NSW

LAND & WATER CONSERVATION

LOCAL GOVERNMENT & SHIRES ASSOCIATIONS OF NSW

1998/99 (Incorporating 1994/95 to 1998/99) NSW Water Supply and Sewerage

Performance Comparisons

1998/99 NSW WATER SUPPLY AND SEWERAGE

PERFORMANCE COMPARISONS

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Whilst the Department of Land and Water Conservation has taken due care in preparation of this report, it accepts no liability for any errors or omissions, nor for any use of the report by any person.

FOREWORD

The performance of all 128 NSW water utilities for the 5 years from 1994/95 to 1998/99 is reported in this report which was prepared by the Urban Water Management Branch of the Department of Land and Water Conservation. The ***NSW*** Annual Water Supply and Sewerage ***Performance Comparisons*** and reporting system has been in operation since 1986.

The Performance Comparisons enable each of the 126 non-metropolitan water utilities to compare both trends in its performance indicators in recent years and its performance relative to other water supply and sewerage utilities. This allows each utility to identify and rectify any areas where it may be under-performing. Table 1 (Water Supply) and Table 2 (Sewerage) on pages xx and xxi indicate the ***top 20%,*** the ***Statewide median*** and the ***lower 20%*** for the ***NSW performance indicators***. These tables facilitate yardstick competition, allowing each utility to review its performance against these values and improve future performance.

There are clearly a wide range of factors which can impact on a particular water utility's performance. In the case of water supply, these include matters such as whether the utility is responsible for the full water supply system or components only (eg. reticulation or bulk supply), and whether the supply is fully filtered, is an unfiltered surface supply, or is a high quality groundwater which does not require filtration. In the case of sewerage, a significant cost impactor is whether the utility is operating phosphorus and nitrogen removal facilities at its treatment works. Other important factors include population density and associated properties served per km of main, climate, rainfall, topgraphy, proximity to water sources, extent of storage required, and age and condition of the infrastructure. By taking account of such factors when reviewing its relative performance, the reporting system will assist each utility to assess and improve its performance.

Performance comparisons and benchmarking are required under National Competition Policy, are important for ***public accountability*** to the community and have been strongly endorsed by the Independent Pricing and Regulatory Tribunal's report on its review of Pricing Principles for Local Water Authorities (September 1996). The NSW Performance Comparisons also provide valuable data for determining the present position and assessing future water supply and sewerage needs for non-metropolitan NSW. This ensures an appropriate focus and targeting of programs to assist the NSW utilities.

The Department of Land and Water Conservation/Local Government and Shires Associations (DLWC/LGSA) ***syndicate benchmarking*** pilot project on water supply and sewerage by a group of 7 large NSW councils has resulted in Council strategies for ***significant cost savings*** and indicates that ***such process benchmarking should be highly cost-effective for all non-metropolitan councils***. The present report therefore provides disaggregated cost data to facilitate such benchmarking by councils (Figures 56, 58, 60, 62, 64 and 65 for water supply and Figures 108, 110, 112, 114, 116 and 117 for sewerage).

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ACKNOWLEDGMENTS

The strong support of the Local Government and Shires Associations for the NSW water supply and sewerage performance reporting system since its commencement in 1986 is acknowledged.

As the success of the NSW performance reporting system is contingent on full participation by all NSW councils, the continuing participation of each council in the reporting system and each council's significant efforts in providing current, accurate and timely data on its performance are particularly acknowledged.

Hyder Consulting Pty Ltd assisted by managing the substantial spreadsheet operations required and preparation of the Figures.

Executive Summary

Highlights of the 1998/99 performance of the 126 non-metropolitan NSW water utilities are outlined below. A summary of the 1998/99 performance of each utility is provided in Table 5 on page xxvi. Trends in Statewide performance over the last 8 years are shown in Table 4 on page xxiv.

108 utilities were responsible for ***both water supply and sewerage, 8 utilities*** were responsible for ***water supply only,*** and ***10 utilities*** were responsible for ***sewerage only***.

The total ***population*** provided with a reticulated ***water supply*** in non-metropolitan NSW was ***1.7 million***, the ***number of assessments*** was ***715,000*** and the total ***water consumption*** was ***325,000 ML***.

The total ***turnover*** for the 126 utilities was ***$570M*** and the ***current replacement cost*** of their water supply and sewerage assets was ***$8,900M. 41*** of these ***NSW utilities*** were ***Category 1 businesses*** under National Competition Policy, having an ***annual turnover*** of over ***$2M*** for their water supply or sewerage businesses***. 24 utilities*** had such a turnover for ***both water supply and sewerage, 13 utilities*** had such a turnover for ***water supply only,*** and ***4 utilities*** had such a turnover for ***sewerage only***.

Drinking Water Quality – 91% of the samples tested complied with the 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines ***for physical and chemical*** water quality and ***95% of the samples tested complied for microbiological*** water quality. Over the last 5 years, physical and chemical compliance ranged from 91% to 96% and microbiological compliance ranged from 85% to 95%. With the large increase in the total number of samples tested, compliance for microbiological water quality has risen to 93% to 95% over the last 3 years.

Sewage Effluent Quality – 97% of the sampling days complied with the 90-percentile limits of the EPA licences ***for Biochemical Oxygen Demand (BOD)*** and ***93% of the sampling days complied for Suspended Solids (SS).*** Compliance over the last 5 years has ranged from 95% to 97% for BOD and 92% to 93% for SS.

Statewide medians for non-metropolitan NSW in 1998/99 were:

- ***Average residential water consumption – 230 kL***/connected residential property. Average residential consumption ***has fallen from 330 kL/a to 230 kL/a*** over the last 8 years.
- ***Number of employees – 2.6*** per 1000 connected properties for water supply and sewerage***.*** This has fallen from a maximum of 3.3 over the last 8 years. The number of employees per 1000 connected properties for water supply has fallen from a maximum of 1.7 to 1.3 and for sewerage has fallen from a maximum of 1.8 to 1.5.
- 1999/00 ***typical residential bill – $650/assessment*** for water supply and sewerage. The 1998/99 ***average residential bill*** was ***$620/connected residential property***. This is lower than the typical residential bill due to pensioner rebates and vacant lots and ***has remained*** at about ***$620*** (Jan 1999$) over the last 8 years.

- Typical 1999/00 ***developer charge – $4400***/equivalent tenement for water supply and sewerage.
- ***Economic real rate of return – 2.9%*** for water supply and sewerage. ***91 utilities had a positive real rate of return.*** The real rate of return has increased from 2.6% to 2.9% over the last 4 years.
- ***Debt/equity – 7%*** for water supply and sewerage, falling from 11% to 7% over the last 4 years.
- ***Water quality complaints*** and ***water service complaints – 4*** and ***10*** per 1000 connected properties. Water quality complaints have remained constant and service complaints have increased from 7 to 10 over the last 5 years.
- ***Sewage odour complaints*** and ***sewerage service complaints – 0*** and ***13*** per 1000 connected properties. Odour complaints have remained constant and service complaints have fallen from 20 to 13 over the last 5 years.
- ***Confirmed sewer chokes*** and ***sewage overflows – 55*** and ***3*** per 100 km of main. These have fallen from 75 to 55 and 7 to 3 respectively over the last 5 years.
- ***Operation, maintenance and administration (OMA) cost – $395***/connected property for water supply and sewerage. The OMA cost per property has increased from $350 to $395 (Jan 1999$) over the last 8 years, mostly due to more stringent standards for sewage treatment and higher management costs.
- ***Management cost – $145***/connected property for water supply and sewerage. The management cost per property has increased from $105 to $145 (Jan 1999$) over the last 8 years, with 70% of the increase reported over the last 3 years.

60 utilities had a ***pay-for-use water supply tariff*** (ie. a two-part tariff with an access charge and a usage charge for all water usage; or an inclining block tariff which also has a higher usage charge for usage over about 200 kL/a) in July 2000. These utilities ***complied*** with the Independent Pricing and Regulatory Tribunal's (***IPART***) Pricing Principles for Local Water Authorities and with the Council of Australian Governments' (***COAG***) Strategic Framework for Water Reform.

99 utilities had ***water supply tariffs independent of land value***, and ***82 utilities*** had ***sewerage tariffs independent of land value***. These utilities ***complied*** with the ***IPART*** Principles and the ***COAG*** Reforms.

40 water utilities have completed Strategic Business Plans and have demonstrated the long-term financial sustainability of their water supply and sewerage businesses to comply with National Competition Policy. A further 57 utilities have prepared draft Strategic Business Plans for these businesses, although further development of these draft business plans is required.

SUMMARY OF RESULTS

1 OVERVIEW

The performance indicators in this report are for each NSW utility's water supply and sewerage businesses and have been grouped under the following categories:

- Business Characteristics
- Charges
- Bills
- Financial
- Levels of Service
- Efficiency

To facilitate comparisons, the performance indicators have been prepared for each utility's aggregated water supply businesses and aggregated sewerage businesses, rather than for individual water supply and sewerage systems.

Statewide performance indicators have been included in the Summary. These have been calculated on a ***'percentage of connected properties basis'*** as this best indicates Statewide performance by giving due weight to larger councils and reducing the effect of smaller councils on the Statewide performance.

Table 5 on page xxvi shows the key water supply and sewerage performance indicators for each of the 128 NSW water utilities to provide an overview of each utility's performance.

Most of the figures in this report show the results for each water utility for each of the last five years to enable review of trends and to facilitate benchmarking and 'yardstick' comparisons. These figures have been arranged into the following 4 size ranges to enable each utility to compare its performance against similar sized utilities (eg. Figure 22 on page 61):

- >10,001 connected properties,
- 2,001 to 10,000 connected properties,
- 801 to 2,000 connected properties, and
- 200 to 800 connected properties.

Tables 6 to 12 on pages 5 to 29 show key data for each utility's water supply and sewerage businesses over the last 4 years:

- Table 6 1998/99 Water Consumptions in Non-Metropolitan NSW
- Table 7 Water Supply – Business Characteristics, Financial
- Table 8 Water Supply – Charges, Bills
- Table 9 Water Supply – Levels of Service, Efficiency
- Table 10 Sewerage – Business Characteristics, Financial
- Table 11 Sewerage – Charges, Bills
- Table 12 Sewerage – Levels of Service, Efficiency

A draft of Tables 5 to 12 was circulated to each council's water supply and sewerage manager for review and any corrections advised by councils have been incorporated in the final tables.

Tables 7 to 12 can be used to view trends and compare key performance indicators for all councils. This allows each council to review its performance against councils with similar businesses. Council can then improve its performance by appropriate benchmarking as indicated on page xix.

2 STATEWIDE PERFORMANCE

Top 20% of Performance

Non-metropolitan NSW performance indicators for the ***top 20% of performance***, Statewide median (50%) values and the bottom 20% of performance, calculated on a percentage of connected properties basis are shown on Table 1 (Water Supply, page xx) and Table 2 (Sewerage, page xxi).

To facilitate comparisons with other forms of reporting of results, Table 3 on page xxii shows the ***top 20%,*** median values, and the bottom 20% for 14 key performance indicators for each of percentage of connected properties; percentage of population; and percentage of councils bases for non-metropolitan NSW.

Trends in Statewide Performance

Trends in Statewide performance over the period 1991 to 1998/99 are shown in Table 4 on page xxiv for 11 key performance indicators.

Table 4 shows that over the last 8 years:

- Annual residential water ***consumption*** per connected property has ***fallen from 330 kL/a to 230 kL/a***.
- The number of ***employees*** per 1000 connected properties has ***reduced from 1.7 to 1.3 for water supply*** and from a maximum of ***1.8 to 1.5 for sewerage***.
- The 1999/00 ***typical residential bill*** for water supply and sewerage was about ***$650/assessment*** (Table 5). The 1998/99 ***average residential bill*** per connected residential property was $620 which is less than the typical residential bill due to pensioner rebates and vacant lots (however, this would not be the case for councils with an inclining block tariff or an annual allowance for their water supply, nor for those with access charges not independent of land value).
- The ***average residential bill*** has remained at about ***$295 (Jan 1999$) for water supply*** and ***$360 for sewerage***.
- The economic ***real rate of return*** has ***increased from 2.6% to 2.9%*** for water supply and sewerage over the last 4 years.
- ***Debt/equity*** has ***fallen from 11% to 7%*** for water supply and sewerage over the last 4 years.
- Compliance with the 1987 ***Microbiological*** Drinking Water Quality Guidelines has remained at about ***89% of councils***.
- ***Water quality complaints*** have ***remained 4, water service complaints*** have ***increased from 7 to 10*** per 1000 connected properties over the last 5 years.
- ***Sewage odour complaints*** have ***remained nil, sewerage service complaints*** have ***fallen from 20 to 13*** per 1000 connected properties over the last 5 years.
- ***Confirmed sewer chokes*** and ***sewage overflows*** have ***fallen from 75 to 55 and 7 to 3*** per 100 km of main respectively over the last 5 years.
- The ***operating (OMA) cost*** per connected property has remained at about ***$185 for water supply*** and has ***increased from $170 to $210 for sewerage***.

- The ***management cost*** per connected property has ***increased from $55 to $80 for water supply*** and ***from $53 to $70 for sewerage***.

Most of the above increases in sewerage operating costs are attributable to the increasing standards of sewage treatment and to increasing management costs.

Interstate Comparisons
To provide an overall assessment of the performance of NSW utilities in providing water supply and sewerage in non-metropolitan NSW, the results of the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) ***Water Industry Performance Review*** are shown in Appendix A. The NSW annual operating cost (OMA*) for water supply is $190 per connected property, which is significantly lower than Sydney Water, and is also significantly lower than SA country and WA country utilities. The operating cost (OMA) for sewerage is $215 per connected property, which is lower than Sydney Water and similar to other Australian utilities. The economic real rate of return for non-metropolitan NSW water supply and sewerage is 2.9% which is slightly lower than Sydney Water and Hunter Water, and similar to other Australian utilities.

The compliance with microbiological water quality guidelines and the water main breaks per 100 km of main in non-metropolitan NSW are similar to the median for Australian capital city utilities and are significantly better than Victoria. Although all sewage treatment works in non-metropolitan NSW provide at least secondary treatment, Sydney Water provides secondary treatment for only 20% of its sewage.

*OMA - operation, maintenance and administration

3 STATEWIDE MEDIAN PERFORMANCE INDICATORS

The 1998/99 Statewide median performance indicators for non-metropolitan NSW have been calculated on a ***percentage of connected properties basis*** and are summarised below.

BUSINESS CHARACTERISTICS

Population Served (Figures 16, 68)

- 75% of water supply councils and 80% of sewerage councils serve a population of less than 20 000.
- 45% of water supply councils and 50% of sewerage councils serve a population of less than 5 000.
- 15% of water supply councils and 15% of sewerage councils serve a population of less than 1 500.

Unserved Urban Population (Figures 17, 69)
Median urban population without a reticulated public:

- water supply is ***1.1 %*** of the existing population
- sewerage service is ***2.3 %*** of the existing population.

New Residential Dwellings (Figures 18, 70)
Median new residential dwellings as a percent of the existing residential properties was:

- ***1.4%*** connected to water supply
- ***1.6%*** connected to sewerage

Properties Served per km of Main (Figures 19, 71, Tables 7, 10)
The median number of properties served per km of main was:

- ***35*** for water supply
- ***40*** for sewerage

Average Annual Residential Consumption (Figures 20, 22, 23, Tables 7)
The median average annual residential consumption was ***230 kL/connected property***.

Consumption by Sector (Figure 21, Table 6)
Annual water consumption by sector (residential, industrial, commercial, other) is shown on Figure 21.

Employees (Figures 27, 78)
The median number of employees per 1000 connected properties was:

- ***1.3*** for water supply and
- ***1.5*** for sewerage.

CHARGES (1999/00)

Water Usage Charge (Figure 2, Table 8)

- The median water usage charge was ***60c/kL***.
- 20% of councils had a water usage charge greater than 85c/kL, and 80% of councils had a charge greater than 45c/kL. It is considered that many councils are under-estimating the true cost of their water supply.

Annual Water Allowance (Figure 2, Table 8)
The median annual water allowance was ***0 kL***.

Access Charge (Figure 2, 5, Table 8, 11)
The median access charge per assessment was:

- ***$195*** for water supply and
- ***$365*** for sewerage.

Developer Charges (Figures 1, 4, 6, Tables 5, 8, 11)
The median typical developer charge was:

- ***$2400*** per equivalent tenement (ET) for water supply and
- ***$1600*** per ET for sewerage.

BILLS

Typical Residential Bill (Figures 3, 5, 7, Tables 5, 8, 11)
The median **1999/00** typical residential bill per assessment was:

- ***$310*** for water supply and
- ***$395*** for sewerage.

Average Residential Bill (Figures 8, 28, 80, Tables 8, 11)
The median **1998/99** average residential bill per connected property was:

- ***$295*** for water supply and
- ***$360*** for sewerage.

FINANCIAL

Turnover (revenue less grants for capital works) (Figures 10, 14, 31, 36, 82, 87, Tables 5, 7, 10)
The total turnover was ***$290M*** for ***water supply*** and ***$280M*** for ***sewerage***.

Real Rate of Return (Figures 11, 32, 83, Tables 5, 7, 10)
The median economic real rate of return was:

- ***2.4%*** for water supply and
- ***3.3%*** for sewerage.

Operating Sales Margin (Figures 12, 33, 84)
The median operating sales margin was ***22%*** for ***water supply*** and ***28%*** for ***sewerage.***

Many councils had a negative economic real rate of return and operating sales margin for sewerage (Figures 83 and 84). These councils should review their strategic business plans and charges to ensure the long-term financial sustainability of their businesses (refer also to page xvii).

As a result of the revaluations of water supply and sewerage assets to written down current cost (deprival value - modern equivalent assets (MEA)), the median operating sales margins from 1995/96 to 1998/99 are significantly lower than the 1994/95 values of 30% (this is due to the higher depreciation resulting from the revaluations).

Debt to Equity (Figures 13, 34, 85, Tables 5, 7, 10)
The median debt to equity was:

- ***4%*** for water supply and
- ***10%*** for sewerage.

Loan Payment (Figures 14, 35, 86)
The median loan payment per connected property was:

- ***$60*** for water supply and
- ***$80*** for sewerage.

LEVELS OF SERVICE

For water utilities with a number of separate water supply or sewage treatment works, the 1998/99 compliance with drinking water quality guidelines and EPA licence conditions have been pro-rated on the basis of the number of samples tested for each treatment works.

Compliance with Drinking Water Quality Guidelines (Figure 38, 39, 40, 40A, Tables 5, 9)
91% of the samples tested complied with the 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines **for physical and chemical** water quality and **95% of the samples tested complied for microbiological** water quality. Over the last 5 years, physical and chemical compliance ranged from 91% to 96% and microbiological compliance ranged from 85% to 95%. With the large increase in the total number of samples tested, compliance for microbiological water quality has risen to 93% to 95% over the last 3 years.

89% of the non-metropolitan NSW water ***utilities complied with microbiological*** water quality of the 1987 National Health and Medical Research Council/Australian Water Resources Council (NHMRC/AWRC) Guidelines for Drinking Water Quality. 11% of utilities did not report on this important item. ***All utilities should carry out the necessary water quality sampling and report thereon in future.***

The chlorination system failed to operate on at least one (1) day in 1998/99 for 13% of utilities (Figure 51). 8% of utilities reported failure of the chlorination system for over 3 days in 1998/99.

Compliance with EPA Licence Conditions (Figures 88, 89, 90, 91, 92, Tables 5, 12)
97% of the sampling days complied with the 90-percentile limits of the Environment Protection Authority (EPA) licences **for Biochemical Oxygen Demand (BOD)** and **93% of the sampling days complied for Suspended Solids (SS).** Compliance over the last 5 years has ranged from 95% to 97% for BOD and 92% to 93% for SS.

The percentage of utilities complying with the 90-percentile limit of their EPA licence conditions was ***58% for BOD and 30% for SS***. The major cause of non-compliance is due to the growth of algae in maturation ponds, being measured as BOD and SS. Most treatment works in non-metropolitan NSW have maturation ponds due to previous EPA preference for ponding over chlorination. Negotiations with the EPA to develop an appropriate licensing method when maturation ponds are used for disinfection have favoured an option to test for SS prior to the maturation ponds. For new installations and major augmentations, Ultra Violet (UV) disinfection is being used as an alternative to maturation ponds to overcome this problem. 7% of utilities did not report on their BOD and SS compliance. ***All utilities should carry out the necessary sampling of effluent quality and report thereon in future.***

Confirmed Sewer Chokes (Figure 93, Table 12)
The Statewide median was ***55*** confirmed sewer chokes per 100 km of sewer mains. 19% of utilities did not report on this item. These utilities should institute a system to record and report thereon in future.

Sewage Overflows (Figure 96, Table 12)
The Statewide median was ***3*** sewage overflows per 100 km of sewer mains. Some 34 % of utilities reported no sewage overflows. 27% of utilities did not report on this item. These utilities should institute a system to record and report thereon in future.

Re-use of Reclaimed Water (Figure 73, Table 6)
Re-use of reclaimed water was carried out by ***47%*** of ***utilities***, mostly for agriculture. In total, for all treatment works, about ***14%*** of treated sewage ***effluent*** was ***reclaimed***. 8 utilities reclaimed 100% of their effluent and a further 8 utilities reclaimed over 50% of their effluent.

Customer Complaints (Figures 43, 44, 45, 97, 98, 99, Tables 9, 12)
The median indicator for water quality complaints was ***4 per 1000 connected properties*** and for sewage odour complaints was ***nil per 1000 connected properties***.

The water utilities which were unable to report on customer complaints should institute a system to record and report complaints. ***Utilities with high levels of complaints should examine their operations.***

Customer Interruption Frequency (Figures 46, 100)
The median customer interruption frequency was ***3*** per 1000 connected properties for water supply and ***0.5*** per 1000 connected properties for sewerage.

During 1998/99, ***3%*** of utilities needed to apply some ***water restrictions***. No NSW utilities had restrictions in place for over 50% of the time in 1998/99.

Trade Waste (Figure 79)
Details of trade waste discharges to sewerage systems are shown on Figure 79.

EFFICIENCY

Operating Cost (OMA) (Figures 15, 53, 54, 55, 56, 105, 106, 107, 108, Tables 5, 9, 12)
The operating cost (OMA - operation, maintenance and administration) was:

- For water supply***, $185 per connected property*** or $580 000 per 100 km of mains.
- For sewerage, ***$210 per connected property*** or $880 000 per 100 km of mains.

Water utilities with higher operating costs should examine their operations to determine whether they can improve their cost-effectiveness.

Management Cost (Figures 15, 57, 58, 109, 110, Tables 5, 9, 12)
The median management cost per connected property was:

- ***$80*** for water supply and
- ***$70*** for sewerage.

Utilities with higher management costs should examine their operations to determine whether they can improve their cost-effectiveness.

Treatment Cost (Figures 61, 62, 113, 114)
The median operation and maintenance cost for treatment per connected property was:

- ***$20*** for water treatment (including chemical costs) and
- ***$60*** for sewage treatment (including chemical, energy and effluent management costs)

Pumping Cost (Figures 63, 64, 115, 116)
The median operation and maintenance cost for pumping per connected property (including energy cost) was:

- ***$20*** for water supply and
- ***$40*** for sewage.

Water Main and Sewer Main Cost (Figures 65, 117)
The median water main, sewer main operation and maintenance cost per connected property was:

- ***$35*** for water mains and
- ***$25*** for sewer mains.

Energy Consumption (Figures 24, 25, 75, 76)
Only 35% of utilities reported on their energy consumption. All utilities should report on this item in future.

PERFORMANCE REPORTS FOR EACH COUNCIL

In response to recommendations in the Independent Pricing and Regulatory Tribunal's (IPART) report on Pricing Principles for Local Water Authorities (September 1996), DLWC will be providing each council and the Tribunal with an annual performance report for the council's water supply and sewerage businesses along the lines shown in Appendix C. Most of the data in this report is based on Tables 5 to 12 which have been reviewed by Council's water supply and sewerage manager.

To assist Council to gain a quick appreciation of its performance in comparison with other councils, the Council performance report provides a ranking of Council's performance in regard to each indicator. These rankings are based on the top 20% of councils for each indicator being ranked 1 and the bottom 20% being ranked 5 (councils in the range 40% to 60% are ranked 3).

Councils will appreciate that each of the performance indicators is a "partial" indicator only and therefore cannot be interpreted in isolation. In addition, the rankings are indicative only and do not take account of the wide range of factors which can impact on a council's performance, as discussed in the Foreword. The aim of ranking each council's performance is to assist the council in identifying areas where its performance appears to be lower than that of other councils, taking into account council's circumstances and the overall results of the performance indicators. Further suggestions for reviewing Council's performance indicators against Statewide values and similar councils are provided in pages xviii and xix.

Council can improve its performance in apparent areas of under-performance by benchmarking[1] its key work processes in these areas with the work processes of 1 or 2 high performing similar councils and implementing the best practices thus identified. An essential first step for Council would be to record its present work practices and work processes in these areas, eg. for sewage pumping stations, how frequently stations are visited by Council's operators, the number of staff at each visit, how are stations monitored (eg. manual, customer advice of malfunction or telemetry), how frequently the stations are cleaned and whether cleaning is carried out by non-trades personnel.

The performance reports also indicate the status of Council's strategic business plan and financial plan. Councils who have successfully completed these plans have demonstrated long-term financial sustainability of their water supply and sewerage businesses and comply with National Competition Policy. Further information on business planning is provided on page xvii.

The status of Council's compliance with the IPART Pricing Principles can also be obtained from the performance reports by reviewing the indicators shown under Charges. These describe the tariff structure, showing whether the access charge is independent of land value and whether a two-part or inclining block tariff has been adopted for water supply. Average annual residential water consumption is also shown in the report under Business Characteristics. Further information on compliance with the IPART Pricing Principles is provided on page xvii.

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[1] Syndicate Benchmarking: Water Supply and Sewerage, Department of Land and Water Conservation, NSW and Local Government and Shires Associations of NSW, June 1997

[2] Strategic Business Plans for Water Supply and Sewerage: Guidelines for Preparation, Public Works, NSW, November 1993

[3] NSW Financial Planning Model: Overview of Financial Planning, How Model Works, User Manual, Department of Land and Water Conservation, NSW (Advance Copy, July 1999)

[4] Water Supply and Sewerage Developer Charges in Country NSW: Guidelines for Calculation, Department of Land and Water Conservation, NSW (Draft, March 2000)

[5] Model Policy for Discharge of Trade Waste to Sewers, Department of Land and Water Conservation, NSW, 1995

[6] Government Trading Enterprises Performance Indicators 1992-93 to 1996-97, Steering Committee on National Performance Monitoring of Government Trading Enterprises, April 1998

[7] The Australian Urban Water Industry, WSAA Facts '99, Water Services Association of Australia, 1999

WHAT SHOULD COUNCIL DO NOW?

1 STRATEGIC BUSINESS PLANS

Council's strategic business plans[2,3] for water supply sewerage are its principal planning documents for these businesses. As indicated in Table 5 (column (20)), 40 councils have completed strategic business plans and financial plans for their water supply and sewerage businesses. Those councils have ***demonstrated long-term financial sustainability of their water supply and sewerage businesses to comply with National Competition Policy*** and now need to annually review the key projections and actions in their strategic plans and annually update their financial plans.

A further 57 councils have prepared draft strategic business plans for these businesses, but further development of the plans is required, including preparing a robust long-term financial plan. These councils should aim to finalise their business plans by July 2001.

Councils who have not yet prepared a strategic business plan should do so as these plans provide an overarching framework for the council's water supply and sewerage planning. Financial assistance of up to $10,000 towards the cost of preparation of a council's first strategic business plan for each of water supply and sewerage is available from the Minister for Land and Water Conservation under the Country Towns Water Supply and Sewerage program.

To comply with National Competition Policy, each council needs to prepare a strategic business plan and financial plan to demonstrate the long-term financial sustainability of its water supply and sewerage businesses. Such plans are also a pre-requisite for eligibility for financial assistance under the Country Towns Water Supply and Sewerage program. Whilst a positive economic real rate of return (column (15) of Table 5 on page xxvi) indicates that a council is recovering the operating cost and current cost depreciation for its businesses, it provides no indication on the financial sustainability of the business as it takes no account of future income or expenditure requirements nor their impact on future customer bills.

2 COMPLIANCE WITH IPART PRICING PRINCIPLES

The Independent Pricing and Regulatory Tribunal's (IPART) Pricing Principles for Local Water Authorities are consistent with the Council of Australian Governments' (COAG) Strategic Framework for Water Reform and include:

(1) Cost- reflective pricing of water supply and sewerage services.

(2) Use of a two-part tariff or an inclining block tariff for water supply where this is cost-effective. Table 5 (column (5)) indicates that 60 out of the 116 NSW non-metropolitan water utilities now have such a tariff in place. A two-part tariff has an access charge and a charge per kL for all water usage. An inclining block tariff has three parts: an access charge, a low charge per kL for usage up to say 200 kL and a higher charge per kL for greater usage. Councils who have not yet adopted such a tariff should aim to adopt one by July 2001 where this is cost-effective. However, it is expected that implementation of such a tariff may not be cost-effective for small towns (with a population of say under 2,000) which are not facing augmentation of the capacity of their water supply. Guidance on implementing such tariffs is provided in the Water Services Association of Australia's "Wise Water Management - a Demand Management Manual for Water Utilities". The Minister for Land and Water Conservation has provided copies of this manual to Council (refer to appendices 3.1, 3.2 and 3.3 of the manual).

(3) The removal of land value from water supply and sewerage access charges is required to eliminate significant cross-subsidies. Table 5 indicates that 99 councils have their water supply tariff independent of land value and 82 councils have their sewerage tariff independent of land value (columns (6) and (10)). The councils who have not yet done so should move to remove land values from their water supply and sewerage access charges.

(4) Developer charges for water supply and sewerage are shown in Table 5 (column (14)). Developer charges guidelines[4] for councils are proposed for release in late 2000; a draft copy is available on request from DLWC (Fax: 9895 5968). Councils should move to set cost-reflective developer charges as far as possible. However, if Council elects to set lower developer charges, the resulting cross-subsidy should be disclosed in Council's annual report. Similarly, Council should move to set cost-reflective trade waste charges[5] as far as possible and should disclose any cross-subsidies for trade waste in its annual report.

(5) Demand management - Council should implement cost-effective demand management (refer to WSAA demand management manual on page xvii). Average annual residential consumption per property is shown in Table 5 (column (3)).

3 IMPROVING COUNCIL'S PERFORMANCE

Comparisons of Similar Sized Councils

In response to council requests for a basis to compare their performance against similar sized councils, the ranked values for most of the performance indicators reported have been presented for 4 size of council ranges (on the basis of the number of connected properties served by each council eg. Figure 22 on page 61).

These Figures report the performance of all the 128 NSW water utilities, including Sydney and Hunter Water Corporations, Broken Hill Water Board and the Fish River government business enterprise. The values for Sydney and Hunter have been obtained from published reports.[6,7]

How is your Council Performing?

To assess its performance, Council should:

- ***Review its performance indicators*** using Council's 1998/99 performance report for each of water supply and sewerage. These have been compiled by DLWC from Council's performance reporting forms and financial statements and provided to Council (sample reports are provided in Appendix C).
- ***Identify any trends*** in Council's performance indicators over the last few years, and compare its indicators with the Statewide median values and the top 20%.
- ***Compare selected performance indicators*** with those of other councils with similar water supply or sewerage businesses. This can be conveniently done using the Figures showing performance trends for similar sized councils over the last 5 years (eg. Figure 22). A more detailed analysis can be carried out in preparation for benchmarking by selecting similar councils (refer to the facing page) from Tables 5 to 12 and graphing their performance indicators to provide a comparison with Council's performance (however, if Council is undertaking syndicate benchmarking with a group of councils, this latter step is unnecessary as such graphing of the results of relevant councils, including all members of the syndicate, would be included in the syndicate benchmarking procedure). Electronic copies of these tables and Figures 56, 58, 60, 62, 64, 65, 108, 110, 112, 114, 116 and 117 have been provided to Council's water supply and sewerage manager to enable Council to carry out such analysis.
- ***Undertake process benchmarking for selected indicators*** that are below the median on a percentage of councils basis (Appendix C) or are lower than those of similar councils.

As discussed in the Foreword, a number of factors such as the extent of the services provided by Council, population density, climate etc. will impact on the level of Council's performance indicators. Council will need to take account of these factors when reviewing its performance against Statewide values/similar councils. For example, in the case of a ***water supply*** system, Council should consider the effect of factors such as:

- ***Properties served per km of main*** - geographically dispersed systems have fewer connected properties served per km of main. This tends to increase the average residential bill and the operating (OMA) cost per property.
- ***Whether supply is filtered*** - a fully filtered water supply will significantly increase both capital and operating costs, increasing the average residential bill and the operating (OMA) cost per property.
- ***High residential consumption per property*** - for businesses with a high residential water consumption per property, a high level of annual and peak day water volumes would be delivered to customers. This is likely to result in a relatively high operating cost per property and the average residential bill. Such councils should examine opportunities for reducing consumption through water demand management and implementation of a two-part or inclining block tariff.
- ***Loan payment per property*** - a high value for this item would indicate a relatively high capital cost per property and/or recent construction of significant capital works or use of short-term loans. If Council has large short term loans (eg. 5 year loan terms), Council may be able to reduce this cost by examining conversion of such loans to say a 20 year term. Such a reduction in loan payments would enable Council to reduce the average residential bill.
- ***High pumping cost*** - this is influenced mainly by topography and geography and a high pumping operation and maintenance cost would also increase the operating cost per property and the average residential bill. Council may be able to negotiate a more competitive electricity tariff from another supplier or achieve savings through use of off-peak or interruptible tariffs.

Similar considerations to the above 1st, 4th, and 5th dot points apply for ***sewerage.*** In addition, a significant cost impactor is whether Council is operating phosphorus and nitrogen removal facilities at its treatment works. In 1998/99, Albury, Bathurst, Cootamundra, Hastings, Lismore, Queanbeyan, Uralla, Wagga Wagga, Wingecarribee and Yarrowlumla councils operated such facilities for over 50% of their treatment works capacity. In addition, significant such nutrient removal was carried out by Shoalhaven and Tweed councils.

As indicated in page xvi, Council can improve its performance in apparent areas of under-performance by benchmarking its key work processes in these areas with the work processes of 1 or 2 high-performing similar councils and implementing the best practices thus identified.

In addition, Council should undertake "Syndicate Benchmarking" with a group of similar sized councils in order to determine current best practice and to identify existing practices which Council can improve. ***The results of the syndicate benchmarking pilot project indicate that such process benchmarking should be highly cost-effective for all NSW councils.*** Over 40 NSW councils have advised they wish to proceed with syndicate benchmarking of their water supply and sewerage businesses. DLWC is now working with these councils to facilitate appropriate syndicate benchmarking projects and will disseminate the results.

