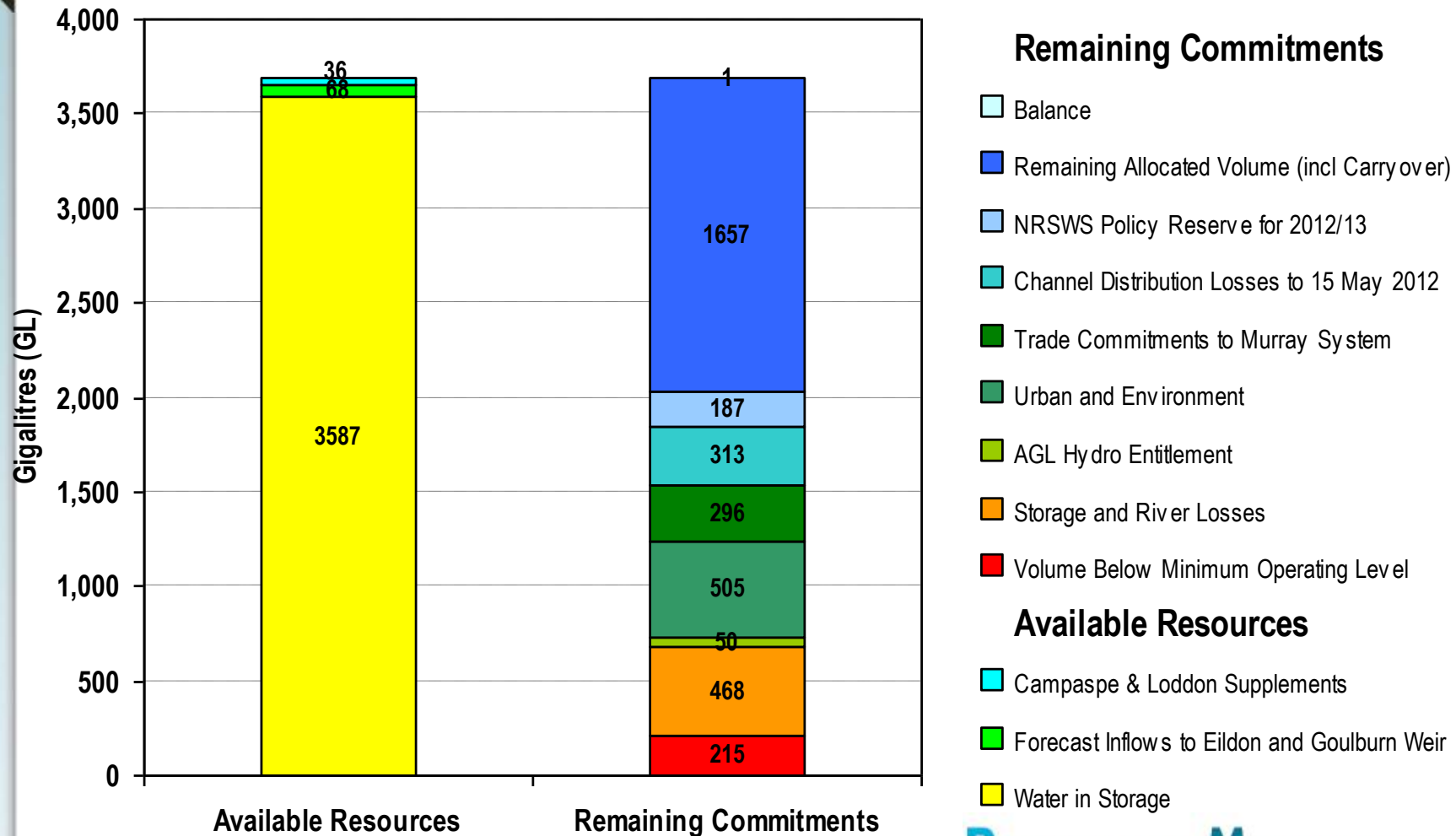
**Urban and Environment:** Entitlements held by urban water corporations and the environment.

**Remaining Allocated Volume (including Carryover):** The volume assigned to water share holders under an 36% allocation of high-reliability water shares plus the carried over resources that were allocated to entitlement holders in 2010/11.

*Source: Resource Manager*

# Goulburn System

Breakdown of Water in Store and Commitments 1 September 2011



# Goulburn System

## Breakdown of Water in Store and Commitments: Terms and Definitions

**Water in Storage:** The volume of water held in Lake Eildon, Waranga Basin and Greens Lake.

**Forecast Inflows to Eildon and Goulburn Weir:** The volume of forecast inflows in tributaries above Lake Eildon and Goulburn Weir that are yet to flow into storage. Inflows to Goulburn Weir are limited by the ability to harvest water to Waranga Basin.

