Water for the Future Strategy

Namoi Unlimited
Namoi Joint Organisation of Councils

- Gunnedah Shire Council
- Gwydir Shire Council
- Liverpool Plains Shire Council
- Tamworth Regional Council
- Walcha Council
Purpose of the Water for the Future Strategy

Water for the Future ‘Statements of Priority’ outlined in the Strategic Regional Plan 2018 – 2021:

1. Audit, analyse, identify and prioritise the key constraints, opportunities and innovations to secure the supply of water for communities, businesses and Local Government

2. Audit, analyse, identify and prioritise opportunities and partnerships for agriculture, agricultural products, commodities, supply and value chains, as well as services

3. Identify the potential impacts of change on agriculture

4. Identify and facilitate opportunities to address change, by diversifying, opening and establishing, and new markets for producers.
Water Sources

- Headwaters of Murray Darling (NSW)
- Net Exporter of Water
- Biggest Source is Rain
Water Sources – how are they accessed?

Surface water entitlement

Ground water entitlement
Water Sources

- Water Availability Index
  - Surface/Groundwater (entitlement ML/year)
  - Rainfall – avg annual mm
What is it used for?

- Rural Areas
  - Cotton
  - Grain
  - Grazing

- Pastures and cereal crops
  - 21%

- Cotton
  - 46%

- Other agricultural water use
  - 15%

- Other cereals for grain or seed
  - 14%

- Other broadacre crops
  - 3%
What is it used for?

• Agricultural water sources
What is it used for?

- Urban Areas
How is It used?

• Urban Areas
How is It used?

- Urban v Rural

![Bar chart showing annual water usage in different local government areas.](chart.png)

- Gunnedah: 40,000 ML (Urban: 10,000 ML, Agriculture: 30,000 ML)
- Gwydir: 25,000 ML (Urban: 7,500 ML, Agriculture: 17,500 ML)
- Liverpool Plains: 30,000 ML (Urban: 5,000 ML, Agriculture: 25,000 ML)
- Tamworth: 45,000 ML (Urban: 15,000 ML, Agriculture: 30,000 ML)
- Walcha: 3,000 ML (Urban: 1,000 ML, Agriculture: 2,000 ML)
How secure is it?

- Ideally Secure Yield Studies
- Water restrictions
- Frequency of when 100% of entitlement is made available

![Graph showing the average number of restriction periods per decade for different water sources.](image-url)
How secure is it?

- Water restrictions
How is it used

• Water reliability index
  • Based on groundwater and surface water security data
  • Provides an overall understanding of water security
Water Strength Index

- Combination of water availability and reliability
Opportunities - Planning

- Intensive agriculture
- Agriculture responds to water availability and security, amongst other factors
  - Are there synergies of activities undertaken in low water strength areas supporting those in high water strength areas (and visa versa)?
Opportunities – Demand Management

• Residential water demand management
• Commercial and industrial water demand management in urban areas
• Water Recycling – Local Water Utilities
Opportunities – Water Supply

- Shared Water Use Infrastructure
- Addressing transmission losses
- Education initiatives to address market trading constraints

- Large scale, trans-catchment, water supply infrastructure?
Threats – Availability/Reliability

- Climate Change
- Drought & Prolonged Dry Periods – Historic Planning Impacts
- Urban Growth vs Agricultural Growth
- Groundwater Reliability
- Lack of Buffer Storage
- Lack of Diversity in Urban Water Source dependencies
Threats – Demand

• E.g. Residential urban growth of Tamworth
• Industrial expansion of water intensive industry
Initial Recommendations – Infrastructure & Actions

As a region not just a town or city

- Secure Yield Study
- IWCM
- Infrastructure Options
  - Short Term
  - Long Term