Table 1 : 1998/99 NSW Water Supply Performance Indicators

	20%	Median (50%)	80%
BUSINESS CHARACTERISTICS			
Urban Properties without Reticulated Public Water Supply (%)	0.0	1.1	5.4
Residential Connections (% of total)	90	94	97
New Residential Dwellings Connected to Water Supply (%)	2.3	1.4	0.8
Properties Served per km of Main	55	35	22
Annual Total Consumption (at Master Meters - ML)	13000	6200	3100
Average Annual Residential Consumption (kL/property)	210	230	360
Peak Day to Average Consumption (%)	175	220	265
Unnacounted for Water (including leakage %)	10	15	19
Energy Consumption (kWh/ML)	0.0	0.6	0.9
Energy Consumption (kWh/property)	0.0	0.2	0.4
Renewals Expenditure (% of current replacement cost of system assets)	0.3	0.0	0.0
Employees (per 1000 properties)	1.0	1.3	1.8
1999/2000 CHARGES/BILLS			
Water Usage Charge (c/kL)	75	60	50
Annual Water Allowance (kL/assessment)	0	0	200
Access Charge ($/assessment)	155	195	245
Typical Residential Bill ($/assessment)	200	310	370
Typical Developer Charge ($/equivalent tenement)	3300	2400	1200
1998/99 BILLS			
Average Residential Bill ($/connected property)	230	295	370
Bill for Residential Customer using 200 kL/a ($/assessment)	175	260	340
Real Increase over Previous Year's Bill for Residential Customer using 200 kL/a (%)	-6	-2	1
FINANCIAL			
Revenue from Usage Charges (% of total)	49	25	17
Revenue from Access Charges (% of total)	31	44	58
Revenue from Other (% of total)	11	23	30
Economic Real Rate of Return (%)	3.8	2.4	0.9
Return on Assets (%)	3.4	2.4	1.2
Debt to Equity (%)	9	4	0.5
Interest Cover (%)	>500	500	250
Loan Payment ($/property)	115	60	15
LEVELS OF SERVICE			
Physical and Chemical Water Quality Compliance (%)	100	98	70
Microbiological Water Quality Compliance (%)	100	100	100
Water Quality Complaints (per 1000 properties)	2	4	16
Service Complaints (per 1000 properties)	3	10	40
Customer Dealings Complaints (per 1000 properties)	0	0	0.2
Customer Interruption Frequency (per 1000 properties)	0	3	80
Average Duration of Interruption (hr)	2	3	3
Average Customer Outage Time (min)	0	1	11
Number of Main Breaks (per 100 km of main)	7	15	30
Drought Water Restrictions (% of time)	0	0	0
EFFICIENCY			
Operating Cost (OMA) per 100 km of Main ($'000)	400	580	930
Operating Cost (OMA) ($/property)	150	185	250
Operating Cost (OMA) ($/ML)	340	480	570
Management Cost ($/property)	45	80	100
Treatment Cost ($/property)	15	20	60
Pumping Cost ($/property)	14	20	40
Water Main Cost ($/property)	25	35	55
Total Days Lost (%)	0	0	3

Notes:

1. ***20%*** ***top 20% of properties***
   Median (50%) median of properties (Statewide)
   80% bottom 20% of properties

2. The above non-metropolitan NSW performance indicators are on a percentage of connected properties basis which is the most appropriate basis for judging Statewide performance by giving due weight to larger councils and reducing the effect of smaller councils (refer also to Notes 1 to 3 on page xxiii).

3. The performance indicators in this table and their grouping are consistent with the 1998/99 Australian Non Major Urban Water Utility Performance Monitoring Report, the body of the present report and the reports for each council in Appendix C.

Table 2 : 1998/99 NSW Sewerage Performance Indicators

	20%	Median (50%)	80%
BUSINESS CHARACTERISTICS			
Urban Properties without Reticulated Sewerage Service (%)	0.2	2.3	12
Residential Connections (% of total)	91	93	95
New Residential Dwellings Connected to Sewerage (%)	3.1	1.6	0.7
Properties Served per km of Main	46	40	32
Volume of Sewage Treated per property (kL/a)	220	280	370
Energy Consumption (kWh/ML)	210	490	790
Energy Consumption (kWh/property)	80	120	240
Reclaimed Water (% of effluent reclaimed)	16	0.6	0.0
Biosolids Reuse (%)	100	0	0
Renewals Expenditure (% of current replacement cost of system assets)	0.01	0.00	0.00
Employees (per 1000 properties)	1.1	1.5	1.8
1999/2000 CHARGES/BILLS			
Access Charge ($/assessment)	255	365	425
Typical Residential Bill ($/assessment)	270	395	430
Typical Developer Charge ($/equivalent tenement)	2800	1600	1200
1998/99 BILLS			
Average Residential Bill ($/connected property)	280	360	410
Real Increase over Previous Year's Average Residential Bill (%)	-6	0	8
FINANCIAL			
Revenue from Access Charges (% of total)	84	78	68
Revenue from Trade Waste Charges (% of total)	2	0.0	0.0
Revenue from Other (% of total)	14	18	30
Economic Real Rate of Return (%)	4.3	3.3	0.5
Return on Assets (%)	3.5	2.3	0.8
Debt to Equity (%)	20	10	1
Interest Cover (%)	>500	300	200
Loan Payment ($/property)	215	80	10
LEVELS OF SERVICE			
Compliance with BOD in Licence (%)	100	100	98
Compliance with SS in Licence (%)	100	98	85
Confirmed Sewer Chokes (per 100 km of main)	25	55	110
Sewage Overflows (per 100 km of main)	1	3	13
Confirmed Sewer Chokes attended to within 5 hours (%)	100	100	100
Odour Complaints (per 1000 properties)	0.0	0.0	1
Service Complaints (per 1000 properties)	7	13	45
Customer Dealings Complaints (per 1000 properties)	0	0	0.2
Customer Interruption Frequency (per 1000 properties)	0	0.5	25
Average Duration of Interruptions (hr)	1	2	2.5
Average Customer Outage Time (hr)	0	1	15
EFFICIENCY			
Operating Cost (OMA) per 100 km of Main ($'000)	700	880	1140
Operating Cost (OMA) ($/property)	190	210	270
Operating Cost (OMA) ($/ML)	600	700	950
Management Cost ($/property)	50	70	100
Treatment Cost ($/property)	45	60	75
Pumping Cost ($/property)	20	40	50
Sewer Main Cost ($/property)	20	25	30
Total Days Lost (%)	0.1	2	4

Notes:

1. ***20%*** ***top 20% of properties***
   Median (50%) median of properties (Statewide)
   80% bottom 20% of properties

2. The above non-metropolitan NSW performance indicators are on a percentage of connected properties basis which is the most appropriate basis for judging Statewide performance by giving due weight to larger councils and reducing the effect of smaller councils (refer also to Notes 1 to 3 on page xxiii).

3. The performance indicators in this table and their grouping are consistent with the 1998/99 Australian Non Major Urban Water Utility Performance Monitoring Report, the body of the present report and the reports for each council in Appendix C.

Table 3: 1998/99 Performance Indicator Comparison - Percentage of Properties, Population, Councils Bases

WATER SUPPLY	*% of Connected Properties (per Connected Property)*			*% of Population (per Head)*			*% of Councils (per Connected Property)*		
	20%	*50%*	*80%*	*20%*	*50%*	*80%*	*20%*	*50%*	*80%*
BUSINESS CHARACTERISTICS									
Urban Properties without Water Service (%)	0.0	1.1	5.4	0.0	0.4	4.4	0	4.5	11
New Residential Dwellings Connected (%)	2.3	1.4	0.8	2.3	1.4	0.8	1.8	0.8	0.2
Annual Residential Consumption (kL/a)	210	230	360	85	105	150	210	290	440
Employees (per 1000)	1.0	1.3	1.8	0.4	0.5	0.8	0.9	1.6	2.5
BILLS									
Average Residential Bill ($)	230	295	370	95	125	165	280	340	440
FINANCIAL									
Economic Real Rate of Return (%)	3.8	2.4	0.9	3.9	2.3	1.1	3.4	1.5	-0.3
LEVELS OF SERVICE									
Compliance with 1987 Microbiological Drinking Water Quality Guidelines (%)	100	100	100	100	100	100	100	100	100
Physical and Chemical Water Quality Compliance (%)	100	98	70	100	100	75	100	98	70
Customer Interruption Frequency (per 1000)	0	3	80	0	4	35	0	4	60
Water Quality Complaints (per 1000)	2	4	16	2	4	16	1	4	12
Service Complaints (per 1000)	3	10	40	3	9	38	0	9	33
EFFICIENCY									
Operating Cost (OMA) ($)	150	185	250	55	75	95	150	210	280
Operating Cost (OMA) per 100 km of Main ($'000)	400	580	930	360	650	920	320	550	840
Management Cost ($)	45	80	100	20	30	40	35	70	100

SEWERAGE	*% of Connected Properties (per Connected Property)*			*% of Population (per Head)*			*% of Councils (per Connected Property)*		
	20%	*50%*	*80%*	*20%*	*50%*	*80%*	*20%*	*50%*	*80%*
BUSINESS CHARACTERISTICS									
Urban Properties without Sewerage Service (%)	0.2	2.3	12	0.2	2.1	10	2	9	20
New Residential Dwellings Connected (%)	3.1	1.6	0.7	3.1	1.8	0.8	2.1	0.7	0.1
Employees (per 1000)	1.1	1.5	1.8	0.4	0.6	0.7	1.1	1.6	2.3
BILLS									
Average Residential Bill ($)	280	360	410	95	135	190	225	320	385
FINANCIAL									
Economic Real Rate of Return (%)	4.3	3.3	0.5	4.3	3.3	0.9	4.0	1.1	-1.4
LEVELS OF SERVICE									
Compliance with BOD in Licence (%)	100	100	98	100	100	98	100	100	92
Compliance with SS in Licence (%)	100	98	85	100	99	83	100	96	80
Confirmed Sewer Chokes (per 100 km of main)	25	55	110	20	55	100	25	60	140
Sewage Overflows (per 100 km of main)	1	3	13	1	4	13	0	3	21
Odour Complaints (per 1000)	0	0	1	0	0	1	0	0	1
Service Complaints (per 1000)	7	13	45	6	13	46	2	19	49
EFFICIENCY									
Operating Cost (OMA) ($)	190	210	270	75	80	105	155	210	250
Operating Cost (OMA) per 100 km of Main ($'000)	700	880	1140	690	900	1140	480	720	980
Management Cost ($)	50	70	100	18	30	40	30	55	85

Notes

1. This table compares 14 key performance indicators for non-metropolitan NSW for each of water supply and sewerage on a 'percentage of connected properties' basis, 'percentage of population' basis, and 'percentage of councils' basis. The table has been provided to facilitate comparisons with other Australian and overseas data.

2. The ***percentage of connected properties*** basis is the most appropriate for judging Statewide performance by giving due weight to larger councils and reducing the effect of smaller councils. It is used in Tables 1 and 2 and throughout this report.

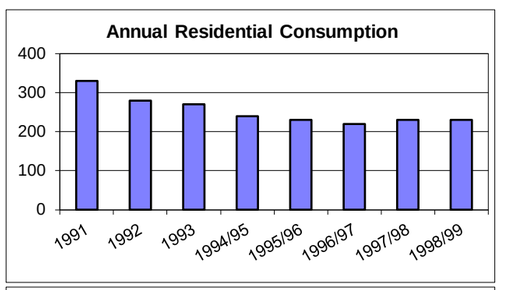
3. The ***percentage of councils*** basis is relevant for ***comparing*** the performance of one ***council*** with other councils.

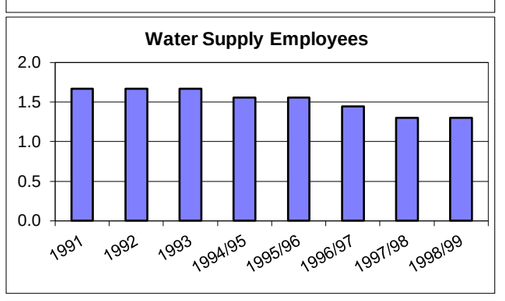
4. The ***top 20*** are shown under '20%'. Median values are provided under '50%'. The bottom 20% are shown under '80%'.

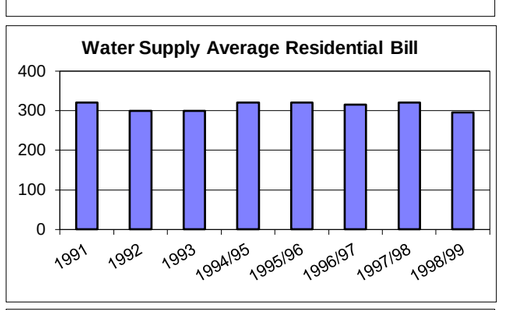
5. Although it is unlikely that any council would be able to meet the 20% level for all performance indicators, these indicators provide broad targets that councils might aspire to achieve.

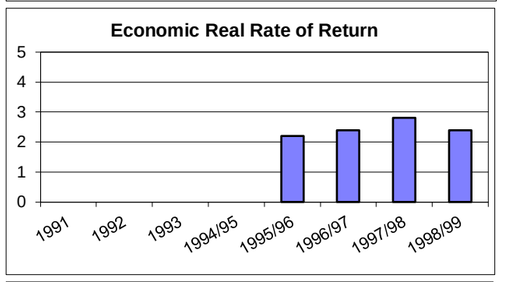
Table 4: Trends in Statewide Performance Indicators - 1991 to 1998/99

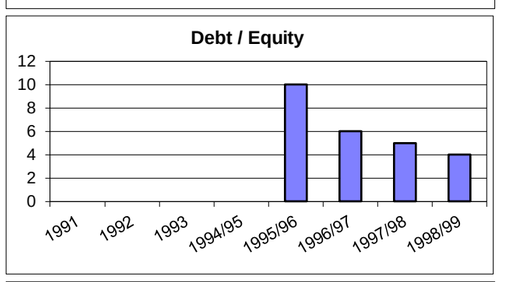
WATER SUPPLY	1991	1992	1993	1994/95	1995/96	1996/97	1997/98	1998/99
BUSINESS CHARACTERISTICS								
Annual Residential Consumption (kL/a/Connected Property)	330	280	270	240	230	220	230	230
Employees (Employees/1000 Connected Properties)	1.7	1.7	1.7	1.6	1.6	1.4	1.3	1.3
BILLS								
Average Residential Bill ($/ Connected Property)	320	300	300	320	320	315	320	295
FINANCIAL								
Economic Real Rate of Return (%)					2.2	2.4	2.8	2.4
Debt / Equity (%)					10	6	5	4
LEVELS OF SERVICE								
Compliance with 1987 Microbiological Drinking Water Quality Guidelines (% of Councils Complying)	88	88	88	90	87	87	88	89
Water Quality Complaints (per 1000 Connected Properties)	2	3	3	4	4	4	4	
Service Complaints (per 1000 Connected Properties)	14	14	7	7	7	9	10	
Number of Main Breaks (per 100km of main)	16	19	15	14	14	15	15	
EFFICIENCY								
Operating (OMA) Cost ($/Connected Property)	180	175	180	170	175	175	180	185
Management Cost ($/Connected Property)	55	55	65	62	60	65	70	80

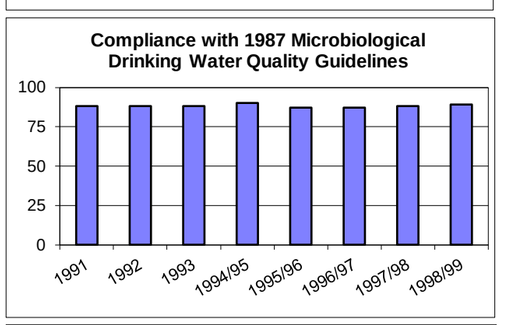


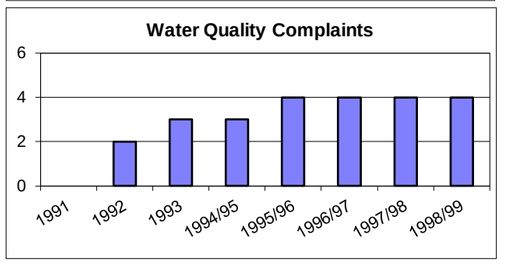


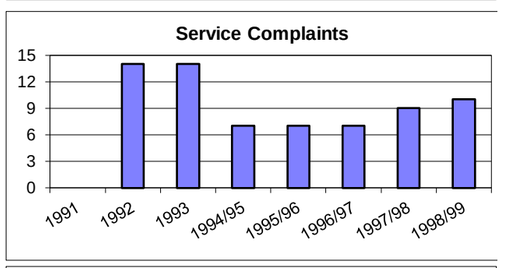


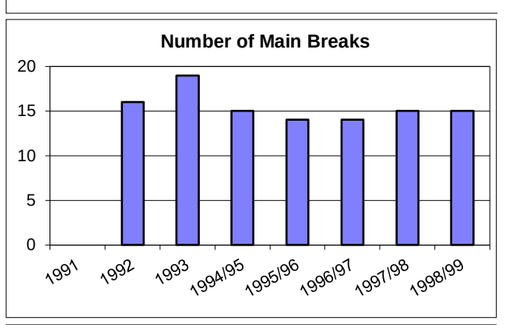


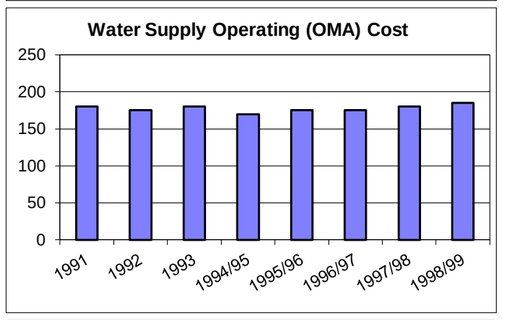


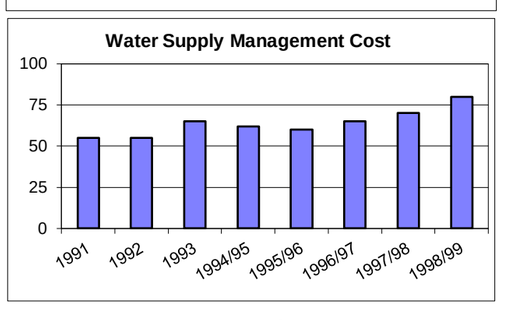








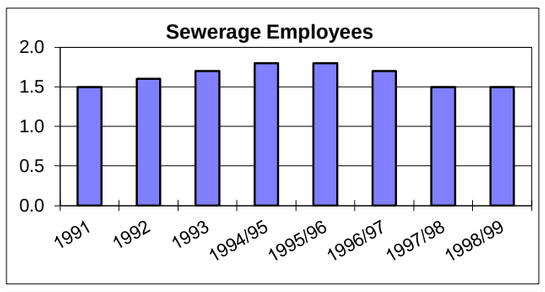


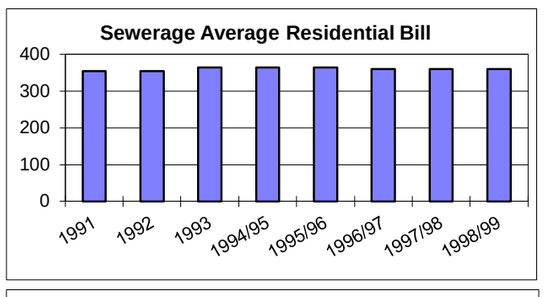


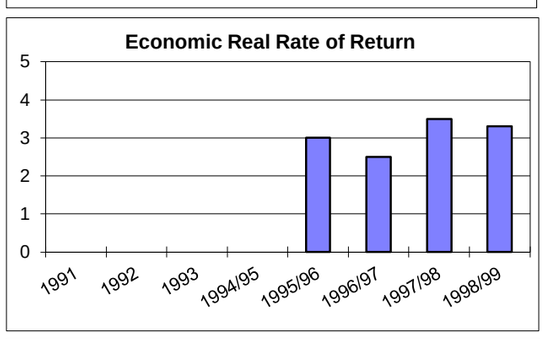
NOTES:

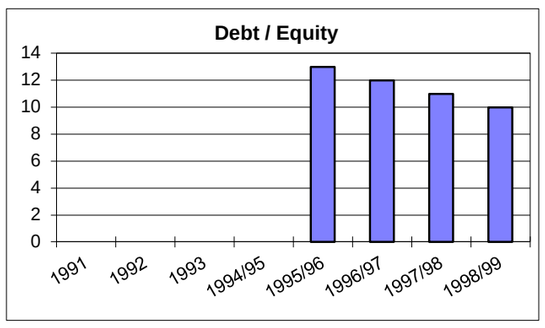
1. The values shown are Statewide medians for non-metropolitan NSW on a percentage of connected properties basis from 1991 to 1998/99, except for microbiological compliance which is the percentage of councils complying.
2. Costs are in January 1999$.

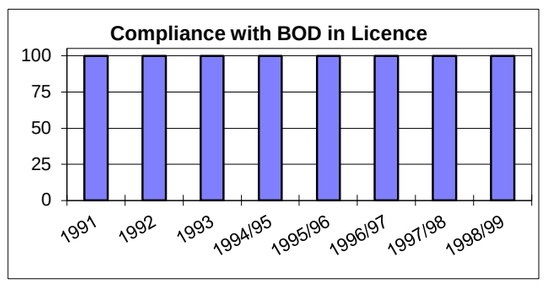
SEWERAGE	1991	1992	1993	1994/95	1995/96	1996/97	1997/98	1998/99
BUSINESS CHARACTERISTICS								
Employees (Employees/1000 Connected Properties)	1.5	1.6	1.7	1.8	1.8	1.7	1.5	1.5
BILLS								
Average Residential Bill ($/Connected Property)	355	355	365	365	365	360	360	360
FINANCIAL								
Economic Real Rate of Return (%)					3.0	2.5	3.5	3.3
Debt / Equity (%)					13	12	11	10
LEVELS OF SERVICE								
Compliance with BOD in Licence (%)	100	100	100	100	100	100	100	100
Confirmed Sewer Chokes (per 100 km of Main)		70	75	75	65	50	50	55
Sewage Overflows (per 100 km of Main)				7	8	6	3	3
Odour Complaints (per 1000 Connected Properties)	0	0	0	1	1	0	0	
Service Complaints (per 1000 Connected Properties)	21	20	20	15	13	13	13	
EFFICIENCY								
Operating (OMA) Cost ($/Connected Property)	170	170	180	180	180	190	210	210
Management Cost ($/Connected Property)	53	50	55	55	60	70	70	70

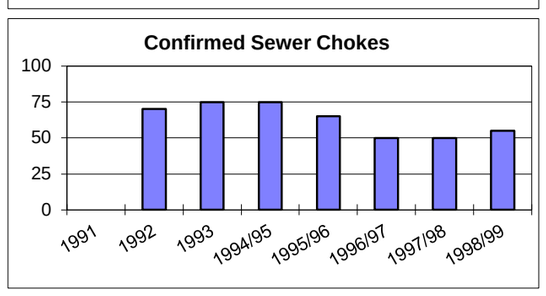


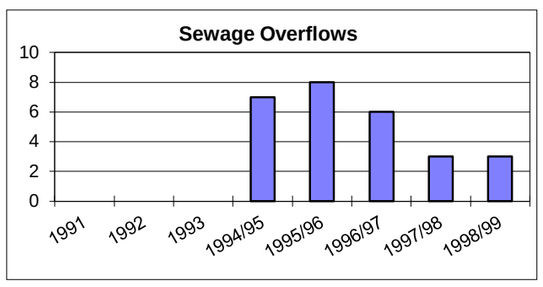


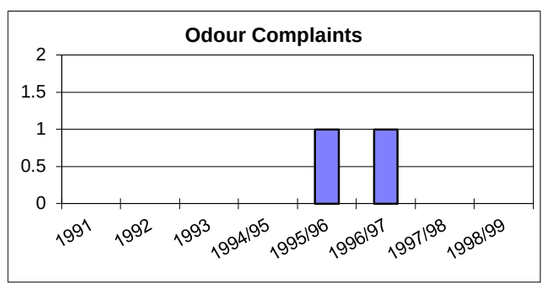


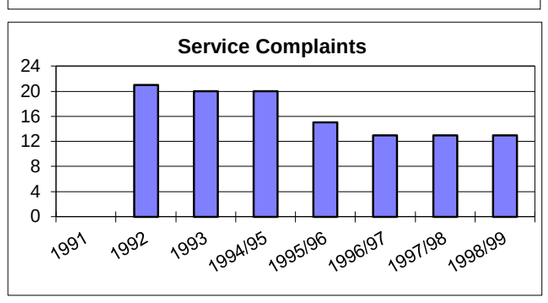


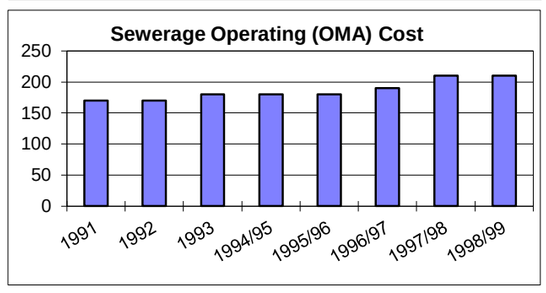












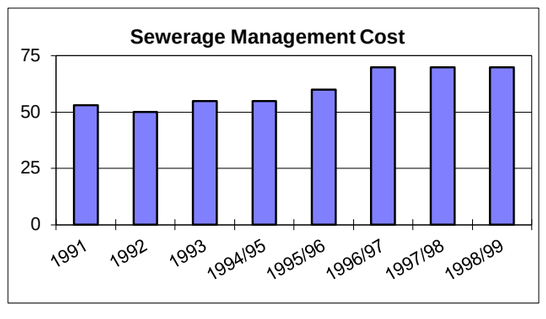


Table 5 : 1998/99 NSW Water Utility Performance Summary

	Water Utility	Water Supply								Sewerage				Water Supply and Sewerage							
		1998/99 Water Supply Assessments (No.) (1)	1998/99 Annual Water Consumption (ML) (2)	1998/99 Average Annual Residential Water Consumption (kL/connected property) (3)	1998/99 Turnover ($M) (4)	Pay-for-Use Tariff by July 2000 ? (5)	1999/00 Tariff Independent of Land Value ? (6)	1998/99 Water Quality Compliance (1996 NHMRC/ARMCANZ Guidelines) Physical and Chemical (%) (7)	1998/99 Water Quality Compliance (1996 NHMRC/ARMCANZ Guidelines) Microbiological (%) (8)	1998/99 Turnover ($M) (9)	1999/00 Tariff Independent of Land Value ? (10)	1998/99 EPA Licence Compliance BOD (%) (11)	1998/99 EPA Licence Compliance SS (%) (12)	1999/00 Typical Residential Bill ($/assessment) (13)	1999/00 Typical Developer Charge ($/ET) (14)	1998/99 Economic Real Rate of Return (%) (15)	1998/99 Debt/Equity (%) (16)	1998/99 OMA cost ($/connected property) (17)	1998/99 Management Cost ($/connected property) (18)	1998/99 Current Replacement Cost of Assets ($M) (19)	Strategic Business Plans Prepared ? (20)
1	Albury	17,680	11,120	382	**6.2**	Yes[9]	Yes[10]	77	96	**6.6**	Yes[10]	100	88	441	2,000	1.8	16	408	211	210	**Yes**[19]
2	Armidale	8,160	3,200	***254***	**3.1**	Yes	Yes	100	100	**2.0**	Yes	100	94	465	4,860	-1.1	***5***	444	177	158	**Yes**
3	Ballina (Reticulator)	12,080	3,920	220	**3.7**		Yes	75	92	**6.9**	Yes	100	92	647	5,550	3.3	2	294	99	131	
4	Balranald (Dual Supply)	750	1,350	375	0.4		Yes	100	99	***0.4***	Yes	NL[13]	NL[14]	524		1.9	2	408	63	18	**Yes**
5	Barraba	770	160	193	0.4		Yes			0.2	Yes	100	100	566		-2.4	17	414	135	7	Yes*
6	Bathurst	11,220	6,380	317	**7.5**			100	100	**4.8**		100	98	613	2,390	1.7	2	542	202	182	**Yes**
7	Bega Valley (Unfiltered)	12,160	3,580	***200***	**6.0**	Yes	Yes			**5.2**	Yes	100	92	789	4,610	2.4	1	493	276	166	Yes*
8	Bellingen (Unfiltered)	3,840		***200***	1.6	Yes	Yes	57	100	1.3	Yes			685	10,800	0.9	2	408	99	56	Yes*
9	Berrigan (Dual Supply)	2,860	2,110	300	1.5	Yes	Yes	100	100	1.0	Yes	100	100	697		0.9	25	467	157	43	**Yes**
10	Bingara	740	330	249	0.3	Yes	Yes	50	95	0.2	Yes	NL	NL	580		0.1	13	329	98	12	
11	Bland	1,806[5]	**No WS**[2]							0.6		100	100	320[7]	1,000[7]	0.4	0	191[7]	55[7]	8	
12	Blayney	1,222	**No WS**							0.8	Yes	100	100	350	1,000	5.2	0	385	79	6	Yes*
13	Bogan	1,030	840	***700***	0.7			98	95	0.3		NL	NL	756		-0.05	10	643	303	22	
14	Bombala	910	380	413	0.4		Yes	67	100	0.3		100	100	826	2,250	2.7	16	505	101	11	Yes*
15	Boorowa	640	***190***	***270***	0.3	Yes	Yes	100	100	0.1		100		615	900	-2.4	0	365	55	4	
16	Bourke (Dual Supply)	1,760	1,600	***400***	0.8		Yes	50		0.5	Yes	NL	NL	914	***800***	-4.6	11	610	165	13	
17	Brewarrina	550	940	204	0.3			50	100	0.2		50		772		1.9	1	809	161	7	
18	Broken Hill WB	10,180	8,590	448	**7.0**		Yes	90	100	**2.4**		100	100	598		0.5	9	865	250	152	Yes*
19	Byron (Reticulator)	9,400	2,630	268	**3.7**	Yes	Yes	95	99	**7.4**	Yes	100	100	898	9,700	3.9	7	622	226	79	Yes*
20	Cabonne	1,090	380	***350***	0.7			96	92	0.8		92	79	859	***600***	1.4	5	458	128	24	**Yes**
21	Carrathool	980	830	739	0.8		Yes	100	100	0.1	Yes	NL	NL	524	1,290	-0.8	4	881	228	16	Yes*
22	Casino	4,210	2,450	***700***	1.6		Yes	100	87	1.5	Yes	85	96	***650***	5,950	1.6	7	413	168	49	Yes*
23	Central Darling	730	***90***	***100***			Yes				Yes	NL	NL	779				656	105		
24	Central Tablelands	4,810	2,930	266	**2.4**	Yes	Yes	51	100	**No SGE**[2]				349		-1.5	0	***326***	***160***	57	Yes*
25	Cobar (Dual Supply)	1,740	1,370	856	1.1		Yes	95	95	0.4	Yes	NL	NL	***842***	2,020	-0.8	0	566	142	29	**Yes**
26	Coffs Harbour (Unfiltered)	20,500	5,530	208	**9.9**	Yes	Yes	100	85	**12.8**	Yes	100	99	838	5,240	4.0	21	474	207	246	Yes*
27	Coolah	1,070	170	162	0.4	Yes	Yes	95	100	0.2	Yes	50	0	520		1.8	0	435	73	8	Yes*
28	Coolamon	908	**No WS**							0.3	Yes	100	80	220	3,000	5.7	13	128	33	3	**Yes**
29	Cooma-Monaro	3,570	1,480	***330***	1.7	Yes	Yes	60	81	1.4	Yes	100	99	855	3,570	2.3	13	712	256	39	**Yes**
30	Coonabarabran	1,870	650	299	1.1			73	100	0.7		100	100	710	1,800	-0.3	1	540	329	47	Yes*
31	Coonamble (Groundwater)	1,470	830	739	0.6					0.5		95	95	416	***610***	-0.1	4	317	40	20	
32	Cootamundra (Reticulator)	2,700	980	271	1.1			100	87	0.5		92	92	527	2,700	-2.5	9	221	80	10	Yes*
33	Copmanhurst (Unfiltered)	150	30	212	***0.1***		Yes	50	74	0.3	Yes	97	83	920	4,380	-2.1	0	887	241	4	Yes*
34	Corowa	3,460	3,470	735	1.4		Yes	100	100	1.0	Yes	74	69	510	800	2.9	2	342	102	33	Yes*
35	Cowra	5,130	***3,100***	***250***	**2.5**	Yes	Yes		100	0.9	Yes	100	95	558	4,500	1.5	1	258	45	43	Yes*
36	Crookwell	1,170	370	213	0.6	Yes	Yes	98	84	0.4		100	100	954	1,150	0.5	22	617	47	14	Yes*
37	Culcairn (Groundwater)	520	170	188	0.1		Yes	100	80	0.3	Yes	100	60	377	3,580	-0.6	10	270	87	10	
38	Deniliquin	3,600	3,100	965	1.7		Yes	99	100	0.9	Yes	100	40	778	930	1.1	4	423	132	47	**Yes**
39	Dubbo	12,600	7,060	337	**7.3**		Yes	100	100	**7.1**		100	79	808	5,750	3.2	1	504	199	193	Yes*
40	Dungog (Unfiltered)	1,890	920	408	0.7		Yes			0.4	Yes	NL	NL	640	5,290	3.2	8	272	57	17	**Yes**
41	Eurobodalla (Unfiltered)	17,640	5,210	264	**7.3**	Yes	Yes	75	97	**8.7**	Yes	100	100	792	3,650	2.3	12	446	204	249	**Yes**
42	Fish River WS (Unfiltered, Bulk Supplier)	23,000	12,200		**6.0**		Yes	91	99	**No SGE**						0.7	8	104	64	157	**Yes**
43	Forbes	3,440	3,690	585	1.5			96	97	1.0		77	92	648	1,080	2.3	13	403	76	26	Yes*