**Campaspe/Loddon Supplement:** The volume available from the Campaspe and Loddon systems to support Goulburn allocations.

**Volume Below Minimum Operating Level:** The volume of water that cannot be released through existing infrastructure under gravity. Pumping of Waranga Basin will not be required to support allocations in the 2011/12 season.

**Storage and River Losses:** The volume of evaporation and other water losses from the storages and from the natural rivers, lakes and waterways that are part of the irrigation network. Also called headworks losses.

**AGL Hydro Entitlement:** The volume allocated to the entitlement held by AGL Hydro for the purpose of power generation that cannot be harvested in Waranga Basin.

**Urban and Environment:** Entitlements held by urban water corporations including Melbourne, irrigators on the lower Broken Creek and the environment (including the water quality reserve).

**Trade Commitments to Murray System:** Total amount of Goulburn system water bought by Murray system users that is yet to be delivered and the carried over volume of Goulburn system water obtained from water savings projects that is to be delivered to the Murray instead of diverted from the Snowy hydroelectric scheme.

**Channel Distribution Losses to 15 May 2012:** Estimate of the amount of water required to operate the G-MW channel and pipeline delivery systems to deliver allocation to customers and urban water corporations.

**NRSWS Policy Reserve for 2012/13:** The volume set aside between 30% and 50% allocation as a reserve for system operations in 2012/13 season, as required by the Northern Region Sustainable Water Strategy (NRSWS). The commitment from Waranga Basin pumping, which comprises the first 88 GL of the reserve is shown in the 'Volume Below Minimum Operating Level'. The total volume of the reserve is 275 GL (187 GL shown in the diagram plus 88 GL from the volume available from Waranga Basin pumping).

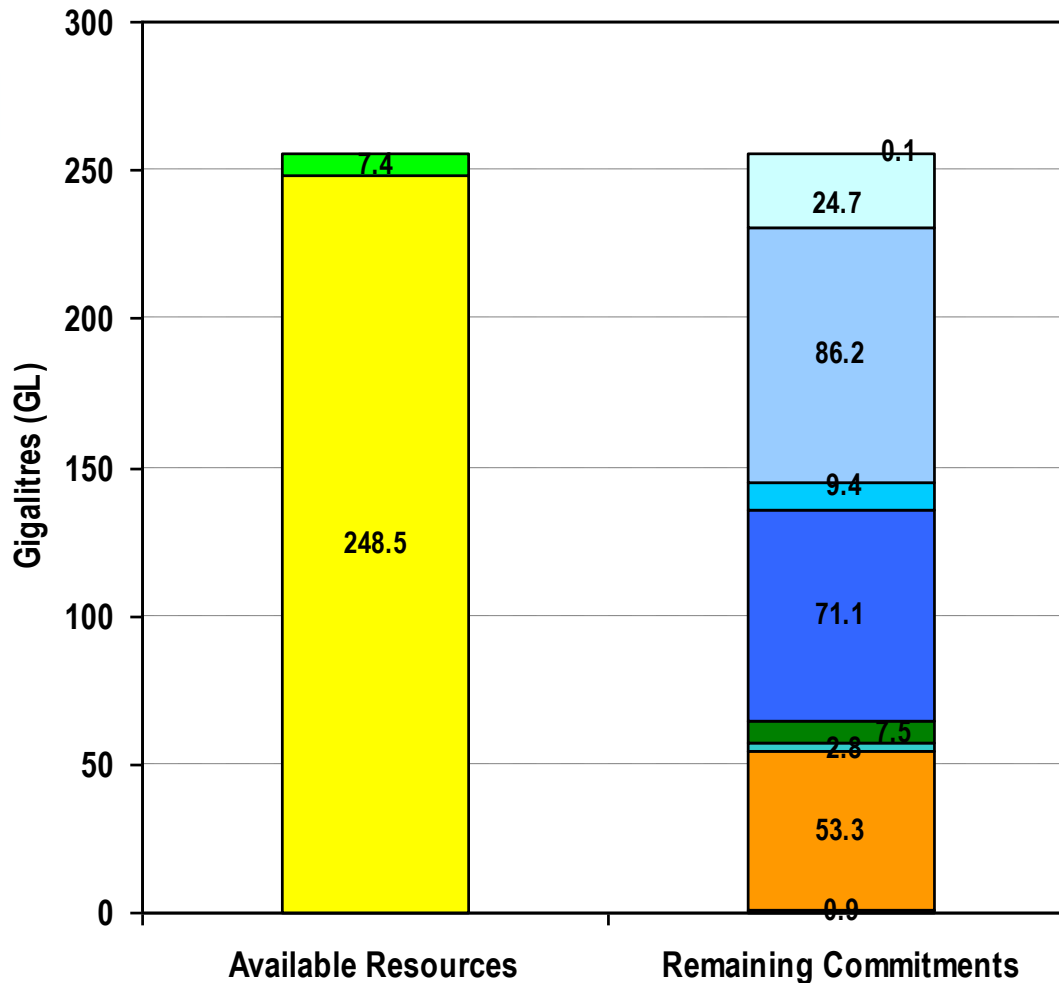
**Remaining Allocated Volume (including Carryover):** The volume assigned to water share holders under a 87% allocation of high-reliability water shares (HRWS) plus the carried over resources that were allocated to water share holders in previous seasons, that is yet to be delivered. This volume includes water held in spillable water accounts.