	Water Utility	Water Supply								Sewerage				Water Supply and Sewerage							
		1998/99 Water Supply Assessments (No.) (1)	1998/99 Annual Water Consumption (ML) (2)	1998/99 Average Annual Residential Water Consumption (kL/connected property) (3)	1998/99 Turnover ($M) (4)	Pay-for-Use Tariff by July 2000 ? (5)	1999/00 Tariff Independent of Land Value ? (6)	1998/99 Water Quality Compliance (1996 NHMRC/ARMCANZ Guidelines) Physical and Chemical (%) (7)	1998/99 Water Quality Compliance (1996 NHMRC/ARMCANZ Guidelines) Microbiological (%) (8)	1998/99 Turnover ($M) (9)	1999/00 Tariff Independent of Land Value ? (10)	1998/99 EPA Licence Compliance BOD (%) (11)	1998/99 EPA Licence Compliance SS (%) (12)	1999/00 Typical Residential Bill ($/assessment) (13)	1999/00 Typical Developer Charge ($/ET) (14)	1998/99 Economic Real Rate of Return (%) (15)	1998/99 Debt/Equity (%) (16)	1998/99 OMA cost ($/connected property) (17)	1998/99 Management Cost ($/connected property) (18)	1998/99 Current Replacement Cost of Assets ($M) (19)	Strategic Business Plans Prepared ? (20)
44	Gilgandra (Groundwater)	1,210	780	515	0.6	Yes	Yes	50	100	0.2	Yes	95		585		-1.6	9	325	68	22	Yes*
45	Glen Innes	2,810	700	191	1.1	Yes	Yes	100	100	0.6	Yes	100	100	495		0.2	5	330	126	35	Yes*
46	Gloucester	1,300	680	395	0.6		Yes	100	100	0.5	Yes	100	100	563	2,920	2.2	12	407	34	19	Yes*
48A	Goldenfields (Combined)	18,830	7,160	396	**9.4**	Yes	Yes	99	97	**No SGE**				592	2,000	0.6		397	125	373	**Yes**
49	Gosford	62,280	16,700	209	**18.7**	Yes	Yes	100	93	**29.1**	Yes		100	530	4,410	2.9	13	348	180	697	
50	Goulburn	8,910	4,080	230	**4.1**	Yes	Yes	98	95	**3.6**		83	50	602	2,030	6.0	17	447	145	44	Yes*
51	Grafton	6,660	5,370	390	1.9	Yes	Yes	100	98	**2.8**	Yes	100	95	709		1.9	2	354	167	84	Yes*
52	Griffith	7,570	9,090	***850***	**3.9**		Yes	33	88	**2.7**		100	100	531	3,860	0.6	1	616	320	108	Yes*
53	Gundagai	930	660	500	0.4			100	98	0.2		96	96	503		2.3	8	455	102	5	
54	Gunnedah (Groundwater)	4,110	2,270	580	1.5			100	100	0.8	Yes	100	100	503	4,250	1.6	8	282	64	43	**Yes**
55	Gunning	360	90	302	0.1			25	100	0.1		100	75	318		-0.4	3	383	76	6	Yes*
56	Guyra	1,170	310	274	0.4	Yes	Yes	100	100	0.4	Yes	100	100	728		0.5	26	520	195	14	**Yes**
57	Harden (Reticulator)	1,610	1,030	630	0.9		Yes	75	98	0.2	Yes	100	92	844	***2,170***	-5.8	1	320	99	18	Yes*
58	Hastings (Unfiltered)	24,280	6,190	182	**14.7**	Yes	Yes	72	96	**12.1**	Yes	79	93	738	4,300	4.9	4	407	110	285	**Yes**
59	Hay (Dual Supply)	1,280	3,940	372	0.6		Yes	92	100	0.5	Yes	NL	NL	744		-0.4	0	495	142	12	Yes*
60	Holbrook	687	**No WS**							0.3				164		-1.4	6	270	74	4	Yes*
61	Hume	1,970	1,040	494	0.7		Yes	100	100	0.3	Yes			400	3,500	-4.4	0	***408***	***103***	16	
62	Hunter Water	193,000	77,100	185	**72.0**	Yes	Yes	100	100	**76.5**	Yes	100	100	439	2,400	4.1	***4***	281		1,820	
63	Inverell	4,780	***2,350***	***300***	**2.1**	Yes	Yes	100	100	1.1	Yes	93	74	675	***1,910***	-0.8	4	458	122	71	
64	Jerilderie (Dual Supply)	460	390	258	0.2		Yes	100	100	0.2		100	100	811	***1,200***	1.7	3	829	192	5	
65	Junee	1,400	**No WS**							0.4	Yes	92	83	255	500	3.6	0	153	30	6	
66	Kempsey (Groundwater)	10,260	5,620	206	**4.8**		Yes	81	100	**4.5**	Yes	100	99	839	6,300	3.1	16	448	130	149	Yes*
67	Kyogle	1,700	520	238	0.6	Yes	Yes	2	88	0.4	Yes	97	50	623	2,000	-2.2	5	393	166	14	Yes*
68	Lachlan	2,400	1,090	***500***	1.5	Yes	Yes	97	95	0.7	Yes	NL	NL	***800***			0	465	132	42	Yes*
69	Leeton	3,440	2,590	619	1.7	Yes	Yes	98	86	1.3		90	84	797	7,770	3.1	5	544	102	42	**Yes**
70	Lismore (Reticulator)	12,300	3,830	240	**4.3**	Yes	Yes			**4.6**	Yes	100	88	595	6,700	0.9	5	380	100	121	**Yes**
71	Lithgow	7,170	2,090	***330***	**2.9**	Yes	Yes	100	100	1.9	Yes	75	80	648	4,020	-2.7	0	415	152	73	
72	Lockhart	690	**No WS**							0.5		100	100	107		2.0	3	223	53	10	**Yes**
73	Lower Clarence (Unfiltered)	9,740	3,540	200	**5.0**	Yes	Yes	20	82	**No SGE**				327	2,700	2.7	5	146	100	88	**Yes**
74	Maclean	4,238	**No WS**							**2.4**	Yes	74	96	371	2,940	5.2	8	136	22	27	**Yes**
75	Manilla	1,120	310	389	0.4		Yes	99	99	0.5	Yes	100	100	625	2,200	4.3	35	429	81	11	Yes*
76	Merriwa (Groundwater)+B65	600	290	383	0.3	Yes	Yes	100	82	0.1	Yes	100	80	719	1,000	-1.5	0	425	161	7	Yes*
78A	MidCoast (Combined)	30,670	11,840	433	**13.6**	Yes	Yes	60	82	**12.1**	Yes	100	98	723	5,500	2.8	24	395	135	327	Yes*
79	Moree Plains	5,000	3,410	638	1.3	Yes	Yes			1.8				***698***		5.5	9	527	104	55	Yes*
80	Mudgee (Unfiltered)	4,540	1,850	261	**2.8**	Yes	Yes	80	95	1.8		100	92	810	4,780	3.2	6	514	184	58	Yes*
81	Mulwaree	500	150	388	0.3		Yes	100	92	0.2		100	100	854	5,000	-0.2	26	548	61	9	**Yes**
82	Murray	1,630	1,510	161	0.9		Yes			0.8	Yes	NL	NL	647	1,400	4.4	46	500	172	19	Yes*
83	Murrumbidgee	750	***980***	***700***	***0.2***					1.0		100	100	629		1.1	51	***161***	***40***	7	Yes*
84	Murrurundi (Unfiltered)	630	160	232	0.3		Yes	95	100	0.2	Yes	NL	NL	730	1,250	2.0	2	325	40	13	
85	Muswellbrook	4,810	3,990	397	**2.0**	Yes	Yes	83	100	1.8	Yes	100	100	589	4,870	2.0	1	423	84	52	**Yes**
86	Nambucca (Groundwater)	5,790	1,580	230	1.9	Yes	Yes	100	100	**2.7**	Yes	92	94	688	4,450	2.9	14	395	163	67	**Yes**
87	Narrabri (Groundwater)	4,200	3,230	***1,000***	1.7	Yes	Yes		42	1.2	Yes			***646***	3,920	1.8	13	303	56	63	
88	Narrandera (Groundwater)	2,140	1,480	***700***	1.2	Yes	Yes	89	100	0.7		92	83	848	***2,300***	6.8	2	319	92	21	Yes*

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								Physical and Chemical (%) (7)	Microbiological (%) (8)			BOD (%) (11)	SS (%) (12)								
89	Narromine (Groundwater)	2,060	***1,030***	***400***	0.7	Yes	Yes			0.8		NL	NL	702	1,440	4.1	1	337	61	24	Yes*
90	Nundle (Groundwater)	220	110	350	0.1		Yes	100	100	**No SGE**				660	***630***	-0.4	30	***263***	***33***	2	
91	Nymboida (Unfiltered)	820	220	276	0.3	Yes	Yes	91	100	0.1	Yes	100	80	911	3,270	1.1	8	761	116	7	**Yes**
92	Oberon (Unfiltered, Reticulator)	1,200	700	208	0.8	Yes	Yes	43	100	0.4		90	100	446	2,200	3.9	8	456	167	10	Yes*
93	Orange	13,690	6,950	351	**5.7**			92	93	**7.3**		96	96	556	2,540	2.0	***0***	401	119	177	**Yes**
94	Parkes	5,760	6,280	283	**4.0**				90	1.2		66	55	509	5,450	0.9	0	371	47	98	Yes*
95	Parry	1,850	440	474	0.8		Yes	60	53	0.4	Yes	71	57	773	***1,700***	1.1	24	380	68	32	Yes*
96	Queanbeyan (Reticulator)	12,500	4,340	291	**5.3**	Yes	Yes	100	100	**8.4**		100	100	733	1,860	6.6	1	334	196	76	**Yes**
97	Quirindi	1,600	570	291	0.5		Yes	95	100	0.5	Yes	100	60	495		-0.01	2	366	71	16	
98	Richmond River (Reticulator)	2,230	650	271	1.0	Yes	Yes		71	1.2	Yes	90	93	910	1,350	0.3	0	598	264	35	**Yes**
99	Riverina (Groundwater)	23,960	15,200	385	**12.2**	Yes	Yes	83	97	**No SGE**				318	1,100	3.4	9	204	59	166	Yes*
100	Rous (Bulk Supplier)	33,000	11,000		**7.7**	Yes	Yes	100	100	**No SGE**					1,260	3.0	0	90	63	103	
101	Rylstone	1,270	580	344	0.7		Yes	100	100	0.4	Yes	100			750	0.0	1	517	76	18	**Yes**
102	Scone (Unfiltered)	2,620	1,470	245	1.1	Yes	Yes	57	90	1.1		87	82	673	4,490	1.4	0	562	147	32	**Yes**
103	Severn	190	***100***	***400***	0.1	Yes	Yes	0	17	0.1	Yes	NL	NL	831		4.4	23	250	126	2	
104	Shoalhaven	44,210	16,340	177	**15.3**	Yes	Yes	62	89	**19.9**	Yes	98	77	733	3,770	3.8	15	447	192	421	**Yes**
105	Singleton	5,440	3,240	316	**3.2**	Yes	Yes	100	99	1.6	Yes	100	96	697	3,450	1.8	6	577	149	76	Yes*
106	Snowy River (Unfiltered)	2,380	660	188	1.2	Yes	Yes			1.2	Yes	96	85	653	5,300	2.4	15	209	62	40	**Yes**
107	Sydney Water	1,572,000	635,800	242	**597.0**	Yes	Yes	100	100	**704.2**	Yes	100	99	613	7,700	4.2	***19***	469		10,850	
108	Tallaganda	600	240	327	0.3			100	92	0.1		83	83	727	5,980	-0.7	1	487	60	6	Yes*
109	Tamworth	14,280	8,190	266	**6.5**	Yes	Yes	98	100	**6.6**	Yes	98	69	691	4,250	1.5	2	512	199	236	Yes*
110	Temora	1,897	**No WS**							***0.3***	Yes	90		90	***400***	0.0	0	***137***	***24***	8	
111	Tenterfield	1,960	550	301	0.8	Yes	Yes	100	90	0.7	Yes	96	71	688	3,000	-1.4	3	547	261	27	**Yes**
112	Tumbarumba	1,070	4,070	***850***	0.4		Yes	100	100	0.4	Yes	85	80	***650***		-0.6	0	347	73	17	Yes*
113	Tumut	3,870	2,400	303	1.8	Yes	Yes	70	100	1.6	Yes	100	100	703	4,950	1.6	5	440	179	64	Yes*
114	Tweed	26,250	8,930	230	**11.9**		Yes	100	99	**14.0**	Yes	100	97	615	6,120	3.1	5	385	135	332	Yes*
115	Ulmarra (Unfiltered)	1,170	270	201	0.6		Yes	64	100	**No SGE**				341	3,500	5.9	34	***67***	***22***	8	**Yes**
116	Uralla	1,260	490	212	0.5		Yes	93	100	0.4	Yes	100	100	714	***2,200***	-0.6	7	560	241	14	Yes*
117	Wagga Wagga	18,522	**No WS**							**6.8**		100	100	204	1,040	11.2	1	139	30	112	
118	Wakool (Unfiltered)	1,210	420	315	0.8	Yes		100	99	0.5	Yes	NL	NL	649		4.5	16	315	56	15	**Yes**
119	Walcha	820	260	195	0.3	Yes	Yes	100	100	0.2	Yes	100	92	619		-0.9	4	385	98	16	
120	Walgett (Dual Supply)	1,740	2,350	612	0.9	Yes	Yes	95	98	0.4	Yes	90	90	692		-1.9	6	601	261	27	Yes*
121	Warren (Dual Supply)	980	670	671	0.4	Yes	Yes	92	75	0.3	Yes	NL	NL	630		1.2	5	409	82	11	**Yes**
122	Weddin	1,004	**No WS**							***0.1***	Yes	100		135		-0.8	1	93	27	7	
123	Wellington	2,780	1,290	360	1.7			100	100	0.8		100	85	761	2,000	1.1	17	671	210	37	**Yes**
124	Wentworth (Dual Supply)	1,550	3,070	***350***	1.1		Yes	64	80	0.5	Yes			***845***	3,070	-0.1	17	537	164	35	
125	Wingecarribee	15,940	5,250	252	**8.4**	Yes	Yes	93	99	**7.3**	Yes	100	100	959	5,150	5.0	9	512	189	189	**Yes**
126	Wyong	52,640	15,210	209	**24.9**	Yes	Yes	100	97	**24.4**	Yes	100	100	528	4,570	3.9	7	338	94	584	
127	Yallaroi (Unfiltered)	720	390	531	0.3	Yes	Yes			0.2	Yes		98	771		0.9	6	336	40	9	Yes*
128	Yarrowlumla (Unfiltered)	960	350	359	***0.4***		Yes	69	67	***0.6***	Yes	100	63	906	***1,980***	1.2	18	518	169	12	Yes*
129	Yass	2,600	990	***450***	1.3		Yes	95	99	0.6	Yes	100	100	675	3,020	0.9	5	513	195	26	Yes*
130	Young (Reticulator)	3,560	1,300	***330***	1.8		Yes	100	95	0.7	Yes	100	100	661	2,700	3.5	3	181	45	18	**Yes**

Water Utility	Water Supply								Sewerage				Water Supply and Sewerage							
	1998/99 Water Supply Assessments (No.) (1)	1998/99 Annual Water Consumption (ML) (2)	1998/99 Average Annual Residential Water Consumption (kL/connected property) (3)	1998/99 Turnover ($M) (4)	Pay-for-Use Tariff by July 2000 ? (5)	1999/00 Tariff Independent of Land Value ? (6)	1998/99 Water Quality Compliance (1996 NHMRC/ARMCANZ Guidelines) Physical and Chemical (%) (7)	1998/99 Water Quality Compliance (1996 NHMRC/ARMCANZ Guidelines) Microbiological (%) (8)	1998/99 Turnover ($M) (9)	1999/00 Tariff Independent of Land Value ? (10)	1998/99 EPA Licence Compliance BOD (%) (11)	1998/99 EPA Licence Compliance SS (%) (12)	1999/00 Typical Residential Bill ($/assessment) (13)	1999/00 Typical Developer Charge ($/ET) (14)	1998/99 Economic Real Rate of Return (%) (15)	1998/99 Debt/Equity (%) (16)	1998/99 OMA cost ($/connected property) (17)	1998/99 Management Cost ($/connected property) (18)	1998/99 Current Replacement Cost of Assets ($M) (19)	Strategic Business Plans Prepared ? (20)
Totals [6]	715,000[6]	325,000[6]	Median[7] 230 kL/connected property	$292M[5] 37 >$2M[8]	60/116 Yes[9]	99/116[10] Yes	39/116[11] 100% compliance	47/116[12] 100% compliance	$277M[8] 28 >$2M	82/118[10] Yes	59/102[13] 100% compliance (16 NL)	31/102[14] 100% compliance (16 NL)	Median $650/ assessment	Median[7] $4,400/ET	Median 2.9%[7] 91/126 +ve	Median 7%[7]	Median[7] $395/ connected property	Median7 $145/ connected property	$8,900M	40 **Yes**[15] 57 Yes* (97/126)

Notes:

1. **Each line of this table shows the key 1998/99 performance indicators/characteristics for one of the 128 NSW water utilities** (including Sydney and Hunter water corporations). A more detailed breakdown of performance indicators for each water utility is provided in Tables 6 to 12 as well as in Figures 1 to 119. This table enables water utilities to carry out an overall comparison of their performance with that of other NSW utilities. However, **it is important to ensure** that any such **comparisons are made with similar utilities** (refer to pages i & xvi of report).
2. **No WS** means not responsible for water supply; **No SGE** means not responsible for sewerage.
3. Of the **126 non-metropolitan NSW water utilities** in 1998/99, **108** utilities were responsible for both **water supply and sewerage**, **8** utilities were responsible for **water supply only** and **10** utilities were responsible for **sewerage only** (116 utilities were responsible for water supply and 118 were responsible for sewerage).
4. Where a water utility has not reported an item for 1998/99, the value previously reported by the utility has been used where available, otherwise an estimate has been used based on results for similar utilities. Such values are shown in this table in ***italics bold*** .
5. For sewerage only utilities, the number shown in column (1) is the number of sewerage assessments (shown left justified).
6. **The totals shown above are for non-metropolitan NSW and therefore exclude Sydney and Hunter.** The totals for the number of Water Supply Assessments (column (1)), Annual Water Consumption (column (2)) and Turnover (column (4)) exclude double-counting where bulk water suppliers are involved. The total **number of water supply assessments** in non-metropolitan NSW was **715,000** (column (11)). The total **1998/99 water consumption was 325,000 ML** (column (2)). The **total turnover** for water supply and sewerage was **$570M** (column (4) + column (9)) and the **current replacement cost of assets was $8,900M** (column (19)).
7. **Columns (3), (13), (14), (15), (16), (17) and (18) and Table 4 show that the Statewide medians** (non-metropolitan) were:
   - **Average annual residential water consumption - 230kL/connected property** (column (3)). This has fallen from 330 kL/a to 230kL/a over the last 8 years. Refer also to Figure 22.
   - **Typical residential bill for water and sewerage - $650/assessment** (column (13)). The 1999/00 typical residential bill for water supply has been calculated on the basis of each utility's 1999/000 tariff (columns (9), (11) and (12) of Table 8) using the 1998/99 average annual residential water consumption (column (3)). The typical residential bill for sewerage is based on the utility's access charge (column (9)) of Table 11 except for 5 utilities where account was also taken of the utility's usage charges. For water supply only utilities or sewerage only utilities, the typical residential bill is shown left justified in column (13). Refer also to Figures 3, 5 and 7.
   - **Typical developer charge for water and sewerage - $4,400/equivalent tenement (ET)** (column (14)**).** For water supply only utilities or sewerage only utilities, the typical developer charge is shown left justified in column (14). Refer also to Figures 1, 4 and 6.
   - **Economic real rate of return for water and sewerage - 2.9%** (column (15)). **91** of the 126 non-metropolitan water **utilities had a positive real rate of return**. The real rate of return has increased from 2.6% to 2.9% over the last 4 years. Refer also to Figures 11, 32 and 83.
   - **Debt/equity for water and sewerage - 7%** (column (16)). This has fallen from 11% to 7% over the last 4 years. Refer also to Figures 13, 34 and 85.
   - **Operation, maintenance and administration (OMA) cost for water supply and sewerage - $395/connected property** (column (17)). The OMA cost per property has increased from $350 to $395 (Jan 1999$) over the last 8 years, mostly due to more stringent standards for sewage treatment and higher management costs. For water supply only utilities or sewerage only utilities, the OMA cost is shown left justified in column (17). Refer also to Figures 15, 52 and 104.
   - **Management cost for water supply and sewerage - $145/connected property** (column (18)). The management cost per property has increased from $105 to $145 (Jan 1999$) over the last 8 years, with 70% of the increase reported over the last 3 years. For water supply only utilities or sewerage only utilities, the management cost is shown left justified in column (18). Refer also to Figures 15, 57 and 109.
8. Column (4) shows there were **37** non-metropolitan **utilities** responsible for **water supply** with an annual **turnover of over $2M** (shown in **bold**) and column (9) shows there were **28 utilities** responsible for **sewerage** with such a turnover. Such utilities are known as **Category 1 businesses** under the NSW Government's Policy Statement on Application of **National Competition Policy** to Local Government, June 1996. In total, **41 utilities** had an **annual turnover of over $2M for water supply or sewerage,** of these, **24 utilities** had such a turnover for **both water supply and sewerage**, **13 utilities** had such a turnover for **water supply only**, and **4 utilities** had such a turnover for **sewerage only**. Refer also to Figures 14, 36 and 87.
9. Column (5) shows that **60 utilities** had a **pay-for-use water supply tariff** (ie. a two-part tariff with access charge and a usage charge for all water usage; or an inclining block tariff which also has a higher usage charge for usage over about 200 kL/a) in July 2000. These utilities **complied** with the Independent Pricing and Regulatory Tribunal's **(IPART) Pricing Principles for Local Water Authorities** and the Council of Australian Governments' **(COAG) Strategic Framework for Water Reform**. 46 utilities had such a tariff in July 1999. Refer also to
10. Column (6) shows that **99 utilities** had **water supply tariffs independent of land value.** Column (10) shows that **82 utilities** had **sewerage tariffs** independent of land value. These utilities **complied** with **IPART Principles and COAG Reforms.** Refer to Figure 2, Tables 8 & 11.
11. **Physical and chemical water quality - 91% of the 13,000 physical samples and 95% of the chemical samples tested for non-metroplitan NSW achieved 100% compliance** with the 1996 NHMRC/ARMCANZ Guidelines. Column (7) shows that **39 out of 116 non-metropolitan water utilities achieved 100% physical and chemical compliance**, but many utilities tested far fewer samples than suggested in these Guidelines**.** Refer also to Figures 38 and 40.
12. **Microbiological water quality - 95% of the 9,000 samples tested for non-metroplitan NSW achieved 100% compliance** with the 1996 NHMRC/ARMCANZ Guidelines. Column (8) shows that **47 out of 116 non-metropolitan water utilities achieved 100% microbiological compliance,** but many utilities tested far fewer samples than suggested in these Guidelines. Refer also to Figures 39, 40 and 40A.
13. **BOD - 97% of the 6,100 sampling days for non-metroplitan NSW achieved 100% compliance** with the 90 percentile limit of their EPA licence for BOD (Biochemical Oxygen Demand). Column (11) shows that **59 out of 102 non-metropolitan water utilities licenced by the EPA achieved 100% BOD compliance** (16 water utilities had no EPA licence (NL)). Refer also to Figures 88 and 92.
14. **SS - 93% of the 5,800 sampling days** for non-metroplitan NSW achieved **100% compliance** with the 90 percentile limit of their EPA licence for SS (Suspended Solids). Column (12) shows that **31 out of 102 non-metropolitan water utilities licenced by the EPA achieved 100% SS compliance** (16 water utilities had no EPA licence (NL)). Refer also to Figures 89 and 92.
15. Column (20) shows that **40** water **utilities** have **completed** their water supply and sewerage **Strategic Business Plans** and have **demonstrated the long-term financial sustainability of their water supply and sewerage businesses to comply with National Competition Policy.** A further 57 utilities have prepared draft Strategic Business Plans for these businesses, but further development of these draft business plans is required.

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1. PARTICIPATING COUNCILS

The following 117 councils participated in the NSW Annual Water Supply and Sewerage Reporting System in 1998/99. Financial data for 123 councils was obtained from Special Schedule Nos 3 to 6 of the councils' 1998/99 financial statements and advice from councils on their charging structures.

Albury
Armidale

Ballina
Balranald
Barraba
Bathurst
Bega Valley
Berrigan
Bingara
Bland
Blayney
Bogan
Bombala
Boorowa
Bourke
Brewarrina
Byron

Cabonne
Carrathool
Casino
Central Tablelands CC
Cobar
Coffs Harbour
Conargo
Coolamon
Coolah
Cooma-Monaro
Coonabarabran
Coonamble
Cootamundra
Copmanhurst
Corowa
Cowra
Crookwell
Culcairn

Deniliquin
Dubbo
Dungog

Eurobodalla

Forbes

Gilgandra
Glen Innes
Gloucester
Goldenfields CC
Gosford
Goulburn
Grafton
Great Lakes
Greater Lithgow
Greater Taree
Griffith
Gundagai
Gunnedah
Gunning
Guyra

Harden
Hastings
Hay
Hume

Inverell

Jerilderie
Junee

Kempsey
Kyogle

Lachlan
Leeton
Lismore
Lockhart
Lower Clarence CC

Maclean
Manilla
Merriwa
Mid Coast CC
Moree Plains
Mudgee
Mulwaree
Murray
Murrurundi
Muswellbrook

Nambucca
Narrabri
Nundle
Nymboida

Oberon
Orange

Parkes
Parry

Queanbeyan
Quirindi

Richmond River
Riverina CC
Rous CC
Rylstone

Scone
Severn
Shoalhaven
Singleton
Snowy River

Tallaganda
Tamworth
Temora
Tenterfield
Tumbarumba
Tumut
Tweed

Ulmarra
Uralla

Wagga Wagga
Wakool
Walcha
Walgett
Warren
Weddin
Wellington
Wingecarribee
Wyong

Yallaroi
Yarrowlumla
Yass

Although DLWC and LGSA are concerned that the following 7 councils did not provide 1998/99 water supply or sewerage performance reporting forms, it is understood that they will be doing so for the 1999/00 financial year.

Bellingen
Central Darling
Holbrook
Murrumbidgee
Narromine
Wentworth
Young

2. KEY DATA TABLES

This section contains the following key data tables:

- Table 6 1998/99 Water Consumption in Non-Metropolitan NSW
- Table 7 Water Supply – Business Characteristics, Financial
- Table 8 Water Supply – Charges, Bills
- Table 9 Water Supply – Levels of Service, Efficiency
- Table 10 Sewerage – Business Characteristics, Financial
- Table 11 Sewerage – Charges, Bills
- Table 12 Sewerage – Levels of Service, Efficiency

GENERAL NOTES

1. Performance indicators have been grouped in this report into Business Characteristics, Charges, Bills, Financial, Levels of Service and Efficiency. This is consistent with national ARMCANZ performance reporting.
2. Where a water utility has not reported an item for 1998/99, the value previously reported by the utility has been used where available, otherwise an estimate has been used based on results for similar utilities. Such values are shown in ***italics bold*** in Tables 5 to 12.
3. Previous NSW Water Supply and Sewerage Performance Comparisons reports were compiled on a "per assessment" basis. This report has been prepared on a ***"per connected property"*** basis for consistency with national performance reporting. A connected property is a property that is connected to the system, as opposed to an assessment which is a bill issued by a water utility. Factors that influence this indicator are the number of vacant blocks (with no connection but which are billed as an assessment) and the number of multiple dwellings (eg. blocks of flats or units) with a single assessment.
4. The ratio of the number of connected properties to the number of assessments is reported to be about 0.95 for most utilities, although it ranges from 0.71 to 1.44. The data required for the calculation of this ratio was not well reported and has been estimated by DLWC for most utilities (shown in ***italics bold*** in column (2) of Tables 7 and 10). The NSW water utilities have been asked to carefully estimate this ratio for their businesses for the 1999/00 financial year to improve its accuracy.
5. The formulae for calculation of the performance indicators in the tables are shown in the final pages of Appendix B.
6. The typical residential bill is based on a customer of the water utility's principal water supply or sewerage system, using the utility's average annual residential water consumption.
7. The average residential bill (Tables 8, 11 and Figures 28, 80) comprises the water utility's revenue from residential rates and charges divided by the number of connected residential properties and is less than the typical residential bill due to pensioner rebates and vacant lots (however, this would not be the case for utilities with an inclining block tariff or an annual water allowance, nor for those with access charges not independent of land value).

8. Drinking water quality guidelines have become more stringent. Previous reports were based on the 1987 NHMRC/AWRC Water Quality Guidelines, however, this report reports compliance with the 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines.
9. The average annual residential water consumption per connected property (Tables 5, 7 and Figure 22) refers to potable water consumption. As shown in Table 6, this comprises 94% (305,000/325,000) of the total 1998/99 water consumption for non-metropolitan NSW.
10. For consistency with national performance reporting, unaccounted for water now includes leakage.
11. As a review of unaccounted for water for NSW water utilities responsible for reticulating water supply to residential customers has indicated a minimum of 10% of total potable water consumption, the values for any such utilities reporting less than 10% unaccounted for water have been increased to 10%, and the reported values for total water consumption have been increased accordingly. Similarly, as minimum leakage levels for such utilities have been found to be at least 6% of potable water consumption, any reported values of leakage of less than 6% have been increased to 6% (Table 6).
12. Total annual water consumption comprises the sum of the potable water supply plus the non-potable water supply less the recycled water. Recycled water is a component of the non-potable supply which also includes raw water (Table 6).
13. ***Unfiltered –*** refers to a water utility with over 50% of its supply comprising unfiltered water ie. the utility does not have a water treatment works involving at least filtration and disinfection for 50% of its supply.
    Groundwater – refers to a utility with over 50% of its supply comprising good quality groundwater (unfiltered).
    Reticulator – refers to a utility which purchases over 70% of its source water from a bulk supplier and reticulates water to householders in its area.
    Bulk Supplier – refers to a utility whose main task is to provide a piped bulk water supply to other utilities, rather than reticulating water to householders.
    Dual Supply – refers to a utility with a potable reticulated water supply for indoor uses and a separate non-potable supply for outdoor uses.
14. The performance indicators for Sydney Water Corporation and Hunter Water Corporation have been obtained from WSAA Facts ’99.

Table 6: 1998/99 Water Consumptions in Country NSW

Consumption Per Category (Consumptions in each category are only shown for water utilities reporting at least 3 categories)

	Water Utility	Source Catchment	Water Consumption - Town Water Supply (ML)										Recycled Water	
			Residential (1)	Commercial (2)	Industrial (3)	Institution (4)	Bulk (5)	Public (6)	Unaccounted[2,5] for Water (7)	Leakage[5] (8)	Total Potable Supply =(1)+(2)+(3)+(4)+(5)+(6)+(7) (9)	Non-Potable Supply (for outdoor uses or industry) (10)	Total Annual Water Consumption[6] (Potable + Non-potable) =(9)+(10)-(12) (11)	For Non-Potable Town Water Supply[8] (12)	For Agricultural use and Non-Potable Town Water Supply[9] (13)
1	Albury	Murray	5,960	1,550	1,020	503	610	359	1,110	667	11,100		**11,100**		5,300
2	Armidale	Macleay									3,160	40	**3,200**		500
3	Ballina (Reticulator)	Tweed/Richmond	2,380	450	44	176	21	10	834	431	3,920	50	**3,920**	50	50
4	Balranald (Dual Supply)	Murrumbidgee	267						30	18	300	1,050	**1,350**		
5	Barraba	Namoi									155	10	**165**		
6	Bathurst	Castlereagh/Macquarie	3,100	767	807	677			1,030	529	6,380		**6,380**		4,200
7	Bega Valley (Unfiltered)	Bega									3,580		**3,580**		440
8	Bellingen (Unfiltered)	Bellinger									1,500		**1,500**		
9	Berrigan	Murray	732	25	0	0	0	0	84	50	840	1,270	**2,110**		50
10	Bingara	Gwydir	165	23		10		61	71	20	330		**330**		10
11	Bland	**No WS**											0		
12	Blayney	**No WS**													
13	Bogan	Castlereagh/Macquarie									840		**840**		
14	Bombala	Snowy									380		**380**		30
15	Boorowa	Lachlan									***190***		***190***		
16	Bourke (Dual Supply)	Darling									750	850	**1,600**		
17	Brewarrina	Castlereagh/Macquarie									220	720	**940**		160
18	Broken Hill	Darling	4,160	460	668			232	828	381	6,350	2,240	**8,590**		
19	Byron (Reticulator)	Tweed/Richmond	2,370	0	0	0	0	0	263	158	2,630		**2,630**		
20	Cabonne	Lachlan									320	60	**380**		
21	Carrathool	Murrumbidgee									690	140	**830**		
22	Casino	Tweed/Richmond									2,450		**2,450**		
23	Central Darling	Darling									***90***		***90***		
24	Central Tablelands	Castlereagh/Macquarie	1,010	87	687	64	186	60	598	401	2,700	230	**2,930**		
25	Cobar (Dual Supply)	Darling									1,260		**1,260**		150
26	Coffs Harbour (Unfiltered)	Bellinger	3,560	1,060	106	109	72	79	553	332	5,530		**5,530**		150
27	Coolah	Castlereagh/Macquarie	153	0	0	0	1	1	17	13	170		**170**		100
28	Coolamon	**No WS**													
29	Cooma-Monaro	Murrumbidgee									1,480		**1,480**		
30	Coonabarabran	Castlereagh/Macquarie	462	64	20	23		14	65	65	650		**650**		
31	Coonamble (Groundwater)	Castlereagh/Macquarie	830	10	9	28	2	10	99	99	990		**990**		
32	Cootamundra (Reticulator)	Murrumbidgee	628	53	34	47		44	177	59	980		**980**		
33	Copmanhurst (Unfiltered)	Clarence	27	0	0	0	0	0	7	7	30		**30**		
34	Corowa	Murray	2,130	100	692			200	347	208	3,470		**3,470**		610
35	Cowra	Lachlan									***3,100***		***3,100***		
36	Crookwell	Lachlan	188	19	3	11	0	90	58	22	370		**370**		
37	Culcairn (Groundwater)	Murray	89	5	1	26	3	14	24	15	160		**160**		
38	Deniliquin	Murray									2,520	580	**3,100**		700
39	Dubbo	Castlereagh/Macquarie									7,060		**7,060**		1,300
40	Dungog (Unfiltered)	Hunter									920		**920**		200
41	Eurobodalla (Unfiltered)	Clyde	4,150	240	0	0	0	0	822	680	5,210		**5,210**		470
42	Fish River (Unfiltered, Bulk Supplier)	Castlereagh/Macquarie	3,680		7,330				1,260	757	12,600		**12,600**		
43	Forbes	Lachlan	1,700	240	56	0	584	40	508	188	3,130	560	**3,690**		
44	Gilgandra (Groundwater)	Castlereagh/Macquarie	530	90				80	78	47	780		**780**		
45	Glen Innes	Moonie/Macintyre	442	114	2	44	0	4	96	42	700		**700**		
46	Gloucester	Manning	439	28	32			114	68	41	680		**680**		
47	Goldenfields (Bulk Supplier)	Murrumbidgee									7,160		**7,160**		
48	Goldenfields (Reticulator)	Murrumbidgee	2,980	267	667	2		184	835	800	4,940	140	**5,080**		
49	Gosford	Hawkesbury	12,020	714	751	0	0	1,210	2,000	1,500	16,700		**16,700**		90
50	Goulburn	Hawkesbury									4,080		**4,080**		2,100

Consumption Per Category (Consumptions in each category are only shown for water utilities reporting at least 3 categories)

Water Utility	Source Catchment	Water Consumption - Town Water Supply (ML)											Recycled Water	
		Residential (1)	Commercial (2)	Industrial (3)	Institution (4)	Bulk (5)	Public (6)	Unaccounted[2,5] for Water (7)	Leakage[5] (8)	Total Potable Supply =(1)+(2)+(3)+(4)+(5)+(6)+(7) (9)	Non-Potable Supply (for outdoor uses or industry) (10)	Total Annual Water Consumption[6] (Potable + Non-potable) =(9)+(10)-(12) (11)	For Non-Potable Town Water Supply[8] (12)	For Agricultural use and Non-Potable Town Water Supply[9] (13)
51 Grafton	Clarence									5,220	150	**5,220**	150	150
52 Griffith	Murrumbidgee									8,460	630	**9,090**		
53 Gundagai	Murrumbidgee	380	100	50	9	1	50	66	39	660		**660**		100
54 Gunnedah (Groundwater)	Namoi									2,270		**2,270**		
55 Gunning	Lachlan	79	3	0	0	0	0	9	5	90		**90**		
56 Guyra	Gwydir	270	2	4			4	31	19	310		**310**		
57 Harden (Reticulator)	Murrumbidgee									840	190	**840**	190	190
58 Hastings (Unfiltered)	Hastings	3,900	972	65	186	9	205	854	371	6,190		**6,190**		20
59 Hay (Dual Supply)	Murrumbidgee									2,050	1,890	**3,940**		
60 Holbrook	**No WS**													
61 Hume	Murray									1,040		**1,040**		
62 Hunter Water Corporation	**Metropolitan**													
63 Inverell	Gwydir									***2,350***		***2,350***		
64 Jerilderie (Dual Supply)	Murray									120	280	**400**		100
65 Junee	**No WS**											0		
66 Kempsey (Groundwater)	Macleay	2,000	500	12	100		16	2,200	600	4,830	200	**4,830**	200	70
67 Kyogle	Clarence	339	0	0	0	0	12	74	26	430	100	**530**		20
68 Lachlan	Lachlan									1,090		**1,090**		100
69 Leeton	Murrumbidgee									2,590		**2,590**		
70 Lismore (Reticulator)	Tweed/Richmond	2,570	558	5				697	697	3,830		**3,830**		180
71 Lithgow	Hawkesbury									2,090		**2,090**		
72 Lockhart	**No WS**													
73 Lower Clarence (Unfiltered)	Clarence	1,490	298	614	761	4	27	354	213	3,540		**3,540**		
74 Maclean	**No WS**													
75 Manilla	Namoi	370	25	25	1	1	50	52	31	520		**520**		230
76 Merriwa (Groundwater)	Hunter	196	36	2	1		41	31	18	310		**310**		
77A Midcoast (Combined)	Manning	7,210	1,360	830	102	0	286	2,050	710	11,800		**11,800**		
79 Moree Plains	Gwydir									3,410		**3,410**		
80 Mudgee (Unfiltered)	Castlereagh/Macquarie	1,010	120	55	40	25	350	200	140	1,800	50	**1,800**	50	550
81 Mulwaree	Hawkesbury									150		**150**		
82 Murray	Murray									810	700	**1,510**		
83 Murrumbidgee	Murrumbidgee									***980***		***980***		
84 Murrurundi (Unfiltered)	Hunter	125	0	0	0	0	0	39	39	160		**160**		
85 Muswellbrook	Hunter	1,650	292	45	11	9	188	408	156	2,610	1,380	**2,590**	1,400	890
86 Nambucca (Groundwater)	Bellinger	1,160	202	18	40	0	15	159	100	1,590		**1,590**		
87 Narrabri (Groundwater)	Namoi									3,230		**3,230**		
88 Narrandera (Groundwater)	Murrumbidgee									1,480		**1,480**		
89 Narromine (Groundwater)	Castlereagh/Macquarie									***1,030***		***1,030***		
90 Nundle (Groundwater)	Namoi									110		**110**		
91 Nymboida (Unfiltered)	Clarence									220		**220**		30
92 Oberon (Unfiltered, Reticulator)	Castlereagh/Macquarie	202	41	359	0	0	28	70	42	700		**700**		
93 Orange	Castlereagh/Macquarie									6,190	760	**6,370**	580	650
94 Parkes	Lachlan	1,370	200	160	20	2,500	100	483	290	4,830	1,450	**6,280**		170
95 Parry	Namoi									440		**440**		10
96 Queanbeyan (Reticulator)	Murrumbidgee	3,490	0	0	0	1	421	434	260	4,340	100	**4,340**	100	100
97 Quirindi Shire	Namoi	333	49	10	23	4	44	108	70	570		**570**		
98 Richmond River (Reticulator)	Tweed/Richmond	560	0	25	0	2	0	65	39	650		**650**		
99 Riverina (Groundwater)	Murrumbidgee	8,060	1,950	1,590	488	546	343	2,260	1,000	15,200		**15,200**		
100 Rous (Bulk Supplier)	Tweed/Richmond		0	0	0		0			11,000		**11,000**		
101 Rylstone Shire	Castlereagh/Macquarie	400	30	35	30		30	58	35	580		**580**		