**Balance:** The balance that will be available when sufficient water is available to make a full 1% of high-reliability water shares to all Goulburn customers

*Source: Resource Manager*

# Campaspe System

Breakdown of Water in Store and Commitments 1 September 2011



## Remaining Commitments

- Balance
- Supplement to the Goulburn
- Commitments for 2012/13
- Urban and Environment
- Remaining Allocated Volume (incl Carry over)
- Trade Commitments
- Channel Distribution Losses to 15 May 2012
- Storage and River Losses
- Volume Below Minimum Operating Level

## Available Resources

- G-MW Share of Forecast Inflows
- G-MW Share of Lake Eppalock

# Campaspe System

## Breakdown of Water in Store and Commitments: Terms and Definitions

**G-MW Share of Lake Eppalock:** The volume of water held by G-MW in Lake Eppalock.

**G-MW Share of Forecast Inflows:** The G-MW share of the volume of forecast inflows for the 2012/13 season with a probability of exceedance of 99%.

**Volume Below Minimum Operating Level:** The volume of water that cannot be released through existing infrastructure under gravity.

**Storage and River Losses:** The volume of evaporation and other water losses from the storages and from the natural rivers, lakes and waterways that are part of the irrigation network. Also called headworks losses.

**Urban and Environment:** Entitlements held by urban water corporations and the environment.

**Trade Commitments:** The volume of Campaspe system water purchased by downstream systems that is yet to be delivered.

**Channel Distribution Losses to 15 May 2012:** Estimate of the amount of water required to operate the Campaspe Irrigation District channel and pipeline delivery systems.

**Supplement to Goulburn system:** The volume available under the G-MW Campaspe Bulk Entitlement as a supplement to support the Goulburn allocation.

**Remaining Allocated Volume (including Carryover):** The volume assigned to water share holders under a 100% allocation of high-reliability water shares and a 91% allocation of low-reliability water shares plus the carried over resources that were allocated to water share holders in previous seasons, that is yet to be delivered. This volume includes water held in spillable water accounts.