Consumption Per Category (Consumptions in each category are only shown for water utilities reporting at least 3 categories)

Water Utility	Source Catchment	Water Consumption - Town Water Supply (ML)											Recycled Water	
		Residential (1)	Commercial (2)	Industrial (3)	Institution (4)	Bulk (5)	Public (6)	Unaccounted[2,5] for Water (7)	Leakage[5] (8)	Total Potable Supply =(1)+(2)+(3)+(4)+(5)+(6)+(7) (9)	Non-Potable Supply (for outdoor uses or industry) (10)	Total Annual Water Consumption[6] (Potable + Non-potable) =(9)+(10)-(12) (11)	For Non-Potable Town Water Supply[8] (12)	For Agricultural use and Non-Potable Town Water Supply[9] (13)
102 Scone (Unfiltered)	Hunter	587	126	75	114	0	110	459	150	1,470		**1,470**		960
103 Severn	Moonie/Macintyre									***100***		***100***		
104 Shoalhaven	Shoalhaven	7,040	1,720	1,490	94	0	83	2,440	772	12,900	3,470	**16,400**		
105 Singleton	Hunter									3,240		**3,240**		1,300
106 Snowy River (Unfiltered)	Snowy									660		**660**		
107 Sydney Water Corporation	**Metropolitan**													
108 Tallaganda (Unfiltered)	Shoalhaven	173	0	0	0	0	20	50	20	240		**240**		
109 Tamworth	Namoi	3,490	3,450					1,260	1,230	8,190		**8,190**		
110 Temora	**No WS**											0		
111 Tenterfield	Moonie/Macintyre									550		**550**		20
112 Tumbarumba	Murray	2,420	1,010	12	0	0	0	382	229	3,820	250	**4,070**		
113 Tumut	Murrumbidgee	997	104	638	61		11	201	121	2,010	390	**2,390**	10	10
114 Tweed	Tweed/Richmond	5,200	1,500	0	0	0	0	1,700	600	8,400	530	**8,930**		450
115 Ulmarra (Unfiltered)	Clarence	185					34	46	16	270		**270**		
116 Uralla	Gwydir	219	33	0	0	0	18	113	48	380	100	**480**		
117 Wagga Wagga	**No WS**													
118 Wakool (Unfiltered)	Murray									420		**420**		20
119 Walcha	Macleay	134	64	1	13		10	39	26	260		**260**		
120 Walgett (Dual Supply)	Namoi	980	65	120	0	3	5	130	78	1,300	1,050	**2,350**		
121 Warren (Dual Supply)	Castlereagh/Macquarie									380	290	**670**		
122 Weddin	**No WS**											0		
123 Wellington	Castlereagh/Macquarie	915	215		15		20	129	90	1,290		**1,290**		
124 Wentworth (Dual Supply)	Darling									1,170	1,900	**3,070**		
125 Wingecarribee	Hawkesbury	3,330	1,220					506	304	5,060	190	**5,250**		
126 Wyong	Tuggerah Lake	10,170	2,530	0	992	0	0	1,520	913	15,200		**15,200**		
127 Yallaroi (Unfiltered)	Gwydir	326	24		1		2	39	24	390		**390**		
128 Yarrowlumla (Unfiltered)	Murrumbidgee	308	4	0	0	0	0	35	21	350		**350**		
129 Yass	Murrumbidgee									990		**990**		160
130 Young (Reticulator)	Murrumbidgee									***1,300***		***1,300***		
Total (for 64 utilities reporting at least 3 categories)		**127,800**	**25,100**	**19,200**	**4,780**	**4,580**	**5,330**	**31,600**	**17,100**	**218,700**	**14,400**	**233,200**		
Percentage of Total Potable Supply		**(58%)**	**(12%)**	**(9%)**	**(2%)**	**(2%)**	**(2%)**	**(14%)**	**(8%)**					
Total (all water utilities)										**305,000**	**21,200**	**325,000**	**2,700**	**23,100**

Notes:

1. Source: Data provided by the 116 non-metropolitan NSW water supply utilities for the 1998/99 NSW Water Supply and Sewerage Performance Comparisons Report.
2. For consistency with national performance reporting, unaccounted for water (column (7)) now includes leakage (column (8)).
3. Where a water supply utility has not reported its total potable water consumption in 1998/99 (column (9)), the consumption previously reported has been used and is shown in ***italics bold.***
4. The total consumptions for all water utilities shown in the final line of the above table excludes double counting where water is supplied by a bulk supplier.
5. As a review of unaccounted water for NSW water utilities responsible for reticulating water supply to residential customers has indicated a minimum of 10% of total potable water consumption, the values for any such utilities reporting less than 10% unaccounted for water have been increased to 10%, and the reported values for total consumption have been increased accordingly. Similarly, as minimum leakage levels for such utilities have been found to be at least 6% of the total potable water consumption, any reported values of leakage of less than 6% have been increased to 6%.
6. The total annual water consumption (column (11)) comprises the sum of the potable water supply (column (9)) and the non-potable water supply (column (10)), less the recycled water (column(12)).
7. The above analysis shows that the ***total 1998/99 annual water consumption*** for non-metropolitan NSW was ***325,000 ML*** (column (11)), of which ***305,000 ML*** (column (9)) was for ***potable water supply***. The total non-potable water supply was 21,200 ML (column (10)) which included 2,700 ML recycled water (column (12)). The non-potable supply was mainly for outdoor uses in dual water supplies, but also includes supplies to industry and other outdoor uses. The ***average uses*** as a percentage of the total potable water supply were:
   - ***Residential - 58%*** (column (11))
   - ***Commercial and Industrial - 21%*** (columns (2) and (3))
   - ***Unaccounted for water - 14%*** (column (7))
8. Recycled water used for non-potable town water supply is shown in column (12). This is a component of the non-potable town water supply (column (10)) which also includes raw water.
9. The recycled water used for agriculture and non-potable town water supply uses is shown in column (13) and includes the values shown in column (12). The total volume of recycled water for non-metropolitan NSW water utilities was 24,400 ML, which is 14% of the total volume of sewage collected.

1998/99 Country Towns Consumption from Source Catchments

Source Catchment	Water Consumption - Town Water Supply (ML)											Recycled Water	
	Residential (1)	Commercial (2)	Industrial (3)	Institution (4)	Bulk (5)	Public (6)	Unaccounted[2,5] for Water (7)	Leakage[5] (8)	Total Potable Supply =(1)+(2)+(3)+(4)+(5)+(6)+(7) (9)	Non-Potable Supply (for outdoor uses or industry) (10)	Total Annual Water Consumption[6] (Potable + Non-potable) =(9)+(10)-(12) (11)	For Non-Potable Town Water Supply[8] (12)	For Agricultural use and Non-Potable Town Water Supply[9] (13)
Bega	2,100	400	300	70	70	70	500	300	3,500	0	**3,500**		440
Bellinger	5,600	1,400	300	180	100	120	900	600	8,600		**8,600**		150
Castlereagh/Macquarie	21,400	3,300	10,700	1,190	530	910	5,800	3,500	43,900	2,100	**45,300**	630	7,000
Clarence	3,100	500	800	800	40	110	700	400	6,200	300	**6,300**	150	200
Clyde	4,200	200	0	0	0	0	800	700	5,200	0	**5,200**		470
Darling	6,100	900	1,000	70	70	300	1,300	600	9,600	5,000	**14,600**		150
Gwydir	4,300	800	500	130	120	200	1,100	600	7,100	100	**7,200**		10
Hastings	3,900	1,000	100	190	10	210	900	400	6,200		**6,200**		20
Hawkesbury (Country Towns only)	19,000	2,700	1,300	130	130	1,340	3,400	2,300	28,000	200	**28,200**		2,190
Hunter	5,000	1,000	500	210	90	420	1,500	700	8,700	1,400	**8,600**	1,400	3,350
Lachlan	6,100	1,000	600	130	3,180	320	1,700	900	13,100	2,100	**15,100**		270
Macleay	4,000	900	300	180	60	90	2,700	900	8,200	200	**8,300**	200	570
Manning	7,600	1,400	900	100		400	2,100	800	12,500		**12,500**		
Moonie/Macintyre	800	200	100	60	10	20	200	100	1,300	0	**1,300**		20
Murray	14,200	3,300	2,200	630	710	670	2,600	1,600	24,300	3,100	**27,300**		6,780
Murrumbidgee	29,200	5,000	4,900	1,020	960	1,470	7,000	4,000	49,500	4,500	**53,700**	300	560
Namoi	8,800	4,300	700	150	130	220	2,400	1,900	16,700	1,100	**17,800**		240
Shoalhaven	7,200	1,700	1,500	90	0	100	2,500	800	13,100	3,500	**16,600**		
Snowy	600	100	100	20	20	20	100	100	1,000		**1,000**		30
Tuggerah Lake	10,200	2,500	0	990	0	0	1,500	900	15,200	0	**15,200**		
Tweed/Richmond	14,500	2,800	300	230	70	60	3,900	2,100	21,900	600	**22,400**	50	680
Totals	**178,000**	**35,400**	**27,100**	**6,600**	**6,300**	**7,100**	**43,600**	**24,200**	**304,000**	**24,200**	**325,000**	**2,700**	**23,100**

Note:

For water utilities which did not report consumptions for at least 3 categories, the percentages tabulated on page 7 were applied to their total potable water consumption (column 9) and the consumptions for each category summed for each catchment to obtain the above values.

Table 7 - Water Supply - Business Charactistics, Financial

	WATER UTILITY	BUSINESS CHARACTERISTICS												FINANCIAL											
		Total No. of Assessments (1)				Connected Properties per Assessment (Total) (2)	Connected Properties per Assessment (Residential) (2A)	Properties Served per km of Main (3)	Total Annual Consumption (ML) (4)			Average Annual Residential Consumption (kL/property) (5)			Economic Real Rate of Return (%) (6)				Turnover (excl. Capital Works Grants) ($'000) (7)				Debt to Equity (%) (8)			
		1995/96	*1996/97*	*1997/98*	*1998/99*			*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
1	Albury	14,120	17,200	17,530	17,680	0.96	0.96	46.5	9,950	12,200	11,120	349	424	382	1.4	0.9	0.4	1.9	5,873	5,640	6,160	6,240	7	6	6	4
2	Armidale	7,180	7,760	7,760	8,160	0.98	0.98	24.9		3,370	3,200		***312***	***254***	-0.4	-0.4	-1.2	-1.1	3,092	3,200	3,540	3,070	2	1	0	0
3	Ballina (Reticulator)	10,800	11,700	12,800	12,080	0.96	0.96	40.0		3,770	3,920		229	220	-3.4	0.5	1.1	1.3	4,286	3,790	3,700	3,670	2	2	1	0
4	Balranald (Dual Supply)	740	760	770	750	***0.95***	***0.95***	***22.8***	1,100	1,700	1,350	364	407	375	1.3	1.9	1.7	1.4	386	400	410	401	9	8	7	2
5	Barraba	760	760	750	770	0.94	***0.94***	14.3	230	140	160		180	193		-1.5	-1.8	-2.4	362	370	370	390	25	23	23	21
6	Bathurst	9,980	10,700	10,900	11,220	**0.96**	**0.96**	35.0	6,550	6,590	6,380	359	366	317	2.2	2.4	2.9	2.7	6,544	6,720	7,320	7,460	3	1	1	0
7	Bega Valley (Unfiltered)	7,780	11,100	12,000	12,160	0.95	0.95	21.9	3,190	3,360	3,580			***200***	2.7	2.5	2.7	2.3	6,114	5,890	6,020	5,990	4	1	0	0
8	Bellingen (Unfiltered)	3,580	4,850	3,840	3,840	***0.95***	***0.95***	23.8		1,510			189	***200***	6.1	2.4	1.3	1.2	1,474	1,480	1,560	1,580	11	3	2	1
9	Berrigan (Dual Supply)	2,660	2,850	2,870	2,860	***0.95***	***0.95***	15.8	2,450	2,530	2,110	617	481	300	2.5	2.2	1.8	1.8	1,317	1,350	1,460	1,530	8	7	15	14
10	Bingara		720	740	740	***0.95***	***0.95***	21.5	410	460	330	261	303	249	1.8	1.4	2.3	2.9	222	270	270	260	45	26	26	26
11	Bland		No WS																							
12	Blayney		No WS																							
13	Bogan	1,010	1,010	1,020	1,030	1.01	1.01	23.6			840			***700***	1.2	0.8	0.7	-0.7	789	960	820	680	11	10	8	7
14	Bombala	820	820	830	910	***0.95***	***0.95***	23.3	410	400	380	436	425	413	2.9	2.4	3.6	3.0	390	390	390	400	18	15	12	8
15	Boorowa	570	830	840	***640***	0.91	0.90		190	190	***190***	268	267	***270***				-0.7	280	300	320	310	68	30	29	
16	Bourke (Dual Supply)	1,120	2,150	1,750	1,760	***0.95***	***0.95***	19.2	1,690	1,690	1,600	443		***400***	-1.4	-4.5	-7.5	-6.1	670	700	700	750	6	5	5	5
17	Brewarrina	550	550	550	550	0.97	***0.97***	22.3		1,030	940			204	-2.0	-0.6	-4.9	-2.3	298	300	300	340	0	0	0	0
18	Broken Hill WB	10,000	10,000	10,200	10,180	1.01	1.01	28.6	8,100	8,120	8,590	340	340	448	2.4	0.6	0.7	0.9	8,896	10,500		6,950	18	9	0	
19	Byron (Reticulator)	8,130	8,130	8,130	***9,400***	1.02	1.02	65.4	2,470	3,110	2,630	286	350	268	4.3	2.5	3.3	1.3	4,434	4,450	4,200	3,740	2	1	0	0
20	Cabonne	970	1,070	1,090	1,090	***0.95***	***0.95***	12.3	410	370	380			***350***	1.7	1.4	0.5	0.4	686	690	690	660	10	9	7	6
21	Carrathool	1,040	1,040	980	980	***0.95***	***0.95***	10.7	790	840	830	737	827	739	0.6	1.5	0.7	1.3	728	770	770	760	4	4	6	5
22	Casino	4,170	4,180	4,230	4,210	***0.95***	***0.95***	38.2	2,970	2,850	2,450			***700***	4.6	3.0	2.5	1.5	1,936	1,850	1,810	1,590	9	5	4	3
23	Central Darling	980	740	730	730	***0.95***	***0.95***	6.7	110	90	***90***	106	82	***100***												
24	Central Tablelands	4,730	4,960	5,000	4,810	***0.95***	***0.95***	10.6	3,060	3,250	2,930	252	245	266	-0.9	0.0	-0.9	-1.5	2,452	2,580	2,740	2,370	2	0	0	0
25	Cobar (Dual Supply)	1,750	1,840	1,840	1,740	***0.95***	***0.95***	22.1	1,550	1,600	1,370	922	1,023	856	3.4	-2.0	-0.5	-1.0	1,566	1,210	1,220	1,130	4	3	1	0
26	Coffs Harbour (Unfiltered)	17,530	19,550	20,500	20,500	***0.89***	***0.89***	35.9	5,090	5,310	5,530	317	179	208	2.3	3.6	4.8	3.9	8,085	10,300	10,900	9,900	16	16	13	24
27	Coolah	980	1,070	1,070	1,070	0.99	***1.00***	26.6	440	110	170	461	106	162	2.8	6.4	5.0	0.9	437	450	450	430	0	1	0	0
28	Coolamon		No WS																							
29	Cooma-Monaro	3,120	3,540	3,550	3,570	***0.95***	***0.95***	23.5		1,610	1,480			***330***	4.3	3.2	4.6	5.5	1,535	1,710	1,700	1,710	17	15	13	9
30	Coonabarabran	2,010	1,870	1,870	1,870	***0.95***	***0.95***	30.7	670	1,210	650	380	741	299	-1.1	-1.0	-0.2	0.1	960	980	990	1,080	2	1	1	1
31	Coonamble (Groundwater)	1,250	1,370	1,370	1,470	0.87	0.85	30.3	1,020	1,020	830	873	872	739	3.9	4.6	7.6	3.8	558	570	570	560	9	7	5	4
32	Cootamundra (Reticulator)	2,750	2,700	2,700	2,700	***0.95***	***0.95***	30.7	970	1,180	980	285	337	271	-2.4	-1.3	-3.1	-0.7	1,004	1,120	1,300	1,140	0	0	0	0
33	Copmanhurst (Unfiltered)	140	130	150	150	***0.95***	***0.95***	14.3	50	40	30		243	212	-0.8	-1.8	-1.8	-7.1	52	60	50	48	0	0	0	0
34	Corowa	2,780	3,330	3,370	3,460	0.93	0.92	30.6	3,390	3,900	3,470	797	928	735	2.2	-0.3	2.2	3.8	1,313	1,350	1,450	1,420	0	0	0	0
35	Cowra	3,480	4,670	5,020	5,130	***0.95***	***0.95***	14.2		2,300	***3,100***		248	***250***	-0.4	0.4	0.9	1.3	2,016	2,400	2,680	2,500	4	2	0	0
36	Crookwell	910	900	1,020	1,170	0.80	***0.80***	28.6	400	460	370	455	427	213	1.2	-1.3	2.1	2.4	426	470	530	560	31	34	24	23
37	Culcairn (Groundwater)	510	520	520	520	***0.95***	***0.95***	31.4	210	220	170	261	297	188	5.4	7.3	6.8	1.5	96	120	150	130	13	10	6	4
38	Deniliquin	3,290	3,560	3,590	3,600	***0.95***	***0.95***	22.4	2,960	3,050	3,100	1,030	1,053	965	1.4	2.1	2.0	2.3	1,346	1,410	1,540	1,660	6	10	7	4
39	Dubbo	11,550	11,800	12,700	12,600	1.01	1.01	36.6	7,260	8,250	7,060			337	2.6	2.1	2.1	2.3	6,391	6,610	7,400	7,290	4	3	2	1
40	Dungog (Unfiltered)	1,960	1,960	1,920	1,890	***0.95***	***0.95***	22.3	420	750	920			408	0.6	1.2	2.2	1.4	594	630	740	650	3	2	2	5
41	Eurobodalla (Unfiltered)	14,220	17,700	17,500	17,640	0.94	0.94	23.4	4,530	5,490	5,210		330	264	1.8	2.0	1.1	1.5	6,451	6,620	6,770	7,320	17	15	10	8
42	Fish River WS (Unfiltered, Bulk Supplier)	22,700	22,800	22,900	23,000	0.94	0.94	86.1	12,800	13,300	12,200				1.3	1.3	1.0	0.7	5,899	5,890	5,940	6,030	0	7	7	8
43	Forbes	3,020	3,370	3,370	3,440	***0.95***	***0.95***	26.4	3,300	3,700	3,690	813	959	585	2.6	3.5	2.3	2.0	1,507	1,540	1,460	1,499	10	8	7	6
44	Gilgandra (Groundwater)	1,140	1,140	1,440	1,210	0.98	***0.98***	24.5	810	940	780	531	483	515	2.3	1.5	0.1	-0.7	537	470	530	600	26	20	15	13

NOTE: Revenue is in Dollars of the Year

	WATER UTILITY	BUSINESS CHARACTERISTICS													FINANCIAL											
		Total No. of Assessments (1)				Connected Properties per Assessment (Total) (2)	Connected Properties per Assessment (Residential) (2A)	Properties Served per km of Main (3)	Total Annual Consumption (ML) (4)			Average Annual Residential Consumption (kL/property) (5)			Economic Real Rate of Return (%) (6)				Turnover (excl. Capital Works Grants) ($'000) (7)				Debt to Equity (%) (8)			
		1995/96	*1996/97*	*1997/98*	*1998/99*			*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
45	Glen Innes	2,540	2,650	2,800	2,810	***0.95***	***0.95***	28.3	770	750	700	292	253	191	1.1	0.2	1.4	0.9	919	910	1,050	1,050	4	3	3	3
46	Gloucester	1,260	1,270	1,290	1,300	***0.95***	***0.95***	33.4	590	710	680	371	427	395	2.5	4.2	3.5	1.2	535	630	630	620	9	8	7	5
47	Goldenfields (Bulk Supplier)		18,600	18,600	18,830	0.94	0.94	55.4	7,430	8,830	7,160					6.2	4.2	3.4	5,993	5,900	7,160	6,880		7	13	10
48	Goldenfields (Reticulator)	9,660	10,800	10,800	10,870	0.92	***0.92***	5.4		5,470	5,080		430	396	-1.0	0.0	-0.5	-2.3	5,703		7,340	6,590	3	0	0	0
49	Gosford	57,880	60,600	61,400	62,280	0.97	0.97	65.7	17,500	18,400	16,700	209	218	209	2.1	2.4	2.7	1.8	17,600	18,200	19,700	18,690	10	7	6	4
50	Goulburn	8,240	8,310	8,520	8,910	1.03	1.03	41.4	4,130	4,420	4,080	174	253	230	3.8	5.2	6.3	4.7	3,123	3,740	4,420	4,110	12	10	8	7
51	Grafton	6,590	6,590	6,640	6,660	0.97	0.97	24.5	2,510	2,720	5,370	434	245	390	3.0	1.8	-0.2	0.4	2,248	2,080	1,950	1,860	5	4	3	2
52	Griffith	7,650	7,590	7,570	7,570	0.85	0.84	17.0		***7,600***	9,090			***850***	2.7	0.1		0.6	4,565	3,920		4,135	1	0	0	2
53	Gundagai	900	930	930	930	***0.95***	***0.95***	24.8	800	800	660	500	500	500	1.5	2.8	1.6	2.5	399	430	440	440	16	13	11	10
54	Gunnedah (Groundwater)	4,140	4,080	4,100	4,110	1.02	1.02	30.6	5,000	2,300	2,270	529	580	580	0.6	2.9	3.0	2.2	1,369	1,680	1,670	1,540	10	12	11	10
55	Gunning	280	360	360	360	***0.95***	***0.95***	20.0	120	130	90	375	424	302		-2.4	-1.4	-0.6		80	100	120		1	1	1
56	Guyra	1,120	1,140	1,160	1,170	***0.95***	***0.95***	23.8	250	290	310	231	276	274	-0.1	-0.1	-0.4	-0.2	480	400	400	390	12	11	9	8
57	Harden (Reticulator)	1,440	1,560	1,560	1,610	0.99	0.98	9.3	800	920	1,030	467	546	630	-3.4	-3.9	-3.7	-4.8	761	910	980	940	0	0	0	0
58	Hastings (Unfiltered)	20,950	23,100	23,400	24,280	***0.95***	***0.96***	32.7	6,300	6,390	6,190	186	194	182	-2.0	3.0	2.3	5.3	4,412	11,200	11,000	14,740	2	1	1	1
59	Hay (Dual Supply)	1,200	1,200	1,210	1,280	***0.95***	***0.95***	14.0	1,900	2,010	3,940	243	310	372	2.9	0.3	-0.4	-0.2	510	510	550	550	6	2	2	0
60	Holbrook		No WS																							
61	Hume	1,680	1,840	1,840	1,970	***0.95***	***0.95***	11.0	960	1,110	1,040			494	1.9	1.1	2.3	-4.5	743	790	1,020	720	3	3	1	0
62	Hunter Water	185,220	187,000	190,000	193,000	***1.04***	***1.04***	47.4	75,000	80,100	77,100	191	202	185	4.4	4.4	4.4	4.0	72,576	71,900	75,000	72,000	5	5	5	4
63	Inverell	6,130	6,130	5,180	4,780	***0.95***	***0.95***	21.9	2,350	2,350	***2,350***	302	351	***300***	1.1	0.8	1.0	-0.3	2,038	2,250	2,300	2,070	8	6	4	3
64	Jerilderie (Dual Supply)	450	480	480	460	***0.72***	0.69	8.6	330	340	390	232	232	258	7.0	8.4	10.2	1.1	210	220	220	210	23	24	22	10
65	Junee		No WS																							
66	Kempsey (Groundwater)	9,380	10,000	10,100	10,260	***1.00***	***1.00***	19.9	3,470	4,280	5,620	213	293	206	9.2	3.5	3.6	3.7	4,553	4,520	4,640	4,810	63	21	12	18
67	Kyogle	1,770	1,770	1,770	1,700	***0.95***	***0.95***	26.1	400	400	520	239	235	238	0.1	-0.6	-0.9	-1.5	548	540	560	600	2	2	1	1
68	Lachlan	2,580	2,120	2,460	2,400	***0.95***	***0.95***	15.6		1,410	1,090			***500***	-1.5	1.3	0.8	1.8	1,110	1,490	1,510	1,530	0	0	0	0
69	Leeton	3,350	3,400	3,440	3,440	***0.95***	***0.95***	27.1	2,730	2,610	2,590	667	621	619	0.8	0.4	0.1	1.5	1,452	1,620	1,770	1,690	5	4	3	3
70	Lismore (Reticulator)	12,060	12,100	12,230	12,300	0.96	0.97	39.4	3,350	3,280	3,830	219	220	240	6.0	2.7	3.6	2.7	5,510	4,870	4,680	4,320	7	5	4	4
71	Lithgow	6,960	7,070	7,070	7,170	***0.95***	***0.95***	15.3		***2,400***	2,090			***330***	1.2	0.7	-1.4	-2.4	3,086	3,100	3,170	2,870	4	3	0	0
72	Lockhart		No WS																							
73	Lower Clarence (Unfiltered)	9,420	9,480	9,640	9,740	***0.95***	***0.95***	8.4	3,230	3,560	3,540	209	218	200	2.9	2.4	3.7	2.7	4,640	4,530	5,440	4,990	8	7	6	5
74	Maclean		No WS																							
75	Manilla	860	1,150	1,120	1,120	***0.95***	***0.95***	26.8	480	560	310	379	464	389	2.7	-0.9	5.3	1.3	317	350	370	360	36	37	34	32
76	Merriwa (Groundwater)	520	590	590	600	0.93	***0.93***	28.7	280	400	290	449	627	383	0.0	-1.7	1.8	1.6	241	240	310	300	4	3	1	0
77	MidCoast (Manning) - (Unfiltered)	16,850	18,400	18,600	18,830	***0.96***	***0.96***	25.5	7,340	7,800	8,700	246	263	217	2.0	11.1	7.9	3.0	6,665	6,860	7,900	7,400	16		16	24
78	MidCoast (Great Lakes)-(Unfiltered, Reticulator)	9,610	11,500	11,600	11,840	***0.96***	***0.96***	35.6	2,920	2,900	3,140	180	219	216	3.6	3.4	2.2	3.0	5,136	5,280	6,600	6,200	13	11	15	24
79	Moree Plains	4,780	5,000	5,000	5,000	***0.95***	***0.95***	19.0		***3,400***	3,410			638	3.6	6.1		8.1	1,691	290		1,260	31	44	0	6
80	Mudgee (Unfiltered)	4,050	4,000	4,490	4,540	***0.95***	***0.95***	18.1	1,860	1,860	1,850	342	274	261	4.7	6.8	7.7	5.2	2,273	2,600	2,920	2,810	16	11	6	2
81	Mulwaree	430	430	450	500	***0.95***	***0.95***	15.3	150	140	150	396	382	388	1.5	0.7	1.3	-2.1	255	250	300	270	8	19	16	13
82	Murray	1,360	1,360	1,630	1,630	***0.95***	***0.95***	18.7		1,300	1,510	544	528	161		7.8	7.6	8.0	836	810	840	920	114	37	37	36
83	Murrumbidgee	370	760	750	750	***0.95***	***0.95***	36.1	850	980	***980***			***700***		9.8	4.7	1.3	211	330	240		43	5	4	
84	Murrurundi (Unfiltered)	540	560	630	630	***0.95***	***0.95***	20.6		***100***	160			232		8.5	3.7	5.1	329	300	330	330	21	11	9	7
85	Muswellbrook	4,480	4,400	4,820	4,810	***0.95***	***0.95***	43.2	2,470	2,920	3,990	426	444	397	4.5	1.5	4.0	3.1	1,968	1,720	1,970	1,960	1	0	0	0
86	Nambucca (Groundwater)	4,520	5,650	5,670	5,790	***0.95***	***0.95***	33.3	1,870	2,370	1,580	182	271	230	2.2	2.7	2.9	3.1	1,748	1,910	2,210	1,890	9	8	6	5
87	Narrabri (Groundwater)	3,580	3,990	4,200	4,200	***0.95***	***0.95***	25.7	3,340	***3,700***	3,230			***1,000***	1.3	1.5	2.8	5.5	1,529	1,600	1,730	1,740	8	7	6	5
88	Narrandera (Groundwater)	1,900	2,070	2,390	2,140	0.92	***0.92***	27.8	1,800	1,810	1,480			***700***		10.3	6.4	8.0	746	860	1,020	1,180	28	5	4	3

	WATER UTILITY	BUSINESS CHARACTERISTICS												FINANCIAL											
		Total No. of Assessments (1)				Connected Properties per Assessment (Total) (2)	Connected Properties per Assessment (Residential) (2A)	Properties Served per km of Main (3)	Total Annual Consumption (ML) (4)			Average Annual Residential Consumption (kL/property) (5)			Economic Real Rate of Return (%) (6)				Turnover (excl. Capital Works Grants) ($'000) (7)				Debt to Equity (%) (8)			
		1995/96	*1996/97*	*1997/98*	*1998/99*			*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
89	Narromine (Groundwater)	1,830	1,890	2,050	2,060	***0.95***	***0.95***	32.3	1,030	1,140	***1,030***	396		***400***	2.3	2.7	5.5	4.5	601	610	730	730	4	3	1	0
90	Nundle (Groundwater)	140	200	220	220	***0.95***	***0.95***	5.8		***100***	110			350		-1.7	-0.7	-0.4		100	100	110		18	29	30
91	Nymboida (Unfiltered)	680	650	700	820	***0.95***	***0.95***	13.1		290	220		416	276	3.6	2.6	2.1	1.7	368	330	350	300	11	8	7	5
92	Oberon (Unfiltered, Reticulator)	1,140	1,100	1,200	1,200	***0.95***	***0.95***	36.6	650	590	700	212	212	208	9.1	-1.0	12.9	10.2	573	530	730	790	10	9	7	16
93	Orange	12,260	13,900	13,400	13,690	***1.00***	***1.00***	37.1	7,230	7,230	6,950	453	467	351	1.3	1.0	4.7	1.6	4,738	4,690	7,240	5,690	2	1	0	0
94	Parkes	4,810	4,870	4,930	5,760	***0.95***	***0.95***	9.9	3,090	3,230	6,280	656	627	283	0.7	2.1	2.8	1.6	3,731	4,320	4,770	3,980	1	1	0	0
95	Parry	1,630	1,760	1,760	1,850	***0.95***	***0.95***	17.2	830	940	440	488	526	474	0.8	1.9	2.3	1.8	637	820	900	840	24	22	21	19
96	Queanbeyan (Reticulator)	9,270	12,700	12,900	12,500	***1.03***	***1.04***	55.2	4,440	5,080	4,340	332	418	291	3.5	1.4	3.0	0.7	4,927	4,690	5,900	5,330	1	1	1	2
97	Quirindi	1,570	1,590	1,600	1,600	0.83	0.84	21.4	720	900	570	374	453	291	1.7	2.0	2.8	0.5	436	450	530	490	0	0	0	0
98	Richmond River (Reticulator)	1,920	2,080	2,220	2,230	***1.00***	***1.00***	36.7	630	610	650	246	276	271	0.4	0.9	2.9	2.8	843	930	980	980	4	9	0	0
99	Riverina (Groundwater)	24,510	24,500	23,700	23,960	0.96	0.96	19.7	14,200	16,500	15,200	371	452	385	0.8	9.9	4.5	3.4	9,193	10,000	12,900	12,150	66		10	9
100	Rous (Bulk Supplier)	26,680	30,000	31,700	33,000	0.96	0.96	74.1	10,500	11,700	11,000				6.9	3.6	2.1	3.0	10,034	8,150	7,220	7,720	1	1	0	0
101	Rylstone	1,180	1,260	1,270	1,270	0.99	0.99	30.7	510	520	580	338	340	344	2.1	1.8	1.6	1.1	653	750	810	710	4	3	0	0
102	Scone (Unfiltered)	2,510	2,580	2,610	2,620	0.90	0.89	19.0	1,450	1,780	1,470	289	319	245	1.3	3.2	3.8	1.4	1,262	1,390	1,420	1,120	4	2	0	0
103	Severn	160	200	190	190	***0.95***	***0.95***	20.9			***100***			***400***	-2.6	-1.0	-1.5	-0.5	42	50	60	50	12	12	12	11
104	Shoalhaven	35,890	43,000	43,700	44,210	0.94	0.94	34.3	17,200	17,300	16,340	158	175	177	4.9	4.4	4.2	3.1	16,077	15,800	15,900	15,260	16	13	11	12
105	Singleton	4,600	5,240	5,360	5,440	***0.95***	***0.95***	35.2	2,990	2,850	3,240	284	284	316	3.6	2.6	2.6	3.6	2,884	2,970	3,080	3,210	19	16	14	10
106	Snowy River (Unfiltered)	2,200	2,120	2,250	2,380	1.38	1.43	24.8	780	870	660	274	290	188	2.8	2.4	3.9	2.5	1,127	1,120	1,290	1,150	24	22	21	17
107	Sydney Water	1,477,770	1,555,000	1,579,000	1,572,000	0.97	0.97	75.3	588,100	620,000	635,800	240	256	242	3.3	3.8	4.9	3.9	651,310	565,000	622,000	597,000	16	19	20	19
108	Tallaganda	580	600	600	600	***0.95***	***0.95***	38.5	220	260	240	279	355	327	1.2	0.0	0.9	-0.4	241	220	290	260	6	5	3	2
109	Tamworth	13,190	13,464	13,557	14,280	***1.01***	1.01	36.2	7,880	9,280	8,190	200	235	266	0.9	1.0	3.3	0.6	5,586	6,350	7,280	6,450	10	6	4	2
110	Temora		No WS																							
111	Tenterfield	1,970	1,940	2,030	1,960	***0.95***	***0.95***	29.3	560	500	550	237	280	301	-2.0	-0.8	-0.3	-4.4	618	750	700	770	1	1	0	2
112	Tumbarumba	730	1,060	1,070	1,070	***0.95***	***0.95***			750	4,070		845	***850***	0.0	-10.9	1.4	-0.3	311	370	390	390	0	0	4	0
113	Tumut	3,910	3,910	3,880	3,870	***0.95***	***0.95***	27.6	1,670	1,880	2,400	330	400	303	0.6	2.9	1.7	2.7	1,150	1,630	1,680	1,800	6	11	4	5
114	Tweed	17,110	24,425	25,350	26,250	0.94	***0.94***	46.6	9,330	9,310	8,930	261	269	230	6.5	5.6	3.3	2.5	14,130	14,800	12,200	11,850	6	5	3	3
115	Ulmarra (Unfiltered)	970	1,160	1,170	1,170	***0.95***	***0.95***	25.1	280	310	270	260	234	201		6.3	5.1	5.9		590	570	560		52	46	34
116	Uralla	1,180	1,250	1,250	1,260	***0.95***	***0.95***	26.3	240	240	490	200	225	212	0.8	0.8	-0.6	0.0	491	510	490	480	7	6	4	4
117	Wagga Wagga		No WS																							
118	Wakool (Unfiltered)	910	890	1,170	1,210	***0.95***	***0.95***	18.2		160	420			315	3.4	7.8	4.5	4.3	643	690	720	750	13	18	15	15
119	Walcha	740	830	840	820	***0.96***	0.96	16.6	290	260	260	208	236	195	0.8	1.7	1.6	-0.2	403	410	420	340	10	9	7	5
120	Walgett (Dual Supply)	1,300	1,720	1,720	1,740	0.85	0.84	12.2		***2,300***	2,350			612		-1.4	-0.8	-1.9		860	970	930		7	6	5
121	Warren (Dual Supply)	870	950	980	980	***0.95***	***0.95***	16.0	270	290	380			671	2.5	1.1	1.5	0.4	397	350	410	400	7	6	6	5
122	Weddin		No WS																							
123	Wellington	2,680	2,790	2,840	2,780	***0.92***	0.92	31.9		1,270	1,290		388	360	5.3	5.0	4.0	2.6	1,708	1,710	1,780	1,670	33	27	23	19
124	Wentworth (Dual Supply)	1,380	1,450	1,450	1,550	***0.95***	***0.95***	15.2		***3,000***	3,070			***350***	2.0	-0.1		0.2	998	930	1,240	1,070	36	20	18	17
125	Wingecarribee	13,060	15,400	15,400	15,940	***0.89***	***0.89***	20.7	4,610	4,910	5,250	263	262	252	3.0	3.3	5.1	4.2	7,299	7,190	8,600	8,360	24	21	19	16
126	Wyong	49,700	50,700	51,600	52,640	0.96	0.96	56.9	14,700	15,800	15,210	207	211	209	2.1	2.1	2.5	4.7	18,047	19,200	23,000	24,910	10	6	6	6
127	Yallaroi (Unfiltered)	680	680	720	720	***0.95***	***0.95***	16.7	210	470	390	312	726	531	1.3	2.0	3.1	3.5	212	240	270	320	3	8	10	9
128	Yarrowlumla (Unfiltered)	810	960	970	960	***0.95***	***0.95***	33.9	250	320	350	282	360	359		3.7	3.2	-0.2	455	350	410	354	5	4	7	6
129	Yass	2,480	2,600	2,600	2,600	0.98	0.98	23.2	1,120	1,040	990			***450***	1.3	1.1	1.4	1.1	1,264	1,330	1,320	1,310	9	8	7	5
130	Young (Reticulator)	3,280	3,550	3,550	3,560	***0.95***	***0.95***	34.2	1,360	***1,200***	***1,300***	325		***330***	1.3	1.9	3.4	3.6	1,632	1,820	1,930	1,840	2	1	1	5

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Table 8 - Water Supply - Charges, Bills

	WATER UTILITY	CHARGES																			BILLS												
		Access Charge (or Minimum) ($) (9)				Charge Independent of Land Value? (10)			Allowance (kL) (11)				Usage Charge for >200kL/a (or > Allowance) (c/kL) (12)				Typical Developer Charge ($/ET) (13)				Typical Residential Bill ($/property) (13A)				Average Residential Bill ($/property) (14)				Bill for Customer using 200 kL/a ($) (15)				for Customer using 200 kL/a (%) (16)		
		1996/97	*1997/98*	*1998/99*	*1999/00*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*
1	Albury	140	150	145	145	Yes	Yes	Yes	Nil	Nil	Nil	Nil	40	10	12	12	810	1000	1000	1000	280	192	191	191	264	267	313	304	220	160	170	169	-29	4	-2
2	Armidale	160	135	135	135	Yes	Yes	Yes	Nil	Nil	Nil	Nil	65	55	55	55	3620	3600	3600	3620	290	307	275	275	244	265	264	241	290	264	245	245	-11	-9	-2
3	Ballina (Reticulator)	260	140	140	215	Yes	Yes	Yes	400	100	75	75	110	95	30	30	1260	1500	1300	1350	240	263	272	277	281	207	170	183	260	195	170	178	-26	-14	2
4	Balranald (Dual Supply)	142	210	212	220	No	Yes	Yes	------ Unmetered ------									400			142	210	212	220	380			460		212	210	212		-3	-1
5	Barraba	393	434	434	434	Yes	Yes	Yes	300	300	300	300	61	61	61	61					430	434	434	434	384	404	445	494	393	393	434	434	-2	8	-2
6	Bathurst	281	289	297	305	No	No	No	356	400	400	400	79	83	85	85	920	1700	1000	1200	284	289	297	305	570	313	313	323	281	289	289	297	1	-2	1
7	Bega Valley (Unfiltered)	200	210	210	200	Yes	Yes	Yes	Nil	Nil	Nil	Nil	82	126	126	65	2420	2500	2500	2460	413	423	423	369	518	464	453	380	364	383	393	393	3	1	-2
8	Bellingen (Unfiltered)	175	180	183	185	Yes	Yes	Yes	Nil	Nil	Nil	Nil	50	53	54	55	4000	4800	4900	4900	335	280	291	295	223	305	305	275	275	282	286	291	1	0	0
9	Berrigan (Dual Supply)	395	405	412	427	Yes	Yes	Yes	750	750	750	750	43	43	43	43	1530		400	430	450	405	412	427	463	422	443	457	395	405	405	412	1	-2	0
10	Bingara	260	285	285	295	Yes	Yes	Yes	433	356	332	332	60	80	90	90					330	285	285	295	241	299	345	298	260	285	285	285	8	-2	-2
11	Bland		No WS																																
12	Blayney		No WS																																
13	Bogan	420	444	452	451	No	No	No	700	700	700	800	60	63	65	65					440	444	452	451	574	416	426	***559***	420	431	444	452	1	1	0
14	Bombala	413	414	426	425	Yes	Yes	Yes	300	300	300	300	65	65	65	84	530	1200	1100	1050	501	496	499	520	379	420	458	400	413	413	414	426	-2	-2	1
15	Boorowa	288	342	342	342	Yes	Yes	Yes	Nil	Nil	Nil	Nil	60	60	60	60		400	400	400	449	502	504	504	304		368	451	408	462	462	462	11	-2	-2
16	Bourke (Dual Supply)	456	483	491	503	Yes	Yes	Yes	------ Unmetered ------								450	400	400	400	456	483	491	503	301	505	516	***366***	456	469	483	491	1	1	0
17	Brewarrina	420	445	467	467	No	No	No	------ Unmetered ------												450	445	467	467	372	421	495	562	420	430	445	467	0	2	3
18	Broken Hill WB		152	198	210	Yes	Yes	Yes	Nil	Nil	200	200		90	53	56					308	308	327	390	406	277	287	287		170	182	198		5	7
19	Byron (Reticulator)	175	120	90	91	Yes	Yes	Yes	Nil	Nil	Nil	Nil	77	85	85	85	2920	4000	5000	4400	396	418	318	319	352	357	332	278	329	302	290	260	-10	-6	-12
20	Cabonne	469	546	546	492	No	No	No	450	500	500	500	109	123	127	130			400	400	550	546	546	550	473	521	531	524	469	546	546	546	14	-2	-2
21	Carrathool	290	305	290	305	Yes	Yes	Yes	500	500	500	500	30	43	43	31			500	790	361	445	393	379	629	442	463	472	290	290	305	290	-2	3	-7
22	Casino	255	240	240	210	Yes	Yes	Yes	375	300	300	300	70	74	74	76	1570	1900	1900	1940	320	310	300	300	304	290	276	247	255	255	240	240	-2	-8	-2
23	Central Darling	112	405	425	445	Yes	Yes	Yes	100	115	115	115	230	198	244	244						405	425	408				468	342	393	405	425	13	1	3
24	Central Tablelands	120	120	120	120	Yes	Yes	Yes	Nil	Nil	Nil	Nil	80	84	86	86					322	326	344	349	315	343	337	353	280	280	288	288	-2	1	-2
25	Cobar (Dual Supply)	283	407	407	493	No	No	Yes	550	550	550	500	100	110	110	125	1060	1300	1300	1310	500	550	650	650	433	463	474	***646***	283	395	407	407	37	1	-2
26	Coffs Harbour (Unfiltered)	137	141	142	153	Yes	Yes	Yes	Nil	Nil	Nil	Nil	91	97	99	104	2780	2300	2500	2840	424	296	344	368	301	313	347	296	318	334	340	337	3	0	-3
27	Coolah	278	292	292	292	Yes	Yes	Yes	400	400	400	400	60	54	54	54					315	292	292	292	427	340	340	313	278	278	292	292	-2	3	-2
28	Coolamon		No WS																			No WS												
29	Cooma-Monaro	306	316	322	322	Yes	Yes	Yes	Nil	Nil	Nil	Nil	50	42	43	43	1820	2000	2000	1970	470	455	464	464	402	433	448	499	406	382	388	401	-8	0	1
30	Coonabarabran	390	210	216	430	No	No	No	684	680	794	683	57	64	64	64	1390	1000	1000	980	390	463	216	430	12	474	497	507	390	200	210	216	-50	3	1
31	Coonamble (Groundwater)	173	184	184	186	No	No	No	825	800	800	775	21	23	23	24	390	400	400	400	183	201	184	186	324	339	372	322	173	178	184	184	1	1	-2
32	Cootamundra (Reticulator)	387	283	268	281	No	No	No	273	243	218	218	87	97	101	101	2000	2000	2000	2000	398	374	321	334	333	347	406	367	387	270	283	268	-32	3	-7
33	Copmanhurst (Unfiltered)	216	230	230	230	Yes	Yes	Yes	100	100	100	100	80	80	80	80	640	700	600	690	390	345	320	320	311	358	368	317	296	310	310	310	3	-2	-2
34	Corowa	260	310	310	310	Yes	Yes	Yes	------ Unmetered ------								480	400	400	400	372	310	310	310	274	290	298	293	260	285	310	310	8	7	-2
35	Cowra	260	290	295	295	Yes	Yes	Yes	Nil	Nil	Nil	Nil	20	20	25	25		1500	1500	2000	400	340	358	358	382	368	399	374	300	326	330	345	7	-1	3
36	Crookwell	385	455	501	550	No	Yes	Yes	350	350	300	300	60	60	70	70	700	500	600	700	448	501	501	550	405	513	588	560	385	395	455	501	1	13	8
37	Culcairn (Groundwater)	149	152	152	152	Yes	Yes	Yes	234	238	238	238	64	64	64	64	1780	1800	1800	1780	167	190	152	152	188	212	231	189	149	152	152	152	0	-2	-2
38	Deniliquin	382	392	413	453	Yes	Yes	Yes	------ Unmetered ------								430	400	400	430	460	392	413	453	370	428	406	403	382	392	392	413	1	-2	3
39	Dubbo	331	388	210	210	No	Yes	Yes	500	500	Nil	Nil	75	79	52	52	3120	3200	3200	3250	425	487	324	384	529	376	416	430	331	348	388	278	3	9	-30
40	Dungog (Unfiltered)	188	196	204	224	Yes	Yes	Yes	280	250	240	240	72	78	85	93	2310	2300	2500	2540	260	330	347	380	211	227	287	250	188	196	196	204	2	-2	2
41	Eurobodalla (Unfiltered)	245	245	245	230	Yes	Yes	Yes	Nil	Nil	Nil	Nil	40	40	40	50	1540	1500	1700	1670	377	377	351	362	304	320	325	325	325	325	325	325	-2	-2	-2
42	Fish River WS (Unfiltered, Bulk Supplier)		MAQ	MAQ	MAQ	Yes	Yes	Yes		MAQ	MAQ	MAQ	33	33	34	35																			
43	Forbes	328	328	334	334	No	No	No	1500	1500	1500	1500	25	30	30	30	450	500	500	540	350	328	334	334	393	313	312	309	328	328	328	334	-2	-2	0
44	Gilgandra (Groundwater)	250	250	250	250	Yes	Yes	Yes	Nil	Nil	Nil	Nil	30	35	30	30					409	419	405	405	342	339	296	323	310	310	320	310	-2	1	-5

NOTE: Charges and Bills are in Dollars of the Year

	WATER UTILITY	CHARGES																			BILLS											
		Access Charge (or Minimum) ($) (9)				Charge Independent of Land Value? (10)			Allowance (kL) (11)				Usage Charge for >200kL/a (or > Allowance) (c/kL) (12)				Typical Developer Charge ($/ET) (13)				Typical Residential Bill ($/property) (13A)				Average Residential Bill ($/property) (14)				Bill for Customer using 200 kL/a ($) (15)				for Customer using 200 kL/a (%) (16)		
		1996/97	*1997/98*	*1998/99*	*1999/00*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*
45	Glen Innes	262	269	269	269	Yes	Yes	Yes	350	230	230	230	70	117	117	117					300	296	269	269	369	263	342	332	262	243	269	269	-9	8	-2
46	Gloucester	310	319	328	200	Yes	Yes	Yes	350	350	350	350	88	91	93	95	1300	1300	1400	1360	328	389	370	243	340	342	365	399	310	319	319	328	1	-2	1
47	Goldenfields (Bulk Supplier)	----- Peak Week -----				Yes	Yes	Yes	Nil	Nil	Nil	Nil	52	54	55	55	2000	2000	2000	2000															
48	Goldenfields (Reticulator)	180	190	192	192	Yes	Yes	Yes	Nil	Nil	Nil	Nil	95	100	101	101	2000	2000	2000	2000		620	592	592	536		831	728	370	386	390	394	2	-1	-1
49	Gosford	175	161	153	153	Yes	Yes	Yes	200	200	200	200	65	65	65	65	2300	2900	2900	2860	181	172	159	159	219	208	210	218	175	168	161	153	-6	-6	-7
50	Goulburn	200	200	200	212	Yes	Yes	Yes	Nil	Nil	Nil	Nil	100	50	50	53	1050	1100	1100	1130	374	331	315	334	376	299	311	334	400	290	299	318	-29	1	4
51	Grafton	239	217	134	134	Yes	Yes	Yes	400	300	Nil	Nil	34	38	50	50					251	321	329	329	232	219	215	193	239	215	217	234	-12	-1	6
52	Griffith	222	238	238	243	Yes	Yes	Yes	694	680	680	680	32	35	37	38	1630	1600	1600	1750	340		301	308	405	309	333	283	222	222	238	238	-2	5	-2
53	Gundagai	310	310	310	310	No	No	No	500	500	500	500	72	72	72	62	450	400	400	480	360	310	310	310	368	330	370	347	310	310	310	310	-2	-2	-2
54	Gunnedah (Groundwater)	170	190	220	230	No	No	No	455	440	440	440	37	43	43	52	2150	2300	2300	2390	198	250	280	303	299	242	282	265	170	180	190	220	4	4	14
55	Gunning	81	85	99	118	No	No	No	360	360	360	360	50	50	100	110					89	117	99	118		203	270	238	81	81	85	99	-2	3	14
56	Guyra	175	190	200	200	Yes	Yes	Yes	Nil	Nil	Nil	Nil	50	60	65	65					291	356	378	378	270	285	310	301	275	290	310	330	3	5	4
57	Harden (Reticulator)	326	343	353	365	Yes	Yes	Yes	300	300	300	300	74	78	80	83	2330	2000	2000	2000	449	535	617	639	378	378	378	406	326	343	343	353	3	-2	1
58	Hastings (Unfiltered)	250	180	180	175	Yes	Yes	Yes	Nil	Nil	Nil	Nil	56	69	72	75	2190	2500	2500	2300	354	300	315	311	374	362	343	304	362	345	318	328	-6	-10	1
59	Hay (Dual Supply)	325	340	345	345	Yes	Yes	Yes	300	300	300	300	60	70	75	75					400	347	399	399	328	372	384	363	325	330	345	340	0	3	-3
60	Holbrook	No WS																																	
61	Hume	360	200	200	200	No	No	Yes	450	450	450	500	80	80	80	80	950	1300	2000	1500	380	385	235	200	330	397	464	***335***	360	200	200	200	-45	-2	-2
62	Hunter Water	74	51	37	25	Yes	Yes	Yes	Nil	Nil	Nil	Nil	80	89	90	92	900	1000	1000	1000	228	249	186	191	229	230	219	197	234	235	227	217	-1	-5	-6
63	Inverell	185	180	180	180	Yes	Yes	Yes	Nil	Nil	Nil	Nil	80	80	80	80	1690	1700	1700	1690	427	461	460	420	277	277	295	***335***	345	345	340	340	-2	-3	-2
64	Jerilderie (Dual Supply)	326	343	376	377	No	Yes	Yes	300	300	300	300	70	70	71	65	550	600			326	343	376	377	390	548	573	***567***	326	343	343	376	3	-2	8
65	Junee	No WS																																	
66	Kempsey (Groundwater)	334	342	359	370	Yes	Yes	Yes	200	200	200	200	55	57	59	61	3900	2900	3000	3500	370	391	421	434	422	361	390	394	334	342	342	359	0	-2	3
67	Kyogle	292	191	194	200	Yes	Yes	Yes	300	Nil	Nil	Nil	97	50	51	52	1000	1000	1000	1000	250	309	315	324	266	222	241		292	295	291	296	-1	-3	0
68	Lachlan	130	180	180	220	Yes	Yes	Yes	Nil	Nil	Nil	Nil	60	80	40	50					430		380	500	219	316	326	***457***	250	255	260	260	0	0	-2
69	Leeton	202	202	215	215	Yes	Yes	Yes	Nil	Nil	Nil	Nil	42	36	38	38	380	1400	3300	3270	350	425	452	467	382	326	326	406	286	273	274	292	-6	-2	5
70	Lismore (Reticulator)	135	88	84	84	Yes	Yes	Yes	Nil	Nil	Nil	Nil	82	85	85	85	1610	3100	3100	3100	315	268	288	288	259	287	269	245	299	290	258	254	-5	-13	-3
71	Lithgow	250	250	250	250	No	No	Yes		500	Nil	Nil	72	38	38	38	1880	2200	2200	2230	250	360	375	375	349	367	354	328		330	326	326		-3	-2
72	Lockhart	No WS																																	
73	Lower Clarence (Unfiltered)	222	222	222	225	Yes	Yes	Yes	Nil	Nil	Nil	Nil	30	50	50	51	2600	2600	2600	2700	285	331	322	327	268	339	293	285	282	322	322	322	12	-2	-2
74	Maclean	No WS																																	
75	Manilla	271	305	305	305	Yes	Yes	Yes	455	455	400	400	60	67	60	60	700	900	900	1000	271	311	305	305	276	287	309	278	271	305	305	305	10	-2	-2
76	Merriwa (Groundwater)	300	315	315	315	Yes	Yes	Yes	Nil	Nil	Nil	Nil	30	35	35	35	750	400	400	400	435	534	449	449	427	387	409	383	360	380	385	385	4	-1	-2
77	MidCoast (Manning) - (Unfilte	168	168	168	168	Yes	Yes	Yes		Nil	Nil	Nil	39	23	53	53	1700	2000	2300	2300	264	218	221	221	310	374	375	341	246	204	214	224	-19	3	3
78	MidCoast (Great Lakes) - (Unfiltered, Reticulator)	379	390	360	360	Yes	Yes	Yes	455	455	400	400	82	85	80	78	2580	2600	2600	3110	379	390	360	360	351	375	373	341	379	390	360	360	1	-9	-2
79	Moree Plains	175	185	190	190	Yes	Yes	Yes	Nil	Nil	Nil	Nil	18	18	18	20					350	350	305	318	310	316	316	262	211	221	221	226	3	-2	0
80	Mudgee (Unfiltered)	280	265	250	250	Yes	Yes	Yes	Nil	Nil	Nil	Nil	70	93	88	88	2890	2800	2000	3160	519	519	480	480	516	526	523	486	420	450	451	426	5	-2	-7
81	Mulwaree	300	310	345	360	Yes	Yes	Yes	295	295	295	295	95	105	105	122	2000	3000	3000	2500	396	365	408	474	319	416	457	428	300	310	310	345	1	-2	9
82	Murray	356	353	358	358	Yes	Yes	Yes	250	250	250	250	20	20	20	30	500	500	500	700	415	409	358	358	453	441	400	426	356	356	353	358	-2	-3	0
83	Murrimbidgee		221	257	283	No	No	No	------ Unmetered ------											1000	290	310	257	283		258	292			221	221	257		-2	14
84	Murrurundi (Unfiltered)	415	410	410	420	Yes	Yes	Yes	450	425	425	425	120	96	96	99	400	400	400	400	410	410	410	420	548	547	505	486	415	425	410	410	1	-5	-2
85	Muswellbrook	80	82	82	84	Yes	Yes	Yes	Nil	Nil	Nil	Nil	55	56	56	59	2420	2400	2400	2370	314	331	305	318	267	268	284	271	190	190	194	194	-2	0	-2
86	Nambucca (Groundwater)	180	145	145	145	Yes	Yes	Yes	150	Nil	Nil	Nil	63	65	65	65	2630	2800	2800	2800	263	321	294	294	212	225	240	220	212	259	275	275	20	4	-2
87	Narrabri (Groundwater)	285	153	153	153	Yes	Yes	Yes	Nil	Nil	Nil	Nil		33	33	33	2180	2200	2200	2180	370	370	350	350	320	337	342	317		216	219	219		-1	-2
88	Narrandera (Groundwater)	175	193	212	233	Yes	Yes	Yes	Nil	Nil	Nil	Nil	35	37	40	44	3000	800	800	800	423	453	495	544	357	393	409	511	245	266	266	293	7	-2	8

	WATER UTILITY	CHARGES																			BILLS										
		Access Charge (or Minimum) ($) (9)				Charge Independent of Land Value? (10)			Allowance (kL) (11)				Usage Charge for >200kL/a (or > Allowance) (c/kL) (12)				Typical Developer Charge ($/ET) (13)				Typical Residential Bill ($/property) (13A)				Average Residential Bill ($/property) (14)				Bill for Customer using 200 kL/a ($) (15)				for Customer using 200 kL/a (%) (16)		
		1996/97	*1997/98*	*1998/99*	*1999/00*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*
89	Narromine (Groundwater)	180	198	198	204	Yes	Yes	Yes	Nil	Nil	Nil	Nil	30	35	35	35		400	400	500	299	360	338	344	323	295	335	320	240	240	268	268	-2	10	-2
90	Nundle (Groundwater)	427	440	447	470	Yes	Yes	Yes	350	350	350	350	121	126	128	134	630				427	440	447	470		495	427	455	427	427	440	447	-2	1	0
91	Nymboida (Unfiltered)	365	170	180	180	Yes	Yes	Yes	300	Nil	Nil	Nil	35	45	60	60	1340	1500	2000	1500	416	357	346	346	434	386	383	338	365	270	300	300	-27	9	-2
92	Oberon (Unfiltered, Reticulator	60	160	160	160	Yes	Yes	Yes	Nil	Nil	Nil	Nil	75	78	80	80	780	800	900	1100	317	326	326	326	192	212	320	328	210	216	316	320	1	44	-1
93	Orange	165	174	177	177	No	No	No	455	455	455	300	102	108	110	52	1170	1200	1200	1270	165	174	177	213	309	262	265	243	165	169	174	177	1	1	0
94	Parkes	319	343	343	349	No	No	No	364	364	364	364	88	91	94	96		1900	2300	3250	576	584	343	349	470	421	442	408	319	333	343	343	2	1	-2
95	Parry	295	372	387	296	Yes	Yes	Yes	350	350	350	350	65	50	70	70			1200		385	461	474	383	286	359	399	396	295	359	373	387	19	2	2
96	Queanbeyan (Reticulator)	269	190	200	185	Yes	Yes	Yes	350	Nil	Nil	Nil	64	40	42	51	780	800	800	780	330	376	322	333	362	290	330	295	269	270	270	284	-1	-2	3
97	Quirindi	250	250	250	250	Yes	Yes	Yes	500	500	500	500	50	50	50	50	100				330	250	250	250	223	288	321	297	250	250	250	250	-2	-2	-2
98	Richmond River (Reticulator)	180	210	210	216	Yes	Yes	Yes	Nil	Nil	Nil	Nil	103	85	85	90	520	600	600	580	433	445	440	460	380	369	397	398	386	334	380	380	-15	12	-2
99	Riverina (Groundwater)	100	80	80	80	Yes	Yes	Yes	Nil	Nil	Nil	Nil	85	45	70	62	2000	1500	1050	1100	415	272	291	318	226	290	327	319	270	180	201	207	-35	10	1
100	Rous (Bulk Supplier)	128				Yes	Yes	Yes	200	Nil			63	56			1800	1300	1300	1260					168				128						
101	Rylstone	463	476	491	370	Yes	Yes	Yes	454	454	454	370	75	100	100	100					500	476	491	370	449	469	497	426	463	476	476	491	1	-2	1
102	Scone (Unfiltered)	101	103	103	106	Yes	Yes	Yes	Nil	Nil	Nil	Nil	76	78	78	80	2310	2400	2400	2460	424	373	317	327	414	370	441	323	246	253	259	259	1	0	-2
103	Severn	165	210	210	219	Yes	Yes	Yes	Nil	Nil	Nil	Nil	34	40	40	42					260	300	370	369	194	230	272	251	233	265	290	290	12	7	-2
104	Shoalhaven	272	272	260	230	Yes	Yes	Yes	300	250	250	150	70	70	70	70	1870	1900	2000	2070	272	272	260	233	308	326	309	256	272	272	272	260	-2	-2	-6
105	Singleton	350	359	359	194	Yes	Yes	Yes	470	470	400	Nil	66	68	68	75	2200	2400	2400	2400	350	359	359	431	435	373	439	412	350	359	359	359	1	-2	-2
106	Snowy River (Unfiltered)	220	224	229	233	Yes	Yes	Yes	Nil	Nil	Nil	Nil	100	36	37	38	2990	4000	3300	3300	494	330	299	304	445	231	238	281	420	291	297	303	-32	0	0
107	Sydney Water	80	80	80	80	Yes	Yes	Yes	Nil	Nil	Nil	Nil	70	80	80	87	2700	2700	2700	2700	248	272	286	323	228	248	275	262	220	222	238	240	-1	5	-1
108	Tallaganda	329	230	240	240	No	No	No	250	132	160	Nil	130	128	132	65	2000	2800	2900	2940	366	516	460	463	366	332		392	329	305	317	293	-9	2	-9
109	Tamworth	125	135	135	135	Yes	Yes	Yes	Nil	Nil	Nil	Nil	50	60	60	60	2960	3000	3000	3000	225	264	295	295	272	331	372	367	225	235	245	255	2	2	2
110	Temora	No WS																																	
111	Tenterfield	245	220	220	231	Yes	Yes	Yes	450	Nil	Nil	Nil	54	58	58	61	1720	1500	1500	1500	270	382	395	415	236	242	290	286	245	330	336	336	32	0	-2
112	Tumbarumba	150	327	327	350	Yes	Yes	Yes	500	400	400	400	66	82	85	82					340	350	350	350	302	316	326	322	150	319	327	327	109	1	-2
113	Tumut	150	205	205	205	Yes	Yes	Yes	Nil	Nil	Nil	Nil	54	41	41	41	480	2000	2200	2230	328	369	329	329	227	308	335	368	258	270	287	287	3	4	-2
114	Tweed	285	212	212	215	No	No	Yes	370	265	265	250	77	70	70	72	3230	3300	3310	3350	285	212	212	215	352	305	206	238	285	277	212	212	-5	-25	-2
115	Ulmarra (Unfiltered)	325	300	340	340	Yes	Yes	Yes	350	200	200	200	71	106	108	108	2700	3200	3300	3500	440	336	341	341		408	419	405	325	370	300	340	12	-20	11
116	Uralla	382	345	345	325	Yes	Yes	Yes	400	350	350	350	50	50	50	50	1000	1000	1100	1100	400	345	345	325	428	370	360	346	382	370	345	345	-5	-8	-2
117	Wagga Wagga	No WS																																	
118	Wakool (Unfiltered)	263	504	510	230	No	No	No	300	300	300	300	50	50	50	60						450	450	239	411	464	421	415	263	496	504	510	85	0	-1
119	Walcha	481	481	270	270	Yes	Yes	Yes	500	500	Nil	Nil	63	63	70	71					500	481	407	409	516	469	482	***399***	481	481	481	410	-2	-2	-16
120	Walgett (Dual Supply)	425	450	458	469	Yes	Yes	Yes	------ Unmetered ------												520	450	458	469		491	614	577	425	436	450	458	1	1	0
121	Warren (Dual Supply)	242	295	310	310	Yes	Yes	Yes	650	650	650	650	42	44	46	46					310	370	310	310	305	281	372	357	242	242	295	310	-2	20	3
122	Weddin	No WS																																	
123	Wellington	505	505	481	461	No	No	No	600	600	572	548	84	84	84	84	1000	1000	1000	1000	590	505	481	461	549	554	554	566	505	505	505	481	-2	-2	-7
124	Wentworth (Dual Supply)	405	405	415	435	Yes	Yes	Yes	250	250	250	250	162	170	198	198	760	900	800	1150	520	510	480	480	461	491	478	463	405	400	405	415	-3	-1	1
125	Wingecarribee	200	197	197	197	Yes	Yes	Yes	Nil	Nil	Nil	Nil	127	51	52	53	1900	2100	2000	2050	534	358	338	448	385	445	465	415	454	340	342	345	-27	-1	-1
126	Wyong	176	176	176	176	Yes	Yes	Yes	200	200	200	200	60	60	60	60	2450	3000	3000	3250	180	183	196	181	182		180	211	176	176	176	176	-2	-2	-2
127	Yallaroi (Unfiltered)	273	361	416	416	No	No	Yes	450	450	450	450	55	58	59	59					273	521	463	498	271	339	412	416	273	309	361	416	11	15	13
128	Yarrowlumla (Unfiltered)	256	266	266	266	No	No	Yes	280	280	280	280	70	70	70	70	1620	1900	500		257	322	321	321	355	333	398	315	256	266	266	266	2	-2	-2
129	Yass	425	425	425	425	Yes	Yes	Yes	420	420	420	420	65	65	65	65	1340	1400	1400	1450	460	520	460	444	448	433	495	438	425	425	425	425	-2	-2	-2
130	Young (Reticulator)	330	360	360	370	Yes	Yes	Yes	265	265	265	265	100	109	109	109	2000	2000	2000	2000	390	480	450	441	335	424	451	427	330	349	360	360	4	1	-2

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Table 9 - Water Supply - Levels of Service, Efficiency

	WATER UTILITY	LEVELS OF SERVICE															EFFICIENCY							
		Water Quality Compliance (based on 1987 NHMRC/AWRC Guidelines)								Water Quality Complaints (per 1000 properties) (19)				Average Customer Outage Time (min) (20)			Operating Cost (OMA) ($/property) (21)				Management Cost ($/property) (22)			
		Physical & Chemical (%) (17)				Microbiological (%) (18)																		
		1995/96	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
1	Albury		99	100	77		100	100	100								189	199	209	196	37	117	118	110
2	Armidale	100	100	100	100	100	100	100	100	77			3				236	246	307	274	50	125	143	105
3	Ballina (Reticulator)			75	75			100	100			1	1	0	69	49	281	95	88	75	8	48	49	38
4	Balranald (Dual Supply)	100	100	100	100	100	100	100	100		7	23	3	2	1	0		212	253	286			33	34
5	Barraba										56	21	7	2	4	0	173	200	210	262	55	60	78	80
6	Bathurst	100	100	100	100	100	100	100	100	2	3	1	3			18	250	218	233	256	83	84	103	99
7	Bega Valley (Unfiltered)		100	100	100		100	100	100		2	0	0	0	0		337	263	242	247	48	142	148	149
8	Bellingen (Unfiltered)		70	100	57		100	100	100			2					132	109	143	157	64	34	32	38
9	Berrigan (Dual Supply)	100	100	100	100		100	100	100	4	4	4	5	1	1	0	186	205	269	261		61	87	78
10	Bingara	50			50	100	100		100	17	7	3	10	4	0	0	192	219	166	147	60	57	64	56
11	Bland		No WS																					
12	Blayney		No WS																					
13	Bogan		98		98		100		100		6		6	30		0	392	605	511	457	86	120	117	178
14	Bombala	100	86	50	67	100	100	100	100	4	13	8	14	26	14	0	223	259	241	281	36	37	45	51
15	Boorowa	100	100	100	100	100	100	100	100		16	16	0	3	3		199	286	174	246	30	25	25	33
16	Bourke (Dual Supply)	33	100	50	50						39	24	30	28	34	30	261	312	387	380	88	59	67	77
17	Brewarrina				67		100	100	100			47	65				487	436	570	562	240	97	84	106
18	Broken Hill WB		88	88	90		100	100	100				6	0	0		677	730	722	690	299	184	184	189
19	Byron (Reticulator)				95		90	100	100		4	7	3	0	1	0	223	249	278	177	61	138	129	86
20	Cabonne	75	56	88	100	100	100	100	92	1	6	2	3	0	0		184	236	303	302	77	90	89	87
21	Carrathool		67	100	100		100	100	100	113	119	125	123	0	0		454	401	549	545	178	108	177	206
22	Casino	100	100	100	100	80	90	89	100				1	0	0		176	203	222	205	28	78	99	89
23	Central Darling		100	100			100	100			23	19			547				454	***454***			79	***79***
24	Central Tablelands	100	100	100	51	100	100	100	100	8	30	31	24	101	1		258	334	345	326	87	162	178	160
25	Cobar (Dual Supply)	100	96	45	95	100	100	100	100	5	10	9	99	16	10	0	317	393	398	460	137	33	150	105
26	Coffs Harbour (Unfiltered)	98	100	98	100	100	100	91	100	5	16	9	9	0	3	2	141	169	193	167	24	85	82	87
27	Coolah		100	83	95		100	100	100		27	42	0	5	51	1	264	227	237	266		54	48	53
28	Coolamon		No WS																					
29	Cooma-Monaro			100	60			100	100			9	0		36	0	174	221	228	193	78	44	43	78
30	Coonabarabran	100	100	73	73	100	100	100	100	13		12	0		6	0	396	335	351	343	12	116	123	171
31	Coonamble (Groundwater)									117	18	14	27	1	1	0	118	128	118	139	84	16		***20***
32	Cootamundra (Reticulator)				100				100	5	3	5	1	0	0		79	66	72	84	48	21	22	46
33	Copmanhurst (Unfiltered)		50		50	40	61	89	84		40			0	0			356	261	533		24	62	140
34	Corowa	100	100	100		100	100	100	100	1	3	5	7	0	0		150	187	227	170	55	70	69	54
35	Cowra			99				100	100			5		0	0		360	284	228	163	128	106	94	25
36	Crookwell		50		98		100	100	86		7	11	16	0	0	0	220	390	325	279	2	73	49	25
37	Culcairn (Groundwater)	100	100	100	100	70	76	100	80			4	4	0	0	0	48	60	92	133	19	8	32	38
38	Deniliquin		100	98	99	100	67		100	4	12	12	10				190	171	216	233	1	55	63	73
39	Dubbo	100	100	100	100	100	100	100	100				1	13	7	10	270	247	327	286	48	103	90	100
40	Dungog (Unfiltered)									1	2	2	4				67	76	79	75	34	30	25	26
41	Eurobodalla (Unfiltered)		100	86	75		100	100	100		23	28	19			1		190	201	201		97	94	101
42	Fish River WS (Unfiltered, Bulk Supplier)		79	82	91		85	100	100				0	0	0	0		88	88	104		45	45	64
43	Forbes	100	100	66	96	100	100	100	100		2	2	2	1	22	0	224	210	240	238	90	40	40	40
44	Gilgandra (Groundwater)	100	100	100	50	100	100	100	100		3	1	4	0	0		189	142	180	209	63	32	29	44