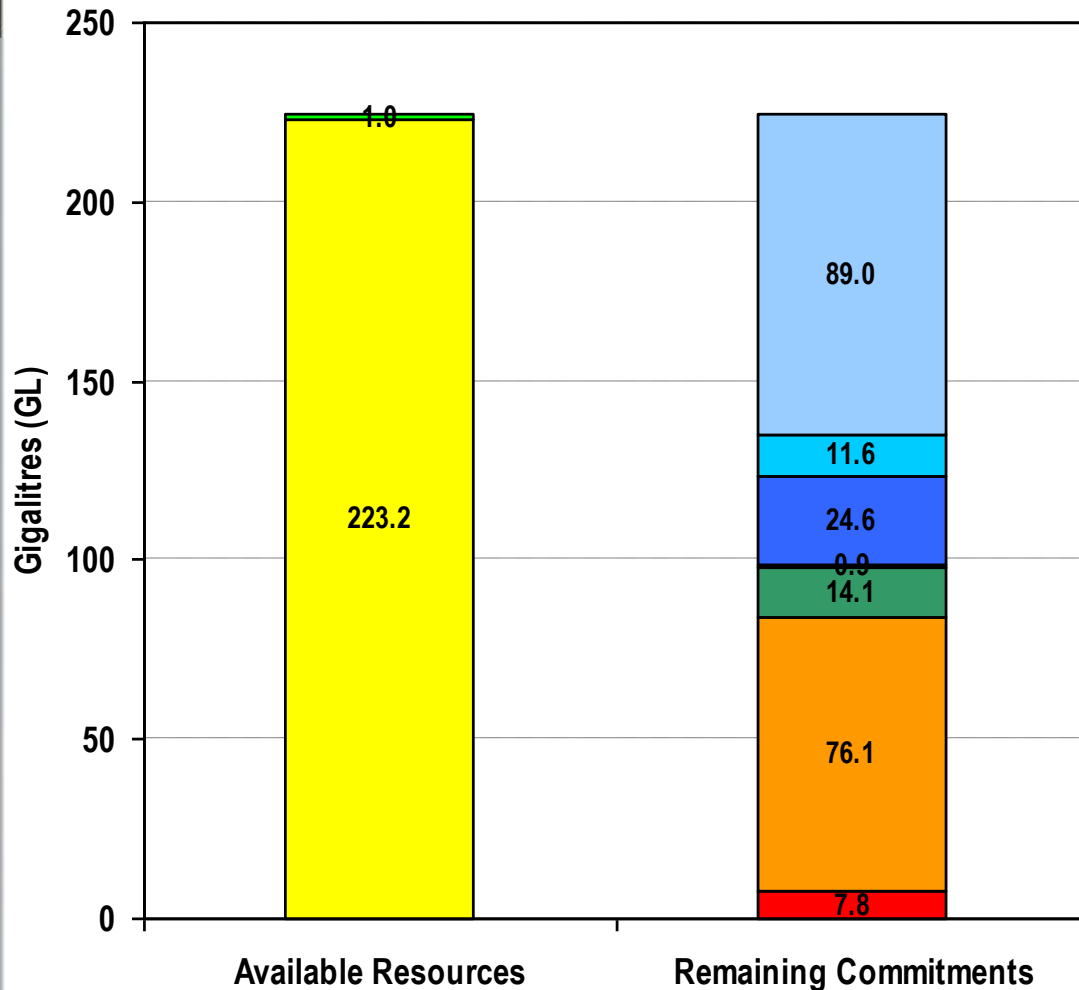
**Commitments for 2012/13:** Water that is reserved in storage to provide operating requirements and allocations (up to 100% HRWS) in the 2012/13 season.

*Source: Resource Manager*



# Loddon System

Breakdown of Water in Store and Commitments 1 September 2011



## Remaining Commitments

- Commitments for 2012/13
- Supplement to Goulburn System
- Remaining Allocated Volume (incl Carry over)
- Volume for remaining 11/12 commitments
- Urban and Environment
- Storage and River Losses
- Volume Below Minimum Operating Level

## Available Resources

- Forecast Inflows
- Water in Store

# Loddon System

## Breakdown of Water in Store and Commitments: Terms and Definitions

**Water in Storage:** The volume of water held in Cairn Curran, Laanecoorie and Tullaroop reservoirs.

**Forecast Inflows :** The volume of forecast inflows in tributaries above the three Loddon storages that are yet to flow into storage. This estimate of inflows assumes there are no further rain events for the year.

**Volume Below Minimum Operating Level:** The volume of water that cannot be released through existing infrastructure under gravity.

**Storage and River Losses:** The volume of evaporation and other water losses from the storages and from the natural rivers, lakes and waterways that are part of the irrigation network. Also called headworks losses and includes minimum environmental flows.

**Urban and Environment:** Entitlements held by urban water corporations and the environment..

**Remaining Allocated Volume (including Carryover):** The volume assigned to water share holders under a 87% allocation of high-reliability water shares (HRWS) plus the carried over resources that were allocated to water share holders in previous seasons, that is yet to be delivered. This volume includes the water allocated to water works districts. The Loddon Bulk Entitlement requires the allocation to HRWS in the Loddon to be the same as the Goulburn where the Loddon resources allow.