NOTE: Costs are in Dollars of the Year

	WATER UTILITY	LEVELS OF SERVICE															EFFICIENCY							
		Water Quality Compliance (based on 1987 NHMRC/AWRC Guidelines)								Water Quality Complaints (per 1000 properties) (19)				Average Customer Outage Time (min) (20)			Operating Cost (OMA) ($/property) (21)				Management Cost ($/property) (22)			
		Physical & Chemical (%) (17)				Microbiological (%) (18)																		
		1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99
45	Glen Innes	100	100	100	100	100	100	100	100	1	2	3	3	1	1	0	186	198	145	195	81	64	15	72
46	Gloucester	100	100	75	100	100	100	100	100				0	0	0			203	211	275		17	17	16
47	Goldenfields (Bulk Supplier)	100	100	100	99	100	100	100	100								190	156	178	156	39	74	39	40
48	Goldenfields (Reticulator)			98	100			100	100	21		4	12		16	5	156		239	241	88		70	85
49	Gosford	100	100	98	100	100	100	100	100	4	9	9	4	48	54	0	124	127	131	155	30	59	68	88
50	Goulburn	100	100	100	98	91	100	82	100	4	7	5	3	0	0	20	185	211	230	227	54	95	87	79
51	Grafton		100	100	100	100	100	100	100								116	139	195	160	40	65	91	82
52	Griffith	100	100	88	33	100	100	100	88				1				284	365		364	37	109		153
53	Gundagai	100	100	100	100	100	100	100	100	5	6	6	6	4	4	0	276	278	312	295	83	57	54	55
54	Gunnedah (Groundwater)				100				100	1		1	2	0	0	0	202	183	183	178	94	39	41	42
55	Gunning		100	100	25		100	100	66		12		6	0	1			100	170	***170***			56	***56***
56	Guyra	100	100	100	100	100	100	100						0	0	0	251	175	207	219	30	76	94	48
57	Harden (Reticulator)			100	75			100	98		22	16	25	2	2	0		116	91	121		40	42	41
58	Hastings (Unfiltered)		100	86	72		100	100	100				6			2	98	153	164	184		38	42	53
59	Hay (Dual Supply)		100	100	92		100	100	100		5		0	0	0	0	212	251	262	244	60	76	74	75
60	Holbrook		No WS																					
61	Hume	100	100		100	100	100		100		1		0	42	40	0	174	211	234	***234***		54	49	***49***
62	Hunter Water	99	100	99	100	99	100	100	100	5	5	8	10	2	2	2	173	153	156	158				
63	Inverell		100	100	100		100	100	100	1	1	1	0	5	5	0	164	178	221	278	40	37	48	75
64	Jerilderie (Dual Supply)		100	100	100		100	100	100		14	14	12	0	30	0	287	386	432	453	22	78	84	82
65	Junee		No WS																					
66	Kempsey (Groundwater)		50	82	81	100	100	100	100	8	6	6	4	0	0		169	164	130	176	80	44	59	53
67	Kyogle		100	100	100	100	100	100	100	12			7	0	0	0	168	183	188	190	29	83	84	87
68	Lachlan	98	100	98	97	100		100	95	3		2	5	0	0	0	172	352	349	305		112	89	93
69	Leeton	98	98	98	98	100	100	100	100	2	1	1	1	14	14	0	225	259	332	305	69	57	126	54
70	Lismore (Reticulator)			99	100			100	100				3	1	1	2	87	116	112	101	41	65	52	48
71	Lithgow	100	100	100	100	100	100	100	100		25	16	18	0	0	0		208	215	176		126	122	87
72	Lockhart		No WS																					
73	Lower Clarence (Unfiltered)	100	67	70	20	86	100	100	100	8	28	5	6	0	21	0	107	128	137	146	29	88	95	100
74	Maclean		No WS																					
75	Manilla		100	99	99		100	100	100			5	6	3	5		187	203	167	216	96	83	37	35
76	Merriwa (Groundwater)		100	79	100		100	44	100	10	37	18	1	34	24	0	338	223	268	210	160	24	70	86
77	MidCoast (Manning) - (Unfiltered)	100	100	86	33	91	100	86	94	30	61	102	91	0	0		137	179	186	186	69	33	34	69
78	MidCoast (Great Lakes) - (Unfiltered, Reticulator)	40	81	73	67		74	89	100	12	19	20	36	0	0		113	140	189	186	40	69	65	69
79	Moree Plains	99	100			100	100		94	23							234	231		236	83	49		55
80	Mudgee (Unfiltered)		75	75	80		100	100	100		68	54	22	14	46	6	242	262	238	272		40	58	98
81	Mulwaree		100	100	100	100	100	100	100	47	49	94	2	0	0	0	219	265	260	419	82	76	47	42
82	Murray		100									1	4	0	0	0	259	308	269	286	87	97	80	86
83	Murrimbidgee		100	100			100	100	100		28	25	0	0	260	0		90	96	84				***20***
84	Murrurundi (Unfiltered)			75	95		100	78	100				16	0	0	0	171	164	263	180			20	***20***
85	Muswellbrook	99	98	100	83	100	92	100	100	1	15	6	32	52	30	2	229	230	212	204	68	75	53	41
86	Nambucca (Groundwater)	100	100	100	100	100	100	100	100	1	1	1	1	1	1	0	143	157	210	174	41	81	102	85
87	Narrabri (Groundwater)			75				74	100		1						232	240	232	117	129	39	38	22
88	Narrandera (Groundwater)	100	69	83	89	100	100	100	100	2	1	1	1	0	0		150	228	210	115	37	35	53	28

	WATER UTILITY	LEVELS OF SERVICE															EFFICIENCY							
		Water Quality Compliance (based on 1987 NHMRC/AWRC Guidelines)								Water Quality Complaints (per 1000 properties) (19)				Average Customer Outage Time (min) (20)			Operating Cost (OMA) ($/property) (21)				Management Cost ($/property) (22)			
		Physical & Chemical (%) (17)				Microbiological (%) (18)																		
		1995/96	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
89	Narromine (Groundwater)		97				100		100		1						179	184	174	181	68	26	33	33
90	Nundle (Groundwater)			100	100			100	100					0	0	0		320	263	273		57		33
91	Nymboida (Unfiltered)			75	91	100		100	100			8	19	0	2	0	75	86	112	297	72		21	96
92	Oberon (Unfiltered, Reticulator)				43				100	94	92	61	97	0	0	0	119	183	104	212	77	35	40	111
93	Orange	100	100	100	92	100	100	100	100	30	23	10	12			23	182	166	192	215	44	59	50	66
94	Parkes		75	25		100	85	88	100	5	5	33	7	0	0		409	404	405	133	49	55	56	20
95	Parry	100	50	100	80	100	51	100	100	13	4	2	1	0	0	0	172	188		218	62	39	41	38
96	Queanbeyan (Reticulator)		90	100	100		100	100	100	7	4	3	4	23	12	11	114	104	127	153	47	57	83	115
97	Quirindi		100	80	95		100	100	100				0	9	8	0	121	141	164	209	36	26	47	41
98	Richmond River (Reticulator)								71					9	8	0	138	152	157	275	89	76	95	156
99	Riverina (Groundwater)	100	91	91	84	100	100	100	100	1	1	2	2	13	12	15	190	176	203	204	70	46	48	59
100	Rous (Bulk Supplier)	100	100	100	100	100	100	100	100		0	1	0				79	88	91	90	22	43	49	63
101	Rylstone		100	100	100		100	100	100	3	6	4	0	0	0	0	249	273	323	260	51	38	84	53
102	Scone (Unfiltered)	100	100	100	57		100	100	100	4	3	4	3	16	0		322	283	308	277	154	122	67	84
103	Severn				0				33	311				0	0		138	156	193	161	51	70	83	72
104	Shoalhaven	98	98	98	62	100	100	100	100	4	5	6	4			0	146	150	164	167	60	69	83	86
105	Singleton	100	100	100	100	100	100	100	100	11	4	4	0	0	45	0	245	278	297	271	52	93	82	70
106	Snowy River (Unfiltered)	100	50	50	100	100	100	100	100	10	4	6	8	0	0	0	161	125	93	65	20	45	39	22
107	Sydney Water	99	99	100	100	97	100	100	100		5	4	136	330	130	120	185	221	222	233				
108	Tallaganda		100	100	100		100	100	100		3	3	1	30	21	0	226	257	293	277	43	31	30	24
109	Tamworth	100	100	100	98	100	94	100	100	1	2	2	8	0	0	0	194	197	150	270	31	65	39	125
110	Temora		No WS																					
111	Tenterfield	100	100	100	100	100	67	54	100		96	12	6	116	4	1		253	178	286		139	73	136
112	Tumbarumba								100			12	12	0	0	0	204	201	186	136	59	28	24	32
113	Tumut	100	72	76	70	100	100	100	100	4	4	1	10	1	0	0	143	195	215	207	20	64	75	89
114	Tweed	100	100	100	100	100	100	100	100	13	1	1	3	22	24	9	126	160	167	185	40	60	62	67
115	Ulmarra (Unfiltered)	100	81	50	64	100	100	100	100			5	0	0	53			63	67	63			22	22
116	Uralla	100	87	68	93	100	100	100	100	2		1	1	0	1	0	204	237	282	260	43	97	131	122
117	Wagga Wagga		No WS																					
118	Wakool (Unfiltered)			100	100			100	100				4	0	0	0	196	229	160	143	43	63	34	33
119	Walcha	100	100	100	100	100	100	100	100				0	1	2	0	242	221	236	205	47	15		55
120	Walgett (Dual Supply)	100			95	100			100	21								541	422	453		230	127	202
121	Warren (Dual Supply)		100	100	92	100	100	100	100	13	9	8	11				201	189	224	238	111	42	52	50
122	Weddin		No WS																					
123	Wellington	100		100	100	100		100	100			1	6	0	63	0	225	270	339	342	80	78	94	122
124	Wentworth (Dual Supply)				64				100								328	446	478	260	72	82	120	78
125	Wingecarribee	100	100	97	93	100	100	100	100	6	7	14	26				256	259	248	269	66	122	109	87
126	Wyong	100	100	100	100	100	100	100	100	4	6	7	16				157	150	160	138	42	84	103	46
127	Yallaroi (Unfiltered)		100	100			100	33		23		13	9	4	2	0	152	191	188	216				20
128	Yarrowlumla (Unfiltered)	100	67	67	96	100	100	100	100	24	22	22	19	19	68	0	159	166	206	186	71	57	60	61
129	Yass	100	100	100	95	100	100	100	100		2	2	2	2	2	0		274	257	246		80	93	108
130	Young (Reticulator)				100				100	1	2		0	11			71	82	86	80	47	24	25	27

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Table 10 - Sewerage - Business Charactistics, Financial

	WATER UTILITY	BUSINESS CHARACTERISTICS														FINANCIAL											
		Total No. of Assessments (Properties) (1)				Connected Properties per Assessment (2)		Properties Served per km of Main (3)	Total Vol of Sewage Collected (ML) (4)				Vol of Sewage Treated per Property (kL/property) (5)				Economic Real Rate of Return (%) (6)				Turnover (excl. Capital Works Grants) ($'000) (7)				Debt to Equity (%) (8)			
		1995/96	1996/97	1997/98	1998/99	(Total)	(Residential) (2A)	1998/99	1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99	1995/96	1996/97	1997/98	1998/99
1	Albury	17,950	17,000	17,215	17,649	0.96	0.96	42.6	5,840	5,300	5,400	5,320	312	326	327	314	1.5	1.2	7.1	1.8	6,010	5,670	10,500	6,622	9	12	19	28
2	Armidale	7,620	7,620	7,620	7,739	0.98	***0.98***	38.4	2,270		1,970	1,650	292		264	218	-0.7	-1.1	-1.7	-1.1	1,720	1,920	1,990	2,011	1	0	0	0
3	Ballina	10,230	11,200	12,700	11,868	0.96	0.96	41.7			3,140	4,150			258	364	4.3	3.7	3.7	4.3	6,370	6,090	6,320	6,945	10	9	7	3
4	Balranald	770	770	750	753	***0.95***	***0.95***	47.7			410	80			572	115	1.4	1.5	0.6	2.2	360	350	370	399	16	13	0	0
5	Barraba	690	700	700	721	0.98	0.98	25.2		110		260		154		372	-4.8	-5.7	-2.9	-2.5	110	130	170	176		0	0	0
6	Bathurst	10,100	10,300	10,900	10,762	0.96	0.96	40.7	3,310	3,490	3,400	4,210	315	353	325	408	0.6	0.2	0.5	0.3	4,370	4,200	4,410	4,780	3	5	3	4
7	Bega	7,430	9,310	9,420	9,960	***0.95***	***0.95***	37.3	1,850			1,530	237			131	1.1	2.9	2.3	2.5	4,690	5,210	5,150	5,239	8	5	3	1
8	Bellingen	2,530	3,700	2,670	2,663	***0.95***	***0.95***	41.3			590	***600***			233	***237***	2.2	2.4	0.3	0.4	1,410	1,380	1,270	1,347	10	51	4	3
9	Berrigan	2,660	2,660	2,660	2,669	***0.95***	***0.95***	33.5	760	710	330	340	271	279	132	160	1.2	0.1	-0.5	-0.3	1,000	950	930	959	13	12	11	10
10	Bingara	550	600	600	601	***0.95***	***0.95***	31.0	20	110	110	120	35	194	195	210	1.4	-2.8	-2.8	-2.5	150	160	160	166	20	4	4	4
11	Bland	1,790	1,790	1,790	1,806	***0.95***	***0.95***	36.3	490		80	300	260		46	185	1.0	0.3		0.4	550	570	582	602	10	8	3	0
12	Blayney	1,040	1,040	1,060	1,222	***0.95***	***0.95***	34.3	260	260	410	300	238	258	411	256	0.1	12.5		5.2	550	870	622	838		0	0	0
13	Bogan	910	920	920	926	0.99	***0.99***	45.1				470				505	1.8	1.9	2.1	1.5	340	350	350	342	30	25	22	18
14	Bombala	790	790	790	785	***0.95***	***0.95***	21.8	210	160	170	180	253	211	228	243	1.1	2.4	2.7	2.5	300	310	320	313	31	29	26	23
15	Boorowa	830	830	840	647	***0.91***	***0.90***	39.3		180	180	110		237	237	187	-3.7	-4.9	-5.3	-5.5	70	60	60	69				
16	Bourke	2,150	2,150	1,760	1,750	0.87	***0.87***	44.5	430	430	430	450	173	231	283	295	1.3	1.1	-2.0	-2.2	500	540	480	520	33	27	24	21
17	Brewarrina	480	480	480	501	1.02	1.02	18.6	100		180	180	212		372	392	-2.7	-3.1	2.5	6.5	170	150	150	179	6	36	6	5
18	Broken Hill WB	9,830	9,830	9,530	9,530	1.01	1.01	45.2		1,700	1,720	2,110		178	179	219		-1.1	-1.1	-0.7		2,310		2,438		9	9	9
19	Byron	7,420	7,420	7,870	9,200	0.96	0.96	49.9		1,930	2,120	2,650		271	280	300	5.4	7.1	8.3	5.1	5,040	6,280	7,590	7,372	16	15	14	11
20	Cabonne	1,230	1,240	1,570	1,711	***0.95***	***0.95***	39.1	150	150	140	150	116	124	94	92	-0.1	7.5	5.1	3.2	390	940	780	781	7	9	5	3
21	Carrathool	630	630	690	748	***0.95***	***0.95***	41.4									-2.6	4.2	-1.3	-8.1	80	260	100	92		0	0	0
22	Casino	3,980	4,050	4,080	3,941	***0.95***	***0.95***	35.6	1,050	1,120	1,100	1,390	251	291	284	372	4.0	1.8	2.2	1.8	1,710	1,440	1,520	1,506	24	20	16	13
23	Central Darling	320	370	360	364	***0.95***	***0.95***	27.6		90	80	***80***		250	243	***231***										0	0	0
24	Central Tablelands		No SGE																									No SGE
25	Cobar	1,510	1,600	1,700	1,736	***0.95***	***0.95***	38.2	320	670	700	700	201	444	434	424	5.1	4.2	1.5	-0.4	520	420	460	364	7	3	0	0
26	Coffs Harbour	17,290	17,800	18,200	18,651	0.89	0.89	39.1	6,020	5,410	4,940	7,000	310	342	305	419	4.3	0.8	5.0	4.2	11,030	11,810	12,700	12,844	25	27	21	18
27	Coolah	790	810	810	809	***0.96***	0.96	30.5	200	190	130	220	243	248	171	286	2.5	1.1	2.6	3.9	210	210	200	212	1	1	1	1
28	Coolamon	470	480	910	908	0.70	0.72	45.3	50	70	70	90	75	209	109	133	-1.9	-1.8	12.0	5.7	100	90	680	256		0	2	13
29	Cooma-Monaro	3,130	3,130	3,230	3,247	***0.95***	***0.95***	41.3			280	30			90	301	5.0	2.2	1.9	0.9	1,340	1,230	1,270	1,363	1	19	16	15
30	Coonabarabran	1,620	1,620	1,620	1,588	***0.95***	***0.95***	16.8	320	220	320	470	188	143	208	309	-0.5	0.7	0.6	0.9	540	670	630	683	6	8	8	1
31	Coonamble	1,370	1,320	1,330	1,335	0.82	0.85	23.7	550	550	550	550	327	510	508	505	-2.7	-2.5	-2.8	-1.0	440	440	440	453	4	4	4	
32	Cootamundra	2,690	2,620	2,620	2,620	***0.95***	***0.95***	50.8	660	880	810	760	233	352	324	304	-2.9	-2.4	-9.6	-3.3	430	450	510	461	6	5	6	
33	Copmanhurst	470	470	470	470	***0.95***	***0.95***	31.7		90	90	100		193	197	219	1.2	5.8	3.8	0.8	230	290	290	303		0	0	0
34	Corowa	3,180	3,160	2,990	3,273	***0.95***	***0.95***	38.9	890	870	850	610	266	290	299	197	1.0	-2.8	-0.6	1.2	1,010	980	1,010	1,030	6	4	4	3
35	Cowra	3,270	3,140	3,390	3,436	***0.95***	***0.95***	34.0	1,500		850	930	436		264	283	1.8	0.6	-4.6	2.6	610	730	290	928	11	10	5	5
36	Crookwell	930	970	970	1,173	0.83	0.83	29.9	490	340	340	580	437	422	422	597	-0.7	-2.8	-1.6	-1.3	290	360	350	399	21	23	23	21
37	Culcairn	1,360	1,360	1,360	1,329	***0.95***	***0.95***	35.7	250	220	230	240	175	169	177	187	0.2	0.2	-0.4	-0.9	230	260	280	288	21	19	16	12
38	Deniliquin	3,080	3,560	3,560	3,597	***0.95***	***0.95***	50.5	920	900	870	840	284	266	258	246	-1.0	-0.3	-1.7	-1.2	870	880	930	938		1	6	5
39	Dubbo	10,750	11,200	11,700	12,046	1.01	1.01	38.4	2,350	2,440	2,570	2,890	220	216	217	238	2.5	3.2	4.4	4.3	5,810	6,010	6,950	7,128	6	4	24	1
40	Dungog	970	990	940	993	***0.95***	***0.95***	32.4		290	330	400		310	373	424	-7.0	-2.6	-0.6	4.9	180	230	300	402	1	6	11	15
41	Eurobodalla	15,460	15,600	16,100	15,595	0.94	0.94	30.2	2,250	2,910	2,630	3,030	137	199	174	206	2.5	2.0	1.8	3.3	7,680	7,620	7,780	8,742	26	21	18	17
42	Fish River Water Supply		No SGE																									No SGE
43	Forbes	3,080	3,370	3,370	3,442	***0.95***	***0.95***	27.7	1,100	1,020	1,140	1,030	339	319	356	314	2.2	4.4	2.3	4.3	910	1,020	895	1,048	33	30	28	28
44	Gilgandra (Groundwater)	1,240	1,240	1,440	1,210	***0.95***	***0.95***	35.2	300	300	300	350	230	254	219	278	-1.5	-2.5	-2.8	-2.8	240	230	240	241	6	6	4	4

NOTE: Revenue is in Dollars of the Year

	WATER UTILITY	BUSINESS CHARACTERISTICS														FINANCIAL											
		Total No. of Assessments (Properties) (1)				Connected Properties per Assessment (Total) (2)	(Residential) (2A)	Properties Served per km of Main (3)	Total Vol of Sewage Collected (ML) (4)				Vol of Sewage Treated per Property (kL/property) (5)				Economic Real Rate of Return (%) (6)				Turnover (excl. Capital Works Grants) ($'000) (7)				Debt to Equity (%) (8)			
		1995/96	*1996/97*	*1997/98*	*1998/99*			*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
45	Glen Innes	2,520	2,940	2,630	2,577	***0.95***	***0.95***	31.8	1,090	990	720	990	411	356	288	404	1.8	-0.4	0.3	-1.6	530	540	580	606	14	12	12	12
46	Gloucester	1,120	1,130	1,140	1,452	***0.95***	***0.95***	29.8	300	370	380	400	254	348	354	286	1.6	3.5	3.7	3.1	440	500	540	515	30	26	22	18
47	Goldenfields (Bulk Supply)		No SGE																									No SGE
48	Goldenfields (Retail)		No SGE																									No SGE
49	Gosford	58,120	57,500	58,000	58,970	0.97	0.97	41.9	13,100	13,200	16,600	15,900	219			277	6.6	3.9	3.7	3.7	31,410	28,210	28,900	29,070	50	31	26	21
50	Goulburn	8,310	8,400	8,400	8,266	1.03	1.03	64.3	1,800	1,980	2,420	2,050	223	229	280	239	5.3	4.4	3.3	7.9	2,590	2,590	3,220	3,622	43	40	37	35
51	Grafton	6,540	6,540	6,540	6,664	0.97	0.97	42.3	2,450	1,920	2,070	2,160	362	304	327	335	5.9	3.4	2.8	4.1	3,130	2,890	2,830	2,845	10	7	4	2
52	Griffith	5,790	5,900	6,140	6,136	***0.95***	***0.95***	34.3	2,290	2,270		2,520	376	405			3.6	0.0		0.6	3,630	2,650		3,099	3	0		1
53	Gundagai	960	960	970	967	***0.95***	***0.95***	20.9	230		240	110	228		261	120	8	5.0	-2.3	1.3	200	200	180	187	3	3	2	2
54	Gunnedah	3,620	3,620	3,310	3,624	1.02	1.02	41.9	1,170	730	1,130	770	330	197	335		-1.2	-0.5	0.4	0.6	790	790	820	837	9	9	7	6
55	Gunning	230	230	230	232	***0.95***	***0.95***	27.4		20	20	20		87	91	91		-4.5	-1.7	-0.3		80	80	92		6	5	5
56	Guyra	690	690	700	734	***0.95***	***0.95***	25.2	130	130	130	110	179	197	197	151	0.3	1.7	1.7	1.3	250	300	360	425	14	20	19	45
57	Harden	970	970	1,020	977	***0.95***	***0.95***	20.6	190	190	190	190	186	201	192		-8.7	-6.8	-8.0	-11.0	140	160	170	188	3	8	8	10
58	Hastings	20,080	20,400	20,900	22,660	***0.96***	***0.96***	46.2	5,610	5,740	6,400	6,980	267	295	320		0.8	3.1	4.9	4.3	7,120	9,930	11,200	12,117	13	12	10	10
59	Hay	1,190	1,190	1,220	1,235	***0.95***	***0.95***	31.6		430	420	440		381	362	372	5.2	-1.8	-1.2	-1.0	430	430	450	477	41	4	1	0
60	Holbrook	680	680	690	687	***0.95***	***0.95***	34.0								285	0.0	-0.1	-5.4	-1.4	240	240	250	256	4	3	0	6
61	Hume	1,210	1,210	1,220	1,231	***0.95***	***0.95***	27.0	200	200	120	210	157	174	108	191	4.6	3.3	2.5	-4.3	590	450	450	327	8	0	0	0
62	Hunter Water	172,000	175,100	178,000	181,800	1.05	***1.05***	42.9	41,000	47,400	48,500	67,400	226	259	261	355	0.0	2.8	3.7	4.2		62,029	72,728	76,505		5	5	4
63	Inverell	4,450	4,450	4,310	4,358	***0.95***	***0.95***	34.5	850	790	790	40	181	187	193	130	-0.1	1.0	1.1	-2.3	1,020	1,180	1,330	1,144	12	9	7	5
64	Jerilderie	420	420	420	424	0.71	0.68	20.9									1.1	0.8		2.3	160	170	200	188		17	17	2
65	Junee	1,400	1,400	1,400	1,400	***0.95***	***0.95***	18.8		350	350	190		262	262	159	-0.5	5.7	5.6	3.6	300	350	390	395				
66	Kempsey	6,930	7,050	7,290	7,514	***1.00***	***1.00***	34.0	2,320	2,420	2,270	2,640	335	343	311		1.6	2.7	2.3	2.4	4,300	4,220	4,350	4,482	15	19	17	14
67	Kyogle	1,650	1,650	1,540	1,542	***0.95***	***0.95***	36.3	60	150	130	360	35	93	86	270	-2.0	-2.8	-3.2	-2.9	370	360	400	421	10	10	10	10
68	Lachlan	2,170	2,170	2,020	2,022	***0.95***	***0.95***	29.2	1,020		720	720	447		374	99	0.1	0.4	1.6	0.9	570	600	760	682		0	0	0
69	Leeton	3,000	3,000	2,670	2,659	***0.95***	***0.95***	36.9	920	880	810	880	291	308	320	351	-0.6	0.3	0.7	5.7	950	1,070	1,130	1,349	5	4	3	8
70	Lismore	10,560	10,626	10,735	10,825	0.93	0.93	31.4	3,680	3,810	3,810	3,880	324	386	382	385	2.4	0.8	0.2	0.1	5,080	4,390	4,570	4,588	5	4	6	5
71	Lithgow	6,530	6,530	7,070	6,683	***0.95***	***0.95***	20.9	1,850	1,860	1,740	***1,800***	269	299	259	***283***	-1.3	-0.7	-5.9	-3.4	1,940	1,930	1,880	1,863	2	2	0	0
72	Lockhart	790	790	790	690	***0.95***	***0.95***	32.3	140	140	60	130	168	185	83	114	0.0	0.4	-0.5	2.0	380	360	300	453	7	6	5	3
73	Lower Clarence		No SGE																									No SGE
74	Maclean	3,620	3,690	4,000	4,238	0.91	0.91	37.3	830	730	710	870	209	216	194	750	3.2	2.9	3.8	5.2	1,900	2,010	2,110	2,421	10	10	9	8
75	Manilla	890	920	960	1,030	***0.95***	***0.95***	42.5	200	220	220	20	213	251	242	135	1.2	3.0	7.1	5.5	200	320	510	520	11	9	44	36
76	Merriwa (Groundwater)	470	470	480	479	***0.95***	***0.95***	27.0	80	250	90	80	162	555	201	192	-5.7	-4.0	-9.2	-7.5	120	130	140	138		0	0	0
77	MidCoast (Taree)	11,650	13,600	13,600	14,299	***0.96***	***0.96***	19.1	2,950	3,040	3,190	4,780	243	233	245	348	2.8	1.5	3.8	2.6	8,490	8,160	9,630	7,100	25	24	30	24
78	MidCoast (Great Lakes)	12,200	12,300	12,500	12,437	***0.96***	***0.96***	16.6	4,000	4,690	4,080	3,943	315	397	341	327		1.6	3.8	2.6		6,010	6,250	5,000		11	30	24
79	Moree Plains	3,900	3,900	3,900	3,900	***0.95***	***0.95***	43.0	1,600			3,000	390			808	4.2			3.8	1,430	1,630		1,824	34	0		11
80	Mudgee	4,000	4,100	4,140	4,315	***0.95***	***0.95***	33.3	800	1,250	1,150	1,250	190	321	292	305	2.5	3.1	2.4	1.1	1,410	1,660	1,740	1,759	9	14	12	10
81	Mulwaree	70	70	80	286	***0.95***	***0.95***	15.9	40	30	30	40	543	474	432	151	0.6	-0.7	-0.3	2.6	80	70	80	163	32	41	58	54
82	Murray	2,070	2,070	1,530	1,527	***0.95***	***0.95***	28.0		50	430	60		25	295	43	4.7	4.1	1.9	0.5	900	1,290	840	798	55	52	51	50
83	Murrumbidgee	540	640	680	684	***0.95***	***0.95***	37.5		160	160	***160***		256	240	***246***	14.2	17.0	5.7	1.0	270	510	230	961		15	14	19
84	Murrurundi	410	410	410	470	***0.95***	***0.95***	33.0				200				439	13.5	3.1	0.2	0.2	170	180	170	169	11	1		
85	Muswellbrook	4,330	4,630	4,590	4,633	***0.95***	***0.95***	32.3	1,100	1,160	1,220	1,380	241	263	279	313	2.3	0.5	0.2	1.3	1,620	1,440	1,440	1,779	3	3	1	1
86	Nambucca (Groundwater)	4,740	4,960	5,100	5,210	***0.95***	***0.95***	36.3	1,310	1,040	1,050	1,540	263	221	216	311	4.9	4.3	3.3	2.8	2,530	2,740	2,770	2,734	20	19	21	21
87	Narrabri	3,560	3,610	3,610	3,612	***0.95***	***0.95***	35.5	820	1,370		***1,370***	219	401		***401***	1.4	-2.2	-1.0	-0.2	1,010	1,040	1,100	1,241	4	9	16	18
88	Narrandera	1,730	1,730	1,740	1,817	***0.95***	***0.95***	48.5	730	520	570	570	401	317	345	329	92.6	10.5	1.5	4.7	550	630	660	746	9	1	0	1

	WATER UTILITY	BUSINESS CHARACTERISTICS													FINANCIAL								
		Total No. of Assessments (Properties) (1)				Connected Properties per Assessment (Total) (2)	(Residential) (2A)	Properties Served per km of Main (3)	Total Vol of Sewage Collected (ML) (4)				Vol of Sewage Treated per Property (kL/property) (5)				Economic Real Rate of Return (%) (6)				Turnover (excl. Capital Works Grants) ($'000) (7)				Debt to Equity (%) (8)			
		1995/96	*1996/97*	*1997/98*	*1998/99*			*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
89	Narromine	1,320	1,830	1,920	1,981	***0.95***	***0.95***	30.8	90			***90***	65			***478***	2.0	4.5	4.3	3.8	600	790	750	762	2	2	2	2
90	Nundle (Groundwater)		No SGE																									No SGE
91	Nymboida	170	170	170	204	***0.95***	***0.95***	40.4	40		40	40	224		212	192	1.2	1.6	0.3	-1.1	90	110	110	109	20	17	19	24
92	Oberon	1,110	1,120	1,120	1,136	***0.95***	***0.95***	33.1	330	410	340	340	282	382	317	315	2.0	0.9	1.0	0.5	440	480	450	433	9	5	5	4
93	Orange	12,420	12,600	13,100	13,220	***1.00***	***1.00***	39.0	4,550	5,470	4,450	6,780	366	433	341	519	2.8	3.0	6.6	2.4	5,260	6,190	16,400	7,299	5	2	0	0
94	Parkes	4,650	4,650	4,700	4,564	***0.95***	***0.95***	45.9	990	700	780	780	202	158	174	180	-0.9	1.6	1.1	-2.0	840	1,000	960	1,232	1	1	0	0
95	Parry	1,160	1,160	1,160	1,176	***0.95***	***0.95***	33.2	180		120	190	147		109	172	0.5	-0.5	-0.5	0.0	430	340	380	437	32	33	34	33
96	Queanbeyan	12,570	12,670	12,900	12,450	***1.03***	***1.04***	49.3	3,730	3,770	3,430	3,610	306	289	259	281	4.5	3.6	6.0	11.0	4,960	4,920	6,170	8,442	2	1	1	1
97	Quirindi	1,090	1,140	1,140	1,140	***0.95***	***0.95***	31.2	290	610	560	540	253	560	515	499	0.2	-0.9	-0.6	2.3	350	350	370	456	18	15	8	5
98	Richmond River	1,740	1,740	1,760	1,795	***0.95***	***0.95***	29.0	450	390	390	650	246	233	233	334	-0.7	-0.9	-0.6	-0.9	610	690	690	1,243	1	0	0	0
99	Riverina		No SGE																									No SGE
100	Rous		No SGE																									No SGE
101	Rylstone	1,030	1,030	1,040	1,048	***0.95***	***0.95***	22.0	220			290	203			288	-2.0	-3.2	-3.1	-1.4	300	330	330	378	5	5	3	3
102	Scone	2,540	2,620	2,630	2,627	***0.95***	***1.00***	30.1	690	720	740	1,160	258	290	296	466	2.0	2.7	0.6	1.4	1,230	1,340	1,090	1,117	7	6	0	0
103	Severn	180	180	190	213	***0.95***	***0.95***	18.1				***40***				***198***	2.8	4.1	4.2	6.7	80	80	80	84	36	33	16	14
104	Shoalhaven	33,700	34,100	34,500	35,285	0.94	0.94	36.0	5,490	6,150	6,000	7,180	153	192	185	216	4.8	4.7	5.1	4.5	16,750	17,780	18,700	19,915	27	24	22	19
105	Singleton	4,110	4,460	4,740	4,822	***0.95***	***0.95***	30.7	1,460	1,140	1,220	1,310	337	270	271	286	-0.4	-0.7	-0.4	0.0	1,360	1,490	1,550	1,637	5	4	3	3
106	Snowy River	2,160	2,160	2,160	2,162	1.44	1.43	46.7	300	300		420	200	96		133	2.1	1.7	2.9	2.2	1,210	1,160	1,310	1,249	21	19	16	13
107	Sydney Water	1,467,000	1,491,000	1,513,000	1,515,000	0.97	***0.97***	72.0	457,000	474,000	493,000	548,000	302	328	335	373	4.1	5.4	6.1	4.5		740,023	769,898	704,182	22	19	20	19
108	Tallaganda	520	550	550	577	***0.95***	***0.95***	40.6		90	90	110		172	172	164	-0.1	0.0	-0.8	-1.0	120	120	130	140	1	1	1	0
109	Tamworth	13,470	14,100	14,100	14,907	***0.96***	0.96	41.6	4,310	4,610	5,080	5,920	307	340	374	413	0.5	-1.5	1.9	2.9	4,340	4,980	4,950	6,624	2	2	2	1
110	Temora	2,070	2,070	1,890	1,897	***0.95***	***0.95***	45.1	190		370	380	87		203	211	-1.4	-1.3	-3.7	***-3.7***	230	220	280			0	0	
111	Tenterfield	1,450	1,900	1,770	1,470	***0.95***	***0.95***	23.4	320		230	160	210		138	116	3.2	4.3	2.4	0.7	680	750	660	674	9	7	4	4
112	Tumbarumba	820	820	880	947	***0.95***	***0.95***	39.1	320		110	180	371		132	197	-1.0	-0.2	-1.8	-1.0	320	390	390	390		0	0	0
113	Tumut	3,660	3,400	3,600	3,672	***0.95***	***0.95***	30.2		1,350	1,060	830		417	311	259	-0.9	-0.6	-0.4	0.6	1,320	1,390	1,440	1,589	7	10	6	6
114	Tweed	20,970	22,700	23,500	23,356	1.00	1.00	46.0	7,150	6,250	6,230	7,950	341	275	282	326	5.4	5.5	5.1	3.7	14,000	14,800	14,334	13,974	13	10	9	9
115	Ulmarra		No SGE																									No SGE
116	Uralla	940	940	950	975	***0.95***	***0.95***	32.7	140	170	150	190	141	187	161	202	3.2	-0.2	-0.2	-1.8	380	370	400	381	15	15	15	14
117	Wagga Wagga	18,340	18,300	18,500	18,522	0.96	0.96	39.7	7,100	5,670		4,790	372	322		269	13.0	13.3	11.5	11.2	6,110	6,340	6,330	6,771	4	2	2	1
118	Wakool	860	830	1,000	1,044	***0.95***	***0.95***	32.6	170			140	188			181	3.4	4.5	5.7	4.9	390	450	480	494	31	27	21	17
119	Walcha	760	760	760	757	1.01	1.01	26.7	210	230	200	230	279	305	260	301	-0.3	-0.5	-1.0	-2.3	160	160	160	155		4	3	2
120	Walgett	1,690	1,690	1,690	1,638	0.90	0.90	29.8	800			400	427			271		-0.4	-2.1	-1.9		390	430	428		12	11	8
121	Warren	850	850	840	850	***0.95***	***0.95***	44.6	370		320	240	414		401	297	0.5	0.7	1.0	2.4	240	260	290	324	3	2	1	5
122	Weddin	900	1,000	1,000	1,004	***0.95***	***0.95***	43.3	180	230	230	140	190	154		151	-3.1	-2.8	-2.8	-8.1	130	130	130	-109		0	4	1
123	Wellington	2,220	2,220	2,230	2,225	0.92	0.92	48.7			500	630			246	307	0.8	-1.9	-0.7	-2.6	600	660	690	837	4	4	15	14
124	Wentworth	1,390	1,390	1,370	1,369	***0.95***	***0.95***	23.0	260			***300***	178			***231***	1.1	-1.2		-0.1	480	510	480	532	5	18	17	17
125	Wingecarribee	9,720	10,200	10,200	10,915	***0.89***	***0.89***	27.3	2,090	2,460	2,310	2,840	191	271	254	293	3.5	3.2	3.8	6.2	5,490	5,320	5,750	7,348	5	4	4	2
126	Wyong	51,790	48,200	49,300	50,587	0.96	0.95	62.2	9,600	11,500	12,700	12,370	178			255	3.3	2.5	2.9	3.3	22,280	20,820	22,700	24,445	20	16	13	10
127	Yallaroi	600	600	560	586	0.93	0.93	24.6	180	140	180	190	280	241	347	341	-1.0	-1.5	-0.8	-1.4	140	150	150	154	3	3	3	2
128	Yarrowlumla	880	890	890	896	***0.95***	***0.95***	31.5	160	160	160	100	173	187	187	114	12.9	2.8	3.6	2.6	1,180	590	590	491	38	34	31	28
129	Yass	1,960	1,960	1,960	1,963	***0.95***	***0.95***	27.2	480	440	380	480	233	238	203	205	1.5	1.6	0.8	-0.1	610	680	680	649	7	6	6	5
130	Young	3,040	3,040	3,140	3,136	***0.95***	***0.95***	35.8	760	760		***760***	238	262		***255***	-1.3	2.0	2.6	3.5	480	570	640	699	3	2	2	0

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Table 11 - Sewerage - Charges, Bills

	WATER UTILITY	CHARGES											BILLS											
		Access Amount (or Minimum) ($) (9)				Charge Independent of Land Value ? (10)			Typical Developer Charge ($/Equivalent Tenement (ET)) (11)				Typical Residential Bill ($/property) (11A)				Average Residential Bill ($) (12)				Real Increase in Average Residential Bill (%) (13)			
		1996/97	*1997/98*	*1998/99*	*1999/00*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	1996/97	1997/98	1998/99	1999/00	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
1	Albury	200	214	220	250	Yes	Yes	Yes	1450	1000	1000	1000	200	214	220	250	205	229	234	240	9	1	0	1
2	Armidale	170	180	185	190	Yes	Yes	Yes	1240	1200	1200	1240	170	180	185	190	148	165	175	178	9	0	4	0
3	Ballina	370	370	370	370	Yes	Yes	Yes	3900	4000	4100	4200	370	370	370	370	422	380	358	390	-12	-3	-8	7
4	Balranald	140	200	140	304	No	Yes	Yes					140	200	140	304	309	368	379	386	17	-3	1	0
5	Barraba	155	236	236	132	Yes	Yes	Yes					155	236	236	132	128	174	225	188	34	10	27	-18
6	Bathurst	276	284	301	308	No	No	No	950	1400	1100	1190	276	284	301	308	355	316	322	306	-13	0	0	-7
7	Bega	400	500	500	420	Yes	Yes	Yes	2120	2200	2200	2150	400	500	500	420	530	493	493	473	-9	-11	-2	-6
8	Bellingen	380	380	386	390	Yes	Yes	Yes	5000	6400	6500	5900	380	380	386	390	337	379	379	366	10	-3	-2	-5
9	Berrigan	256	256	260	270	Yes	Yes	Yes					256	256	260	270	342	290	289	299	-17	-3	-2	2
10	Bingara	260	270	280	285	Yes	Yes	Yes					260	270	280	285	245	239	243	253	-4	1	0	2
11	Bland	299	317	322	320	No	No	No			1000	1000	299	317	322	320	278	281	289	295	0	-1	1	0
12	Blayney	318	325	342	350	Yes	Yes	Yes	680	1100	1000	1000	318	325	342	350	342	325	326	335	-7	0	-1	1
13	Bogan	278	305	310	305	No	No	No					278	305	310	305	355	335	344	349	-7	3	1	0
14	Bombala	285	285	294	306	No	No	No	520	1500	1000	1200	285	285	294	306	331	347	359	361	3	-3	2	-1
15	Boorowa	100	100	111	111	No	No	No	500	500	500	500	100	100	111	111	68	111	111	76	61	-3	-2	-33
16	Bourke	373	394.5	401	411	Yes	Yes	Yes	430	400			373	395	401	411	234	437	437	278	83	-1	-2	-38
17	Brewarrina	270	290	305	305	No	No	No					270	290	305	305	202	236	239	243	15	0	-1	0
18	Broken Hill WB		190	196	208	No	No	No						190	196	208		178	183	213		4	1	14
19	Byron	334	412 + usage	412 + usage	418 + usage	Yes	Yes	Yes	4810	5300	5400	5300	334	573	573	579	342	457	458	410	31	16	-2	-12
20	Cabonne	271	308.65	309	309	No	No	No					271	309	309	309	244	400	400	431	61	0	-2	6
21	Carrathool	131	131	135	145	Yes	Yes	Yes	500	500	500	500	131	131	135	145			122	108		-3		-13
22	Casino	335	345	345	350	Yes	Yes	Yes	2210	4900	4900	4010	335	345	345	350	356	331	336	354	-9	-2	0	3
23	Central Darling	190	355	362	370	Yes	Yes	Yes					190	355	362	370		347	358	365		0	1	0
24	Central Tablelands		No SGE																					
25	Cobar	304	190	190	192	No	No	Yes	630	700	700	710	304	190	190	192	296	194	200	190	-36	-1	1	-7
26	Coffs Harbour	439	453	460	470	Yes	Yes	Yes	2400	1900	2400	2400	439	453	460	470	540	515	535	536	-7	-3	2	-2
27	Coolah	210	226	229	229	Yes	Yes	Yes					210	226	229	229	200	187	193	205	-8	-3	1	4
28	Coolamon	175	180	180	220	Yes	Yes	Yes				3000	175	180	180	220	164	219	222	285	31	0	-1	26
29	Cooma-Monaro	302	362	391	391	Yes	Yes	Yes	1480	2000	800	1600	302	362	391	391	329	351	368	385	5	8	3	3
30	Coonabarabran	340	100	102	280	No	No	No	920	800	400	820	340	100	102	280	284	350	347	354	21	0	-3	0
31	Coonamble	217	181	181	230	No	No	No					217	181	181	230	254	269	275	280	4	0	0	0
32	Cootamundra	112	128	130	193	No	No	No	700	700	700	700	112	128	130	193	120	124	126	154	1	0	0	20
33	Copmanhurst	500	600	600	600	Yes	Yes	Yes	3340	3500	3600	3690	500	600	600	600	442	611	611	536	36	16	-2	-14
34	Corowa	200	200	200	200	Yes	Yes	Yes	550	600	400	400	200	200	200	200	243	223	245	228	-10	-3	8	-9
35	Cowra	124	210	266	200	Yes	Yes	Yes		1800		2500	124	210	266	200	177	201	258	248	12	11	26	-6
36	Crookwell	295	350	385	404	No	No	No	450	500	400	450	295	350	385	404	297	362	389	400	20	7	5	1
37	Culcairn	212	225	225	225	Yes	Yes	Yes	2130	1700	1300	1800	212	225	225	225	173	168	169	176	-4	0	-2	2
38	Deniliquin	188	262	288	325	Yes	Yes	Yes	500	500	500	500	188	262	288	325	310	267	229	206	-15	-6	-16	-12
39	Dubbo	366	390	404	424	No	No	No	2000	2500	2500	2500	366	390	404	424	486	420	434	453	-15	2	1	2
40	Dungog	138	196	204	260	Yes	Yes	Yes	2500	2500	2700	2750	138	196	204	260	118	168	179	311	40	32	4	71
41	Eurobodalla	430	430	430	430	Yes	Yes	Yes	1800	1800	2000	1980	430	430	430	430	462	439	430	446	-7	-3	-4	2
42	Fish River Water Supply		No SGE																					
43	Forbes	265	265	314	314	No	No	No	450	500	500	540	265	265	314	314	294	232	236	270	-23	-3	0	12
44	Gilgandra (Groundwater)	180	180	180	180	Yes	Yes	Yes					180	180	180	180	146	168	168	162	13	-3	-2	-6

NOTE: Charges and Bills are in Dollars of the Year

	WATER UTILITY	CHARGES											BILLS											
		Access Amount (or Minimum) ($) (9)				Charge Independent of Land Value ? (10)			Typical Developer Charge ($/Equivalent Tenement (ET)) (11)				Typical Residential Bill ($/property) (11A)				Average Residential Bill ($) (12)				Real Increase in Average Residential Bill (%) (13)			
		1996/97	*1997/98*	*1998/99*	*1999/00*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	1996/97	1997/98	1998/99	1999/00	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
45	Glen Innes	92	200	215	226	Yes	Yes	Yes					92	200	215	226	213	184	189	211	-15	-3	1	9
46	Gloucester	297	305	315	320	Yes	Yes	Yes	1500	1500	1600	1560	297	305	315	320	327	323	333	274	-3	-1	1	-19
47	Goldenfields (Bulk Supply)		No SGE																					
48	Goldenfields (Retail)		No SGE																					
49	Gosford	440	377	371	371	Yes	Yes	Yes	2700	1400	1400	1550	440	377	371	371	417	370	359	362	-13	-15	-5	-1
50	Goulburn	232	250	250	268	No	No	No	1000	900	900	900	232	250	250	268	300	239	257	306	-22	-3	5	17
51	Grafton	330	380	380	380	Yes	Yes	Yes					330	380	380	380	323	371	391	402	12	8	4	1
52	Griffith	208	218	218	224	No	No	No	1640	1600	1600	2110	208	218	218	224	352	211	221	225	-41	-3	3	0
53	Gundagai	157	173	182	193	No	No	No					157	173	182	193	184	163	172	180	-13	2	3	3
54	Gunnedah	170	190	195	200	No	Yes	Yes	1670	1800	1000	1860	170	190	195	200	199	176	186	214	-13	3	4	13
55	Gunning	146	151	171	200	No	No	No					146	151	171	200		147	158	332		-4	5	106
56	Guyra	225	350	375	350	Yes	Yes	Yes					225	350	375	350	252	287	337	405	12	29	15	18
57	Harden	140	154	187	205	Yes	Yes	Yes					140	154	187	205	122	141	147	171	13	7	3	14
58	Hastings	398	396	410	427	Yes	Yes	Yes	2720	1900	1500	2000	398	396	410	427	414	377	384	369	-11	-1	0	-6
59	Hay	300	320	345	345	Yes	Yes	Yes					300	320	345	345	318	582	593	371	80	0	0	-39
60	Holbrook	160	160	160	164	No	No	No					160	160	160	164	259	340	341	354	29	-3	-2	2
61	Hume	450	350	300	200	No	No	Yes	2280	2900	1300	2000	450	350	300	200	439	341	300	226	-24	-20	-14	-26
62	Hunter Water	345	371	386	398	Yes	Yes	Yes		1000	1200	1400	345	416	431	443	249	218	221	212	-14	-6	-1	-6
63	Inverell	225	255	255	255	Yes	Yes	Yes					225	255	255	255	234	234	252	249	-2	6	6	-3
64	Jerilderie	326	450	427	434	No	No	No	530	600	600	600	326	450	427	434	369	506	588	575	35	2	14	-4
65	Junee	186	243	255	255	Yes	Yes	Yes	500	500	500	500	186	243	255	255	193	214	236	246	9	4	8	2
66	Kempsey	380	390	400	405	Yes	Yes	Yes	2300	2700	2800	2800	380	390	400	405	330	370	370	380	10	-1	-2	1
67	Kyogle	190	175 + usage	178 + usage	200 + usage	Yes	Yes	Yes	1000	1000		1000	190	274	277	299	186	263	284	158	38	-14	6	-45
68	Lachlan	265	275	275	300	Yes	Yes	Yes					265	275	275	300	238	240	275	298	-1	1	13	6
69	Leeton	64	70	300	330	Yes	No	No	2500	1100	4500	4500	64	70	300	330	298	313	316	355	3	6	-1	10
70	Lismore	273	295	300	307	Yes	Yes	Yes	3600	3600	3600	3600	273	295	300	307	214	289	311	321	33	0	6	1
71	Lithgow	135	260	260	273	No	No	Yes	1740	1800	1800	1790	135	260	260	273	263	252	253	245	-6	-4	-2	-5
72	Lockhart	101	106.84	107	107	No	No	No					101	107	107	107	372	296	260	293	-22	0	-14	11
73	Lower Clarence		No SGE																					
74	Maclean	294	330	350	371	Yes	Yes	Yes	3620	3300	3800	2940	294	330	350	371	304	319	352	319	3	3	8	-11
75	Manilla	216	320	320	320	Yes	Yes	Yes	900	1100	1100	1200	216	320	320	320	198	311	302	444	54	44	-4	44
76	Merriwa (Groundwater)	255	270	270	270	Yes	Yes	Yes	900	600	600	600	255	270	270	270	285	275	248	233	-5	1	-12	-7
77	MidCoast (Taree)	413	425	450	450	Yes	Yes	Yes	3100	3300	3300	3470	413	425	450	450	437	385	417	511	-13	5	6	20
78	MidCoast (Great Lakes)	413	433	440	445	Yes	Yes	Yes	1950	2000	2100	2150	413	433	440	445		419	432	493		-1	1	12
79	Moree Plains	315	360	380		No	No						315	360	380		410	400	421	429	-4	5	3	0
80	Mudgee	236	310	310	330	No	No	No	1480	2000	1500	1620	236	310	310	330	323	330	346	327	0	19	3	-7
81	Mulwaree	250	250	250	380	No	No	No	2000	2500	2500	2500	250	250	250	380	402	384	391	322	-6	-3	0	-19
82	Murray	265	332	289	289	Yes	Yes	Yes	600	600	600	700	265	332	289	289	311	344	326	383	8	-2	-7	15
83	Murrimbidgee		346	346	346	No	No	No						346	346	346		241	234	162		-3	-5	-32
84	Murrurundi	270	310	310	310	Yes	Yes	Yes	800	800	800	850	270	310	310	310	379	344	344	298	-11	11	-2	-15
85	Muswellbrook	235	250	252	271	Yes	Yes	Yes	3170	2500	2000	2500	235	250	252	271	277	233	250	277	-17	-1	5	9
86	Nambucca (Groundwater)+E	380	394	394	394	Yes	Yes	Yes	1550	1600	1600	1650	380	394	394	394	379	386	385	385	0	0	-2	-2
87	Narrabri	375	276	296	296	Yes	Yes	Yes	1740	1800	1800	1740	375	276	296	296	205	214	238	252	2	10	9	4
88	Narrandera	208	229	251	304	No	No	No	860	1500			208	229	251	304	282	221	247	338	-23	7	10	34

	WATER UTILITY	CHARGES											BILLS										
		Access Amount (or Minimum) ($) (9)				Charge Independent of Land Value ? (10)			Typical Developer Charge ($/Equivalent Tenement (ET)) (11)				Typical Residential Bill ($/property) (11A)				Average Residential Bill ($) (12)				Real Increase in Average Residential Bill (%) (13)			
		1996/97	*1997/98*	*1998/99*	*1999/00*	*1997/98*	*1998/99*	*1999/00*	*1996/97*	*1997/98*	*1998/99*	*1999/00*	1996/97	1997/98	1998/99	1999/00	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
89	Narromine	265	350	350	358	No	No	No	940	600	600	940	265	350	350	358	434	355	342	342	-20	22	-5	-2
90	Nundle (Groundwater)		No SGE																					
91	Nymboida	450	555	555	565	Yes	Yes	Yes	1710	1700	1700	1770	450	555	555	565	533	547	563	515	1	16	1	-10
92	Oberon	122	120	120	120	No	No	No	1000	1100	1100	1100	122	120	120	120	318	253	263	294	-22	-1	2	10
93	Orange	319	334	334	343	No	No	No	1170	1200	1200	1270	319	334	334	343	376	353	356	364	-8	0	-1	0
94	Parkes	130	143	157	160	No	No	No		1900	1200	2200	130	143	157	160	124	127	117	137	0	7	-9	15
95	Parry	105	300	396	390	Yes	Yes	Yes			700	500	105	300	396	390	262	262	297	338	-2	1	11	12
96	Queanbeyan	236	245	257	400	No	No	No	1080	1100	1100	1080	236	245	257	400	312	279	277	320	-12	1	-2	13
97	Quirindi	245	245	245	245	Yes	Yes	Yes					245	245	245	245	285	232	228	225	-20	-3	-3	-3
98	Richmond River	276	340	390	450	Yes	Yes	Yes	700	800	800	770	276	340	390	450	265	286	361	406	6	2	24	10
99	Riverina		No SGE																					
100	Rous		No SGE																					
101	Rylstone	346	317	324	380	Yes	Yes	Yes					346	317	324	380	276	283	296	349	1	0	3	16
102	Scone	346	346	346	346	No	No	No	1880	2000	2000	2030	346	346	346	346	369	347	347	347	-8	-3	-2	-2
103	Severn	144	440	440	462	Yes	Yes	Yes					144	440	440	462	440	422	424	366	-6	-3	-1	-15
104	Shoalhaven	395	450	470	500	Yes	Yes	Yes	1540	1600	1630	1700	395	450	470	500	474	455	471	480	-6	4	2	0
105	Singleton	240	246	246	266	Yes	Yes	Yes	1000	1000	1020	1050	240	246	246	266	249	242	239	242	-5	-1	-3	-1
106	Snowy River	242	258 + usage	268 + usage	279 + usage	Yes	Yes	Yes	1850	2000	1400	2000	242	366	338	309	509	345	356	282	-34	0	1	-22
107	Sydney Water	262	280	286	290	Yes	Yes	Yes		4300	4500	5000	262	280	286	290	268	269	278	283	-1	4	1	0
108	Tallaganda	515	110	110	264	No	No	No	2890	3000	3000	3040	515	110	110	264	203	188	197	206	-9	-3	3	2
109	Tamworth	254	276	276	396	Yes	Yes	Yes	1230	1250	1300	1250	254	276	276	396	284	243	259	379	-16	0	5	44
110	Temora	73	77	90	90	Yes	Yes	Yes		400			73	77	90	90	77	84	84	80	8	0	-2	-7
111	Tenterfield	210	260	260	273	Yes	Yes	Yes	1470	1700	1600	1500	210	260	260	273	227	263	263	291	14	-3	-2	9
112	Tumbarumba	169	363	363	300	Yes	Yes	Yes					169	363	363	300	293	407	384	356	36	22	-7	-9
113	Tumut	316	374	374	374	Yes	Yes	Yes	480	2500	1400	2720	316	374	374	374	284	330	330	351	14	2	-2	4
114	Tweed	355	385	394	400	No	No	Yes	2520	2700	2770	2770	355	385	394	400	352	378	378	379	5	3	-2	-2
115	Ulmarra		No SGE																					
116	Uralla	360	389	389	389	Yes	Yes	Yes	1000	1000	1100		360	389	389	389	409	362	367	365	-13	1	-1	-2
117	Wagga Wagga	184	198	198	204	No	No	No	1260	1200	1200	1040	184	198	198	204	254	253	265	286	-2	0	3	6
118	Wakool	366	371	410	410	No	No	Yes					366	371	410	410	365	366	382	401	-2	-11	2	3
119	Walcha	206	206	206	210	Yes	Yes	Yes					206	206	206	210	203	184	182	183	-11	-3	-3	-2
120	Walgett	206	219	223	223	Yes	Yes	Yes					206	219	223	223		210	231	265		0	8	13
121	Warren	240	290	320	320	Yes	Yes	Yes					240	290	320	320	227	257	275	330	11	7	5	18
122	Weddin	132	127	127	135	Yes	Yes	Yes					132	127	127	135	112	128	105	107	13	2	-20	0
123	Wellington	225	256	280	300	No	No	No				1000	225	256	280	300	241	268	287	335	9	3	5	14
124	Wentworth	280	280	300	365	Yes	Yes	Yes	1260	1500	1400	1920	280	280	300	365	305	303	300	327	-3	0	-3	7
125	Wingecarribee	328	351 + usage	365 + usage	365 + usage	Yes	Yes	Yes	2500	3100	3100	3100	328	456	511	511	399	503	539	426	24	0	5	-22
126	Wyong	410	356	356	347	Yes	Yes	Yes	1700	1400	1400	1320	410	356	356	347	371		350	330				-7
127	Yallaroi	253	260	273	273	No	No	Yes					253	260	273	273	227	247	247	260	6	0	-2	4
128	Yarrowlumla	466	585	564	585	No	No	Yes	1370	1500		1480	466	585	564	585	519	479	379	531	-9	1	-22	37
129	Yass	210	220	231	231	Yes	Yes	Yes	1450	1500	1500	1570	210	220	231	231	256	271	277	278	4	6	1	-2
130	Young	140	160	200	220	Yes	Yes	Yes	700	700	700	700	140	160	200	220	138	160	173	196	13	11	6	11

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Table 12 - Sewerage - Levels of Service, Efficiency

	WATER UTILITY	LEVELS OF SERVICE																				EFFICIENCY							
		EPA Licence Compliance BOD (%) (14)				EPA Licence Compliance SS (%) (15)				Confirmed Sewer Chokes (per 100 km of Main) (16)				Sewage Overflows (per 100 km of main) (17)				Odour Complaints (per 1000 properties) (18)				Average Customer Outage Time (min) (19)			Operating Cost (OMA) ($/property) (20)				Management Cost ($/property) (21)			
		1995/96	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
1	Albury		100	100	100		100	100	88	0	56		179	0	56		51	2	0	0	2				159	176	201	212	81	89	105	101
2	Armidale	100	100	100	100	96	90	96	94	251				2			***208***	0	0	0	0				128	151	187	170	61	83	97	72
3	Ballina	98	100	100	100	84	100	100	92			15	7			1	1	4	0	1	1	0	1	0	223	192	196	219	68	59	52	62
4	Balranald	100	------ No Licence ------			100	------ No Licence ------			5	30			3	0	0	0	0	0	0	0	0	0	0	75	76	249	122	8		29	29
5	Barraba		100	100	100		100	100	100	0	89	93	86	0	18	29	14	0	0	0	7	0	0	2	190	148	158	152	47	47	49	55
6	Bathurst	100	95	98	100	95	90	100	98	80	48	84	57	55	23	9	10	4	1	0	0		36	0	234	262	231	285	96	91	91	103
7	Bega	100	100	100	100	92	92	100	92	87	51	68	25	29	23	19	0	8	0	0	0	0	0	0	356	249	264	246	176	133	125	127
8	Bellingen		100	100			98	100				16				11		0	0	4	0				226	157	230	251	51	38	50	61
9	Berrigan	98	98	100	100	97	97	98	100	49	51	25	18	0	0	0	0	0	0	0	0	0	0	2	154	188	210	206	59	63	89	79
10	Bingara	100	--- No Licence ---		100	66	0	0		38	33	22	6	0	0	0	0	9	0	0	0	0	0	1	193	180	183	182	38	37	44	42
11	Bland	100	100	100	100	100	100	100	100	167		512	472	8	0	0	0	10	0	0	0	0	0	0	176	173		191	51	43		55
12	Blayney	100	100	100	100	100	100	100	100	30	24	30	33	18	24	18	0	0	0	0	0	0	0	0	172	217		385		72		79
13	Bogan		------ No Licence -------				------ No Licence -------			0	26		128	0	0	0	0	0	0	0	5	0	0	0	164	171	172	186	87	95	92	125
14	Bombala	95	100	100	100	100	100	100	100	109	178			109				0	1	3	0	0	0	0	181	191	200	224	28	29	35	50
15	Boorowa	100	100	100	100	100	100	100		103	77	72		0	0	0	0	1	7	4	0	4	4	1	74	78	88	119	15	18	16	22
16	Bourke		------ No Licence -------				------ No Licence -------			135	29	412	306	0	1	0	35	0	24	39	0	84	85	0	154	153	162	230	51	51	74	88
17	Brewarrina	100	100	100	50	100	0	0						0				0	0	0	0	0	9	17	315	296	261	247	65	68	45	55
18	Broken Hill WB		87	87	100		75	75	100		247	247	260	0	59	59		0	0	1	0					168	168	175		56	57	61
19	Byron	100	99	100	100	100	100	100	100		46	45	23		7	1	5	7	13	13	7	0	3	1	289	389	454	445	97	118	112	140
20	Cabonne	100	85	88	92	93	78	48	79	90	69	50	53	5	0	0	0	0	0	0	0	0	0	0	132	186	171	156	36	59	56	41
21	Carrathool		------ No Licence -------				------ No Licence -------			241	268	167	251	12	0	0	0		17	0	0	0	0		221	121		336	130	43		23
22	Casino	100	100	100	85	100	100	96	96	60	59	49	23	10	11	14	10	0	1	1	0				170	189	200	208	84	87	85	79
23	Central Darling		------ No Licence -------				------ No Licence -------				303	151						0	14	0	0	10	5	0			202	***202***			26	***26***
24	Central Tablelands		No SGE																													No SGE
25	Cobar		------ No Licence -------				------ No Licence -------			140	8	7	7	0	3	2	7		0	0	0	0	0	0	84	70	128	107	15	12	43	37
26	Coffs Harbour	100	100	100	100	100	100	100	99	101	74	124	97	11	16	11	11	5	1	1	0	0	11	16	245	283	272	307	71	85	81	120
27	Coolah	------ No Licence -------			50	------ No Licence -------			0	0			106	0	0	23	0	0	4	1	0	14	0	4	144	177	168	169	26	23	19	21
28	Coolamon	------ No Licence -------			100	------ No Licence -------			80	21	14	42	43	0	0	0	0	0	0	0	0	0	1	0	157	191	92	128	45	48	31	33
29	Cooma-Monaro			100	100			100	99	0		20		0				0	0	0	0	0	0		149	224	189	519	35	35	35	178
30	Coonabarabran	100	100	100	100	100	100	100	100	278	192	279	312	0	2		67	0	0	0	0	0	0	0	181	203	189	225	57	87		158
31	Coonamble	95	95	95	95	95	95	95	95	35	43	46	17		2	2	2		0	4	9	0	0	0	191	195	207	178				***20***
32	Cootamundra	100	100	91	92	100	100	100	92	453	443	402	412			12		0	0	0	0	0	0		135	132	137	***137***	23	25	34	***34***
33	Copmanhurst	73	92	86	97	50	72	74	83	56	185		85	0		7		1	0	0	0	0	0	1	211	186	249	354	9	13	65	101
34	Corowa	54		50	74	100		33	69	67	43	25	28	7	1	5	1	4	3	4	1	0	0	0	161	203	253	171	58	75	79	48
35	Cowra			50	100			33	95	0			83	0				0	0	3	0	0	0	4	95	129	106	95	40	51	39	***20***
36	Crookwell		100	100	100		100	100	100		77	115	101		0	0	0	0	0	0	0	0	0	0	201	533	388	338	23	22	24	23
37	Culcairn	100	100	100	100	100	99	83	100	46	42	34	31	0	0	0	0	0	0	1	0	0	0	0	71	85	113	137	7	12	42	49
38	Deniliquin	25		100	100	25	0	100	40	582	328	563	191	0	0	0	0	16	4	1	2				200	154	207	190	64	55	63	59
39	Dubbo	100	100	100	100	100	100	96	79		145	35	62		26	3	27	0	0	0	0	6	83	16	200	187	210	218	83	69	83	99
40	Dungog		------ No Licence -------				------ No Licence -------			33	70	69	62	10	31	41	34	0	0	1	0				174	177	218	197	29	31	36	32
41	Eurobodalla	100	100	100	100	100	100	100	100	1	30	30	27	0	0	3	3		1	1	1			44	223	248	259	244	82	108	102	103
42	Fish River Water Supply		No SGE																													No SGE
43	Forbes	100	67	92	77	100	92	100	92	47	61	175	147	1	3	0	5	0	0	0	2	0	8	7	158	167	168	165	37	36	34	37
44	Gilgandra (Groundwate	100	100	100	95	100				311	131		138	14	15	12	15	0	3	1	0	5	0	5	101	125	112	116	13			24

NOTE: Costs are in Dollars of the Year

	WATER UTILITY	LEVELS OF SERVICE																				EFFICIENCY							
		EPA Licence Compliance BOD (%) (14)				EPA Licence Compliance SS (%) (15)				Confirmed Sewer Chokes (per 100 km of Main) (16)				Sewage Overflows (per 100 km of main) (17)				Odour Complaints (per 1000 properties) (18)				Average Customer Outage Time (min) (19)			Operating Cost (OMA) ($/property) (20)				Management Cost ($/property) (21)			
		1995/96	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
45	Glen Innes	100	100	100	100	100	100	100	100	139	79	46	29	3	8	26	8	0	2	0	2	0	0	0	129	126	98	136	52	44		54
46	Gloucester	100	100	75	100	67	75	75	100	65			164	0	0	0	0	0	0	0	0	0	0	0	140	145	155	132	21	21	23	18
47	Goldenfields (Bulk Supply)		No SGE																												No SGE
48	Goldenfields (Retail)		No SGE																												No SGE
49	Gosford	100	100	100	100	100	100	100	100	54	49	48	56	55	0	2	2		0	0	0	2	4		163	170	207	193	39	76	105	92
50	Goulburn	100	83	75	83	100	83	58	50	205	400	372	338	34	33	20	20	20	0	0	0				144	174	265	220	44	70	69	66
51	Grafton	100	94	100	100	96	95	94	95	125		52	92					2	2	2	2	0	0	0	146	167	219	194	50	66	103	85
52	Griffith	50	0	94	100	58	0	71	100	75	86	86	15	1	0	0	12	5	0	0	3	0	0	1	213	251		330	60	62		167
53	Gundagai	86	100	97	96	95	100	94	96	55		41	24	5	0	0	1	1	0	0	0	0	0		129	141		160	33	49	54	47
54	Gunnedah	100	100	100	100	100	100	100	100	113	119	144	215	55	29	20	0	0	0	0	0	0	2	3	82	94	103	104	19	19	22	21
55	Gunning	100	100	100	100	100	100	100	75	0	50	25	62	0	0	0	0	0	0	0	0	0	1	3		471	296	213			64	***20***
56	Guyra	100	100	100	100	100	100	100	100	15	22	22	22	7	11	11	11	0	0	0	0	0	0	0	159	171	240	301	72	59	100	148
57	Harden	100	100	100	100	100	100	100	92	342	311	256	24	0	0	2	2	0	0	0	0	0	0	0	156	140	149	199	53	54	54	58
58	Hastings	100	80	94	79	96	91	99	93	25	31	44	38	1	6	9	4	1	1	1	1				162	209	185	223	33	41	44	57
59	Hay	100	100	100	No Licence	88	70	88	No Licence		150	336	673		0	0	0	10	0	1	3	0	0	1	303	238	203	251	121	70	58	66
60	Holbrook	33				33								0				0	0	0	0				211	221	242	270	68	71	70	74
61	Hume	100	97	100	100	100	92	100	100		0	2	2	0	0	0	5	0	0	0	0	0	0		160	151	174	***174***	57	56	54	***54***
62	Hunter Water	100	99	99	100	100	99	99	100	62	67	68	54				54			2	2	3	2	2		149	140	123				
63	Inverell	90	90	100	93	63	62	100	74	96	89	19	70	25	15	10	9	5	0	0	0	0	4	0	111	141	184	180	23	28	30	47
64	Jerilderie		100	100	100	0	100	100	100			70	333		0	0	0	0	0	33	17	0	7	4	343	387	387	377	101	117	117	110
65	Junee		100	100	92	0	100	100	83		49	5	47		4	5	0	0	0	0	0	0	0	3	126	97	113	153	59			30
66	Kempsey	100	99	100	100	100	99	97	99		19	19	18					0	1	3	1				246	256	181	271	65	77	82	77
67	Kyogle		90	97	97	N/P	90	50	50	58	16	275	57	64				1	2	3	3	0	0	3	147	177	199	203	66	75	85	79
68	Lachlan	------ No Licence -------				------ No Licence -------				371		244	20	9	0	6	0	9	0	8	0	0	0	0	149	147	178	160	50	51	42	39
69	Leeton	100	96	100	90	100	91	90	84	41	52	44	77	11	12	9	54	2	7	6	0	1	1	0	175	244	304	239	36	53	131	48
70	Lismore	95	95	94	100	95	84	81	88	78	28	51	113						0	0	0	1	22	49	234	194	268	279	51	40	40	52
71	Lithgow	92	75	75	75	92	75	75	80										0	0	0	0	0		201	213	269	239	81	73	74	66
72	Lockhart	100	100	100	100	95	98	100	100	143	38	54	30	5				0	0	0	2	0	0	1	160	196	196	223	44	46	47	53
73	Lower Clarence		No SGE																													No SGE
74	Maclean	82	91	80	74	100	76	80	96	71	81	95	75	50	20	46	50	9	2	1	2	1	1	2	157	188	175	136	26	39	41	22
75	Manilla		100	100	100	0	100	100	100	0	226	522	496	0	43	43		0	0	0	0	7	3	2	125	185	214	214	39	71	43	46
76	Merriwa (Groundwater)	100	80	90	100	100	80	90	80	167	207	347	124	27	40	167	95	0	0	0	0	10	16	2	195	173	252	215	83	29	117	75
77	MidCoast (Taree)	96	93	97	99	86	78	90	98	21	31	17	15	3	12	18	13	54	7	1	2	0	0	0	173	221	220	180	54	83	77	69
78	MidCoast (Great Lakes)	100	100	100	100	100	100	99	99	58	17	17	13	61	6		9	4	4	3	4	0	0	0		267	267	242		64	66	62
79	Moree Plains	95	100			95	100			922				11				1	0	0	0				263	296		270	34	44		49
80	Mudgee	90	100	100	100	70	90	90	92		225	162	142	0	142	111	89	10	4	3	0	8	7	3	165	176	197	242	32	29	33	86
81	Mulwaree		100	100	100		100	100	100				27				41	0	0	0	0	0	0	0	376	489	364	129	75	44	54	18
82	Murray	------ No Licence -------				------ No Licence -------					22	29	21		0	0	0	0	0	6	0	0	0	0	100	231	167	214	40	52	71	86
83	Murrimbidgee		100	100	100		100	100	100		55	186	123		11		37		0	0	0	2	1	113		59	65	103				***20***
84	Murrurundi	100	------ No Licence -------			100	------ No Licence -------								0	0	0	0	0	0	0				146	114	155	145				***20***
85	Muswellbrook	98	100	100	100	95	100	100	100	133	260	114	123	94	40	26	37	0	2	2	1	8	6	17	143	170	189	219	51	48	39	43
86	Nambucca (Groundwate	100	99	96	92	85	96	99	94	77	86	31	30	5	44		15	3	1	0	0	1	0	0	215	285	253	221	90	109	119	78
87	Narrabri	90	95	100		90	95	40											0	0	0				153	198	191	186	27	32	29	34
88	Narrandera	100	69	100	92	80	50	100	83	433	472	492	275	6	0	0	0	1	1	1	0	0	0	0	139	180	237	203	37	33	60	64