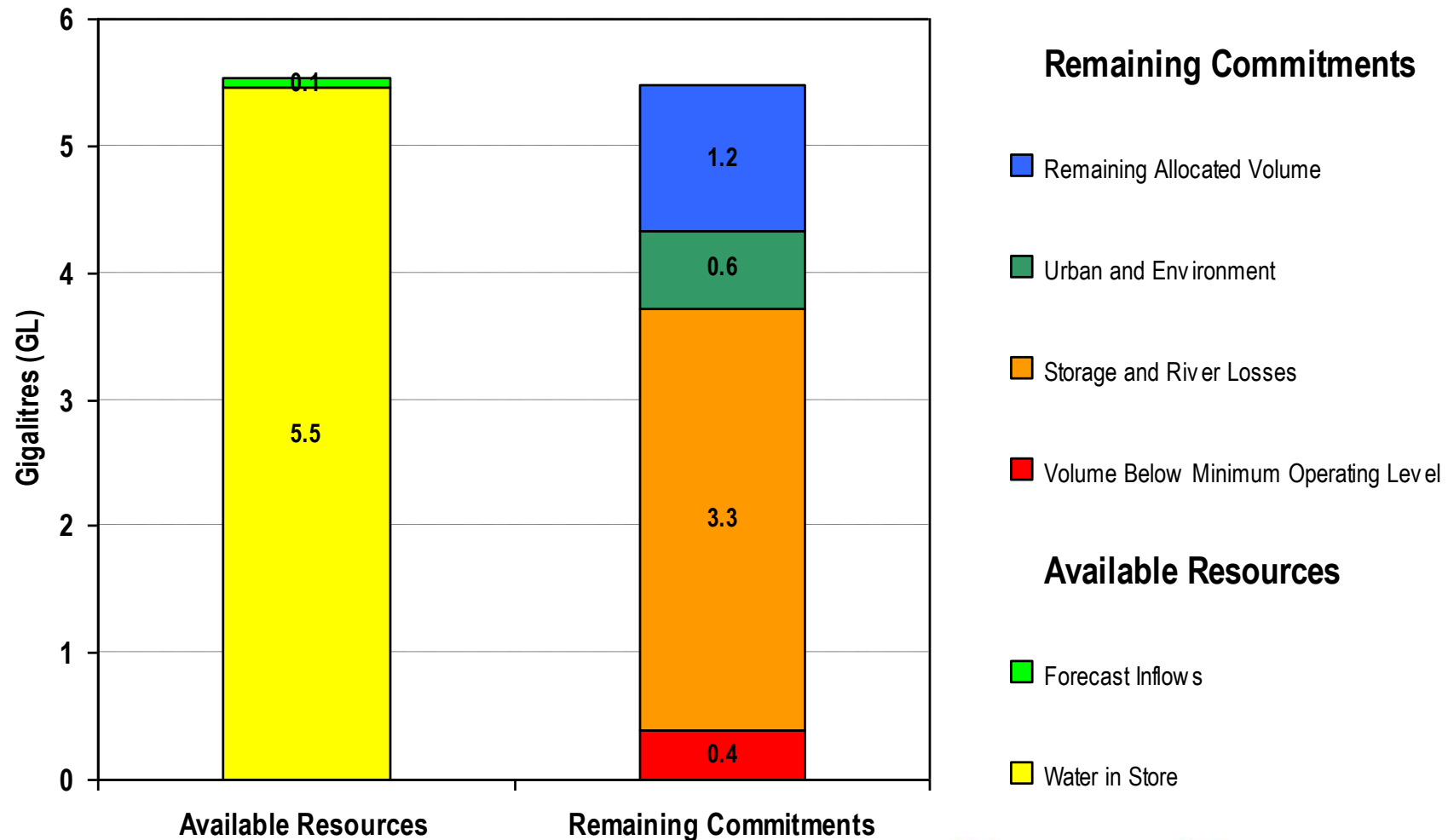
**Volume for remaining 2011/12 commitments:** The volume required to meet the remaining Loddon system commitments in the 2011/12 season, up to an allocation of 100% HRWS.

**Commitments for 2012/13:** Water that is reserved in storage to meet operating requirements and allocations (up to 100% HRWS) in the 2012/13 season.

*Source: Resource Manager*

# Bullarook System

Breakdown of Water in Store and Commitments 1 September 2011



# Bullarook System

## Breakdown of Water in Store and Commitments: Terms and Definitions

**Water in Storage:** The volume of water held in Newlyn Reservoir and Hepburns Lagoon

**Forecast Inflows :** The volume of forecast inflows in tributaries above the Bullarook storages that are yet to flow into storage that can meet river loss commitments. This estimate of inflows assumes there are no further rain events for the year. An assessment of forecast inflows is not required when all system commitments can be met by water held in storage.

**Volume Below Minimum Operating Level:** The volume of water that cannot be released through existing infrastructure under gravity at Newlyn Reservoir and Hepburns Lagoon.

**Storage and River Losses:** The volume of evaporation and other water losses from the storages and from the natural rivers, lakes and waterways that are part of the irrigation network. Also called headworks losses and include minimum environmental flows.

**Urban and Environment:** Entitlements held by urban water corporations and the environment.

**Remaining Allocated Volume:** The volume assigned to water share holders under a 100% allocation of high-reliability water shares and 100% of low-reliability water shares.

*Source: Resource Manager*