	WATER UTILITY	LEVELS OF SERVICE																				EFFICIENCY							
		EPA Licence Compliance BOD (%) (14)				EPA Licence Compliance SS (%) (15)				Confirmed Sewer Chokes (per 100 km of Main) (16)				Sewage Overflows (per 100 km of main) (17)				Odour Complaints (per 1000 properties) (18)				Average Customer Outage Time (min) (19)			Operating Cost (OMA) ($/property) (20)				Management Cost ($/property) (21)			
		1995/96	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*	*1995/96*	*1996/97*	*1997/98*	*1998/99*
89	Narromine	------ No Licence -------				------ No Licence -------					39			0				0	1	0	0				188	180	153	156	31	22	28	28
90	Nundle (Groundwater)	No SGE																													No SGE
91	Nymboida	73		95	100	43			80		0	0	0	0	0	0	0	0	0	0	0	0	0	0	272	380	472	464			18	***20***
92	Oberon	100	90	90	90	100			100	123	31	46	77	0	0	0	0	0	0	0	0	0	0	0	164	251	257	244	40	39	49	56
93	Orange	100	100	100	96	100	100	100	96	222				1				1	1	1	1	0	0	0	123	138	120	186	50	56	40	53
94	Parkes	N/P	100	63	66	N/P	100	13	55	161	140	116	103	25	22	66	92	1	1	1	1	0	1	1	98	104	104	238	26	26	26	27
95	Parry	66	100	100	66	100	100	100	50	6	3	0	9	0	0	0	0	0	0	0	0	0	0	0	112	111	149	162	29	31	24	30
96	Queanbeyan	100	100	100	100	100	100	100	100	77	120	90	58	78	78	9	21	2	0	0	0				168	110	175	181	44	53	71	81
97	Quirindi	100	96	96	100	100	58	58	60	131	63	57	15	68			2	0	0	0	0	2	3	0	124	155	143	157		16	18	30
98	Richmond River	100	100	97	90	100	90	85	93	4	2	4	15	5	0	0	2	0	0	0	3	0	1	1	169	227	258	323	37	53	98	108
99	Riverina	No SGE																													No SGE
100	Rous	No SGE																													No SGE
101	Rylstone	100	100	100	100					154	36			0				0	0	0	0	0	0		219	293	289	257		25	38	23
102	Scone	100	100	51	87	100	96	84	82	201	126	128	83	13	4	5	4	0	1	1	0	0	0	0	228	269	285	285	91	100	116	63
103	Severn	100	------ No Licence -------			25	------ No Licence -------			0	0	0		35				0	18	0	0	0	0		205	158	176	89	70	58	61	54
104	Shoalhaven	84	98	100	98	84	94	100	77	22	23	33	25	13	18	5	5	0	0	0	0				224	238	252	280	100	85	103	106
105	Singleton	100	100	100	100	100	100	100	96	54	54	54	54	0	0	2	2	1	2	1	1	3	3	3	202	205	184	306	57	62	66	79
106	Snowy River	100	88	85	96	100	88	81	85	160	4			47		1	45	0	0	0	2	0	0	1	144	147	144	144	39	42	37	40
107	Sydney Water		100	100	100		100	100	99	74	72	88	84		22		79			1	1	2	1	2	247	227	226	236				
108	Tallaganda		60	60	83	0	60	50	83	0	96	81	96	0	0	0	0	0	0	0	0	1	1	1	156	170	189	210	18	27	25	36
109	Tamworth	75	83	94	98	50	66	48	69	225	185	99	78	8	4	2	3	1	0	0	0				197	276	169	243	63	61	40	74
110	Temora	100			90	100				70	0	250	38	12	0			0	0	0	0	0	5	5	65	69	137	***137***	16	16	24	***24***
111	Tenterfield	100	100	100	96	50	100	69	71	103	86	34	99	98			20	0	1	0	0	0	0	4	181	113	154	261	97	41	47	125
112	Tumbarumba	0	100	100	85	0	100	100	80	0			91	0			43	0	0	0	0	0	0	0	176	204	262	211	18	21	17	41
113	Tumut	100	99	99	100	100	97	98	100	169	154	227	190	8	8	0	2	0	0	0	0	0	0	5	172	242	241	233	58	73	77	90
114	Tweed	100	100	100	99	100	99	100	97	69	21	12	5	3	4	2	3	41	1	1	1		16	19	180	175	175	200	62	56	61	68
115	Ulmarra	No SGE																													No SGE
116	Uralla	50	100	100	100	50	90	80	100	74	49	145	67	0				0	0	0	0	0	0	0	167	241	274	299	64	112	153	119
117	Wagga Wagga	99	99	100	100	90	71	100	100	244	150	151	126	8	0	0	0	4	0	0	0		61		130	119	127	139	34	24	32	30
118	Wakool	------ No Licence -------				------ No Licence -------				0	0	33	46	0			7	0	0	0	11	0	0		149	192	145	172	24	52	23	23
119	Walcha	92	92	100	100	42	42	67	92	73	38	62	28	52	28	39	28	2	3	46	7	0	3	1	108	113	126	180	18			43
120	Walgett				90				90	31				8			4	0	0	0	0					129	162	148		61	79	59
121	Warren	100	------ No Licence -------			100	------ No Licence -------			589	225	344		17	3	0		0	0	3	7	0	0		155	164	191	171	32	25	36	32
122	Weddin		100	5	100	0		10			60	60	145		0	0	0	0	0	0	0	0	0	0	68	57	57	93	16	15	15	27
123	Wellington	85	100	100	100	100	85	85	85			226	133			29	14	0	0	1	1	0	3	2	124	213	204	329	60	65	69	88
124	Wentworth					0				0				0				0	0	0	0				211	263	275	278	39	70	96	86
125	Wingecarribee	100	100	100	100	100	99	100	100	135	59	22	36		8	11			0	0	0				229	213	227	243	106	103	108	102
126	Wyong	100	100	100	100	100	100	100	100	43	35	57	40	0	1	1	1		1	0	1				195	215	230	200	92	100	111	48
127	Yallaroi	95	100	97		N/P			98	41		113	108	14	0	18	5	0	0	0	0	1	1	1	95	129	106	120				***20***
128	Yarrowlumla	100	100	100	100	100	100	100	63	15	22	18	33	19	4			0	0	6	5	0	0	0	286	347	298	332	111	127	108	108
129	Yass	100	100	50	100	100	100	50	100	134	108	147	133	4	6	7	4	0	1	1	0	0	0	0	185	220	254	267	61	59	79	87
130	Young	100	100	100	100	100	100	100	100	198	226			6	15			2	1	0	0	4			86	80	93	101	15	15	15	18

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3. 1999/2000 WATER SUPPLY AND SEWERAGE CHARGES/BILLS

This section contains the following Figures for 1999/2000 water supply and sewerage charges and bills:

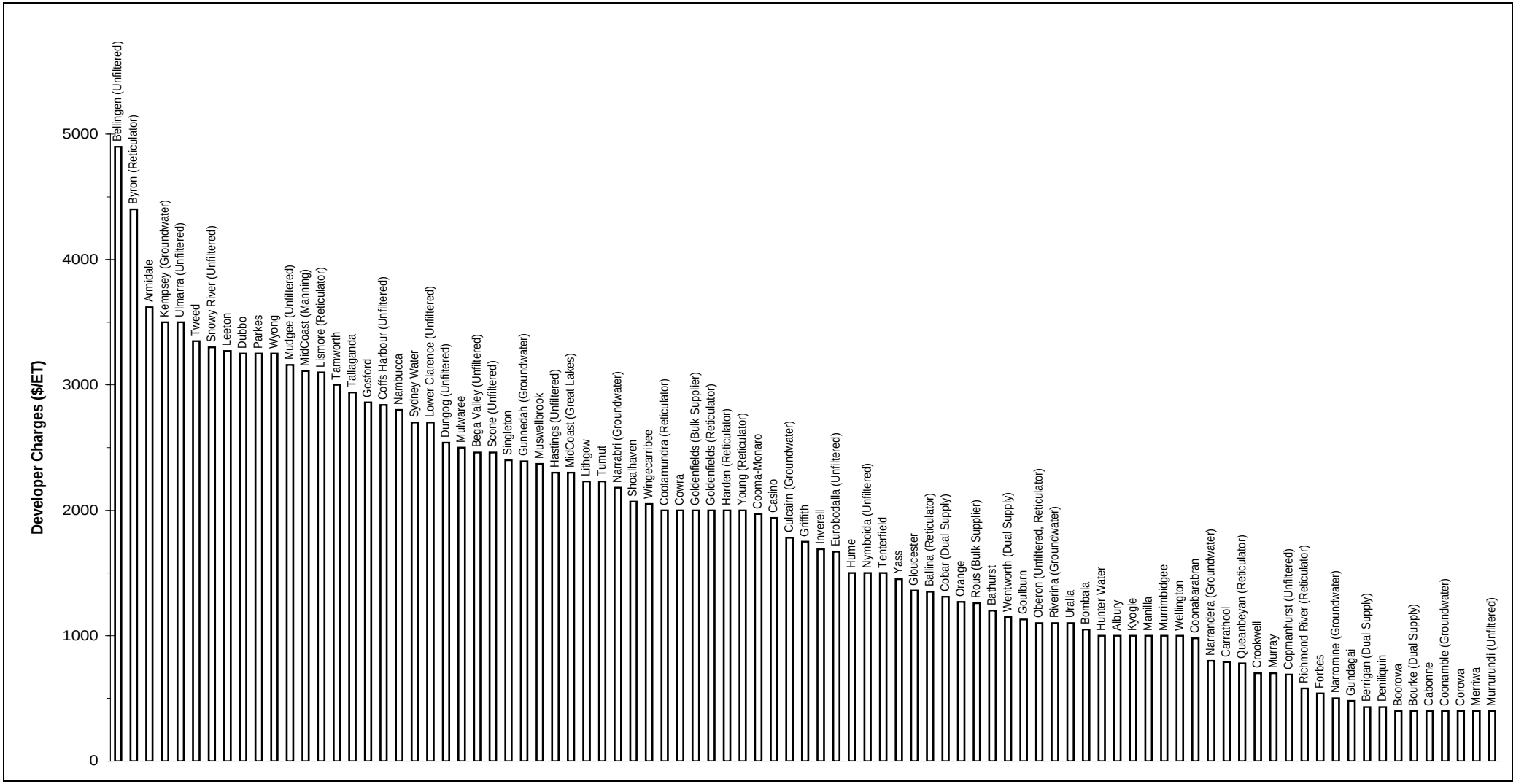
1. Typical Developer Charge for Water Supply
2. Annual Water Allowance, Water Usage Charge and Access Charge
3. Typical Residential Bill - Water Supply
4. Typical Developer Charge for Sewerage
5. Typical Residential Bill – Sewerage
6. Typical Developer Charge for Water Supply and Sewerage
7. Typical Residential Bill - Water Supply and Sewerage

GENERAL NOTES

1. Previous NSW Water Supply and Sewerage Performance Comparisons reports were compiled on a "per assessment" basis. This report has been prepared on a ***"per connected property"*** basis for consistency with national performance reporting. A connected property is a property that is connected to the system, as opposed to an assessment which is a bill issued by a water utility. Factors that influence this indicator are the number of vacant blocks (with no connection but which are billed as an assessment) and the number of multiple dwellings (eg. blocks of flats or units) with a single assessment.
2. The ratio of the number of connected properties to the number of assessments is reported to be about 0.95 for most utilities, although it ranges from 0.71 to 1.44. The data required for the calculation of this ratio was not well reported and has been estimated by DLWC for most utilities (shown in ***italics bold*** in column (2) of Tables 7 and 10). The NSW water utilities have been asked to carefully estimate this ratio for their businesses for the 1999/00 financial year to improve its accuracy.
3. The typical residential bill is based on a customer of the water utility's principal water supply or sewerage system, using the utility's average annual residential water consumption.
4. The average residential bill (Tables 8, 11 and Figures 28, 80) comprises the revenue from residential rates and charges divided by the number of connected residential properties and is less than the typical residential bill due to pensioner rebates and vacant lots (however, this would not be the case for utilities with an inclining block tariff or an annual water allowance, nor for those with access charges not independent of land value).
5. Drinking water quality guidelines have become more stringent. Previous reports were based on the 1987 NHMRC/AWRC Water Quality Guidelines, however, this report reports compliance with the 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines.
6. The average annual residential water consumption per connected property (Tables 5, 7 and Figure 22) refers to potable water consumption. As shown in Table 6, this comprises 94% (305,000/325,000) of the total 1998/99 water consumption for non-metropolitan NSW.
7. For consistency with national performance reporting, unaccounted for water now includes leakage.

8. ***Unfiltered –*** refers to a water utility with over 50% of its supply comprising unfiltered water ie. the utility does not have a water treatment works involving at least filtration and disinfection for 50% of its supply.
   Groundwater – refers to a utility with over 50% of its supply comprising good quality groundwater (unfiltered).
   Reticulator – refers to a utility which purchases over 70% of its source water from a bulk supplier and reticulates water to householders in its area.
   Bulk Supplier – refers to a utility whose main task is to provide a piped bulk water supply to other utilities, rather than reticulating water to householders.
   Dual Supply – refers to a utility with a potable reticulated water supply for indoor uses and a separate non-potable supply for outdoor uses.
9. The performance indicators for Sydney Water Corporation and Hunter Water Corporation have been obtained from WSAA Facts ’99.

1 Typical Developer Charge For Water Supply – 1999/00

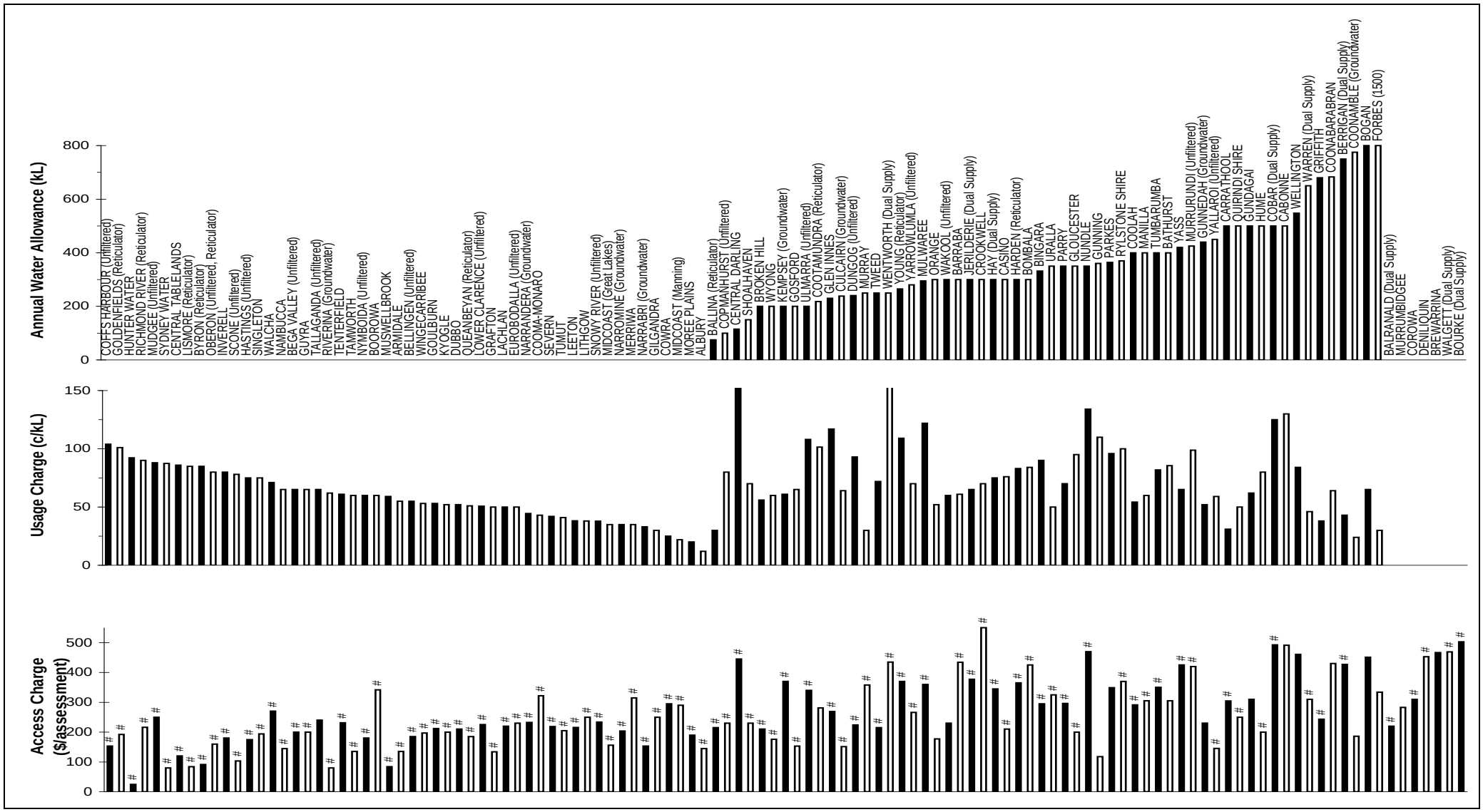


Parameter: Typical Water Supply Developer Charge (Q40)

Notes:

1. This figure shows ranked values of the typical developer charge for water supply for each council.
2. The Statewide median typical water supply developer charge was about $2,400 per equivalent tenement (ET) (Table 1).
3. 85 councils levied developer charges, 29 councils did not levy developer charges.
4. For general notes see page 33.

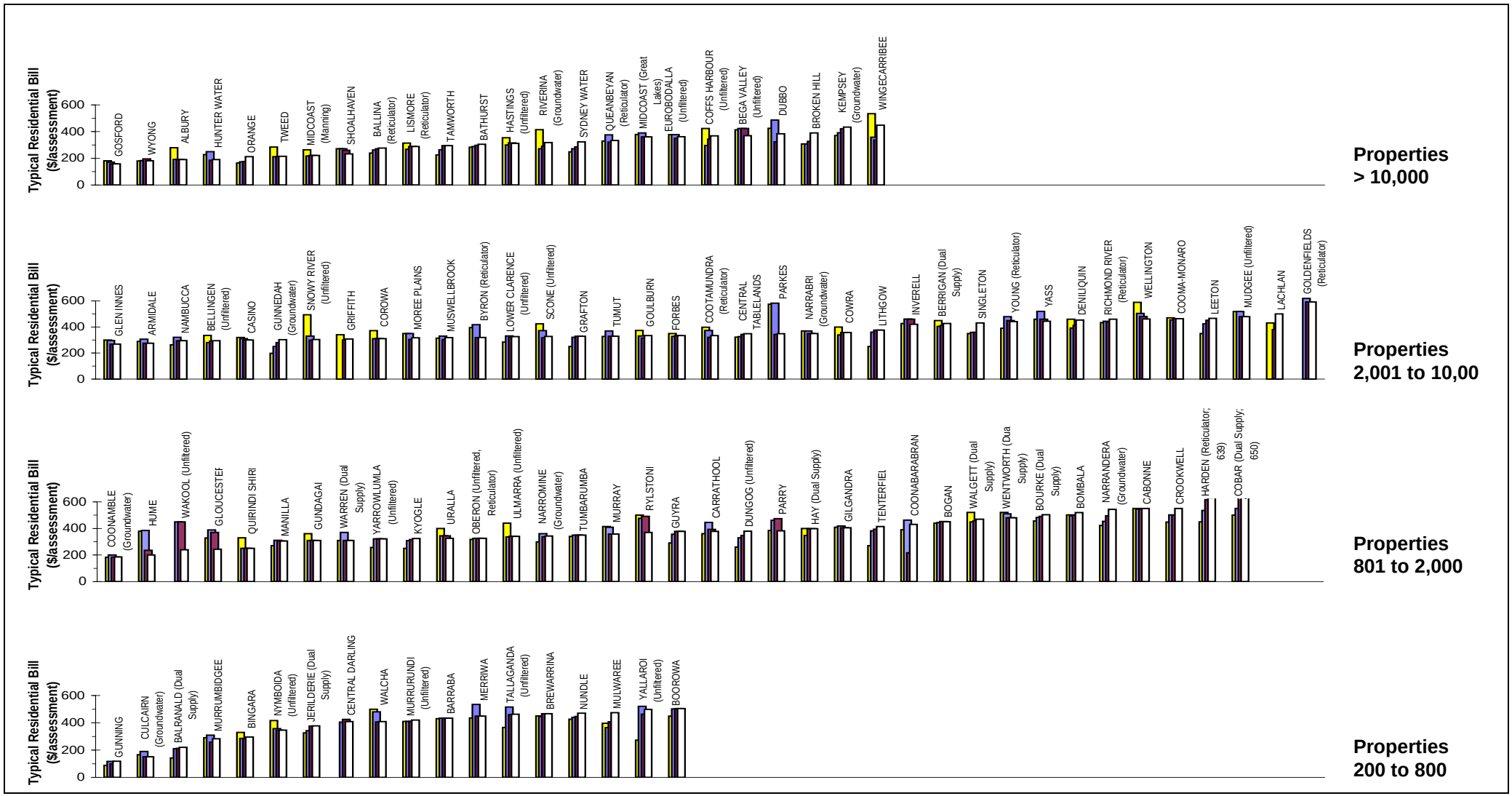
2 Annual Water Allowance, Usage Charge And Access Charge – 1999/00



Notes:

1. The water usage charge shown is for usage in excess of 200 kL/a or any water allowance. Councils with a two-part tariff have the usage charge shown for all water usage.
2. The Statewide median water usage charge was 60 c/kL. 20% of councils had a usage charge greater than 85c/kL. 80% of councils had a usage charge greater than 45 c/kL.
3. The water access charge for the councils with a water allowance is the minimum charge or rate.
4. The 99 councils which have an Access Charge independent of land value are indicated with an "#" on the bottom graph.

3 Typical Residential Bill - Water Supply

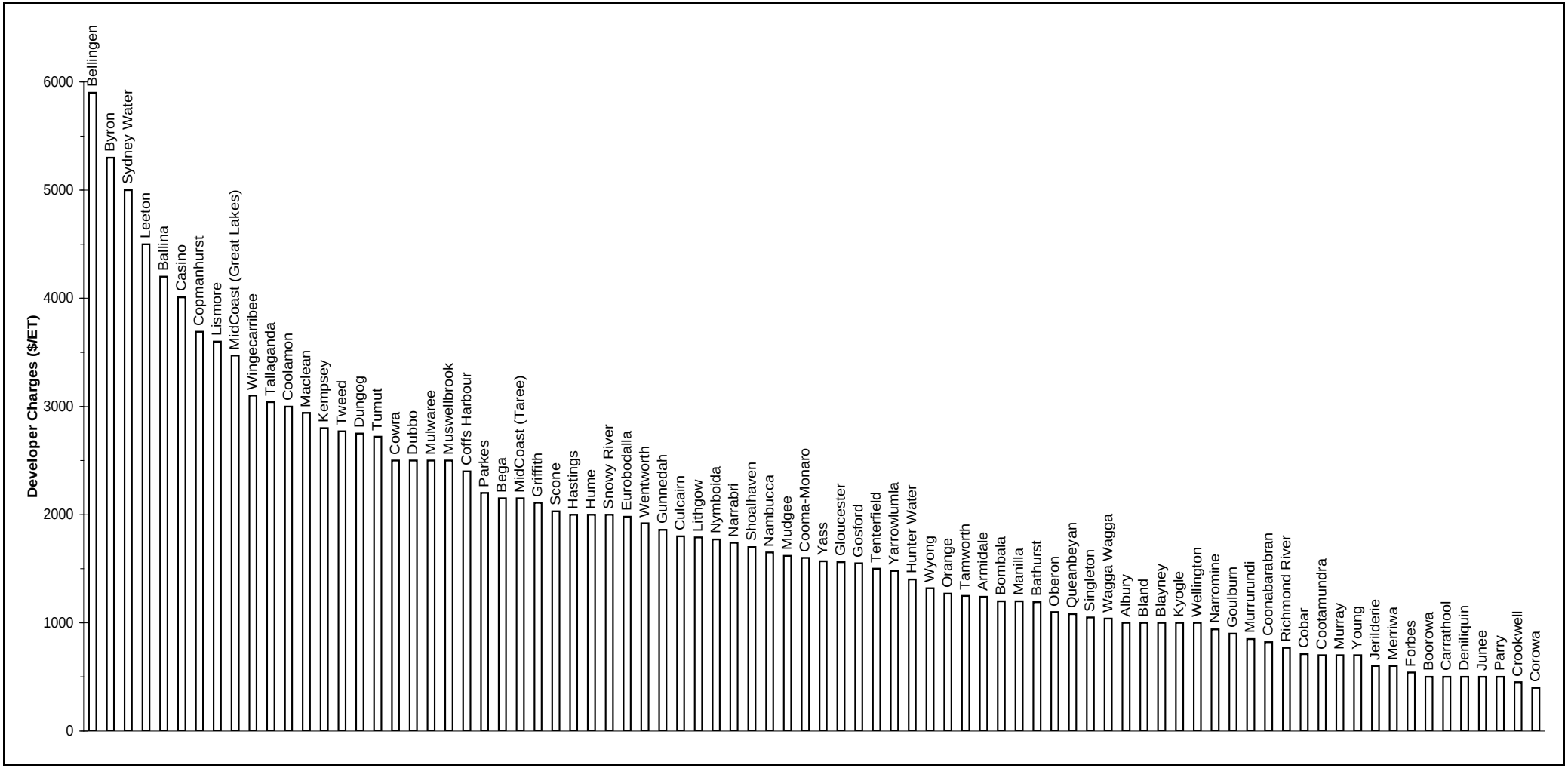


Parameter: Access Charge (Q37a) + Average Annual Residential Consumption (Fig.22) x Usage Charge (Q38b)

Notes:

1. This figure shows ranked values of the 1999/00 typical residential bill for water supply for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the water supply for the 37 councils shown ***range*** from about ***$270 to $590*** per assessment. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median typical residential bill for water supply was $310 per assessment (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.

4 Typical Developer Charge For Sewerage – 1999/00

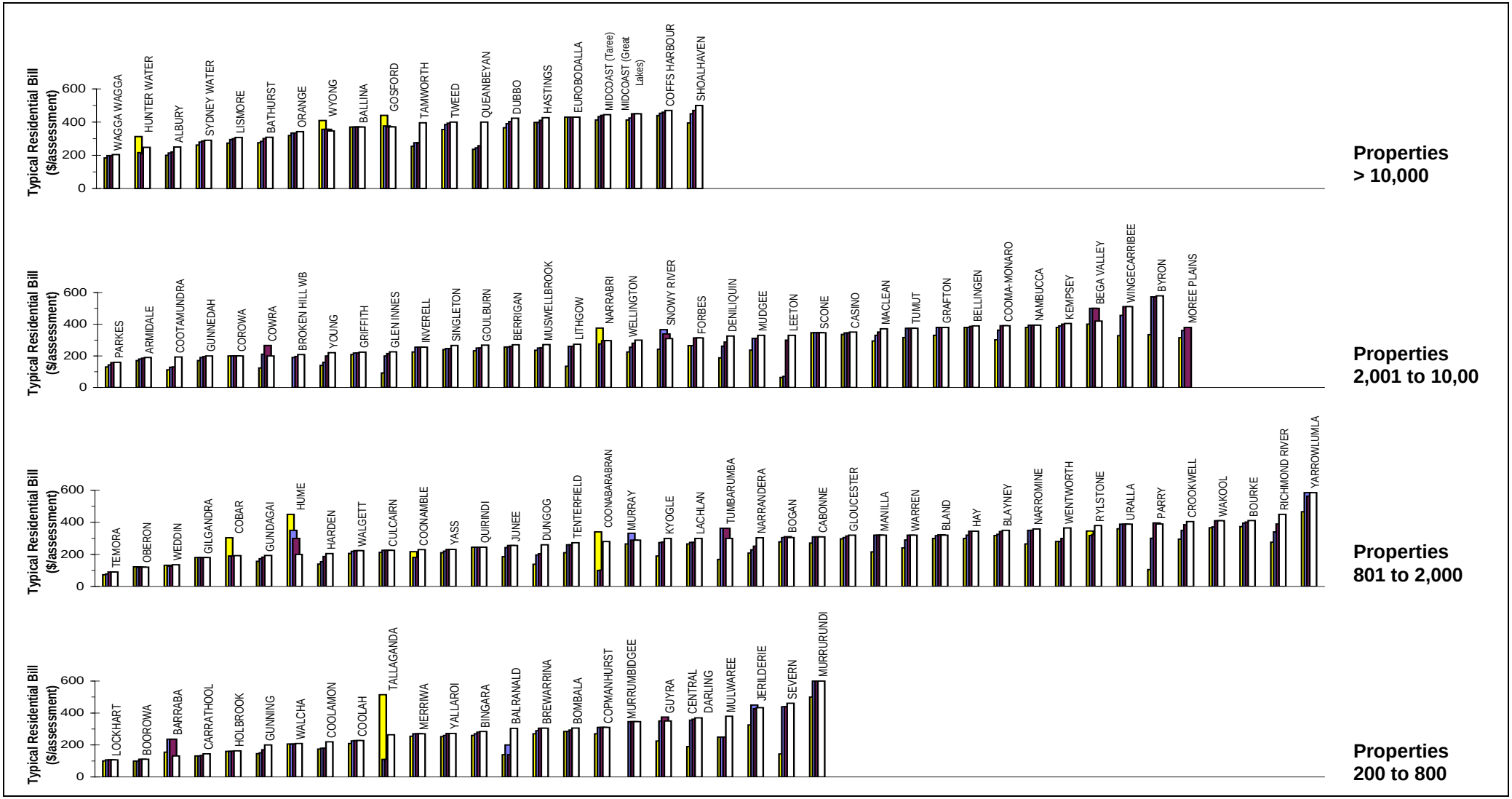


Parameter: Typical Sewerage Developer Charge (Q30)

Notes:

1. This figure shows ranked values of the typical developer charge for sewerage for each council.
2. The Statewide median typical sewerage developer charge was about $1,600 per equivalent tenement (ET) (Table 2).
3. 79 councils levied developer charges, 37 councils did not levy developer charges.
4. For general notes see page 33.

5 Typical Residential Bill - Sewerage

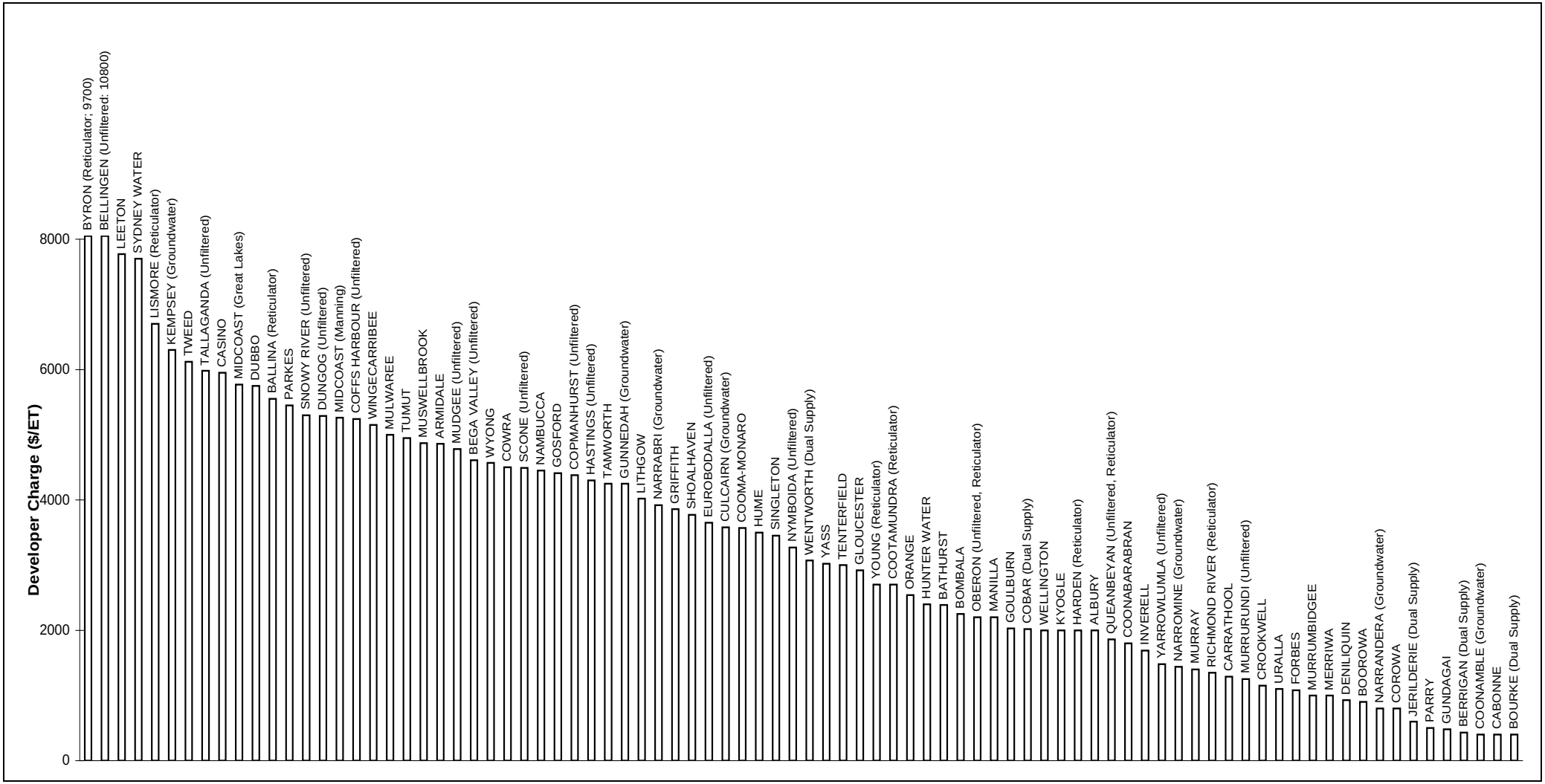


Parameter: Access Charge (Q28a).

Notes:

1. This figure shows ranked values of the 1999/00 typical residential bill for sewerage for each council in 4 groups based on the number of water supply connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the typical residential bill for sewerage bill for the 36 councils shown ***range*** from about ***$160 to $580*** per assessment. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median typical residential bill for sewerage was $395 per assessment (refer to Table 2 – percentage of connected properties basis).
3. For general notes see page 33.

6 Typical Developer Charge For Water Supply And Sewerage – 1999/00

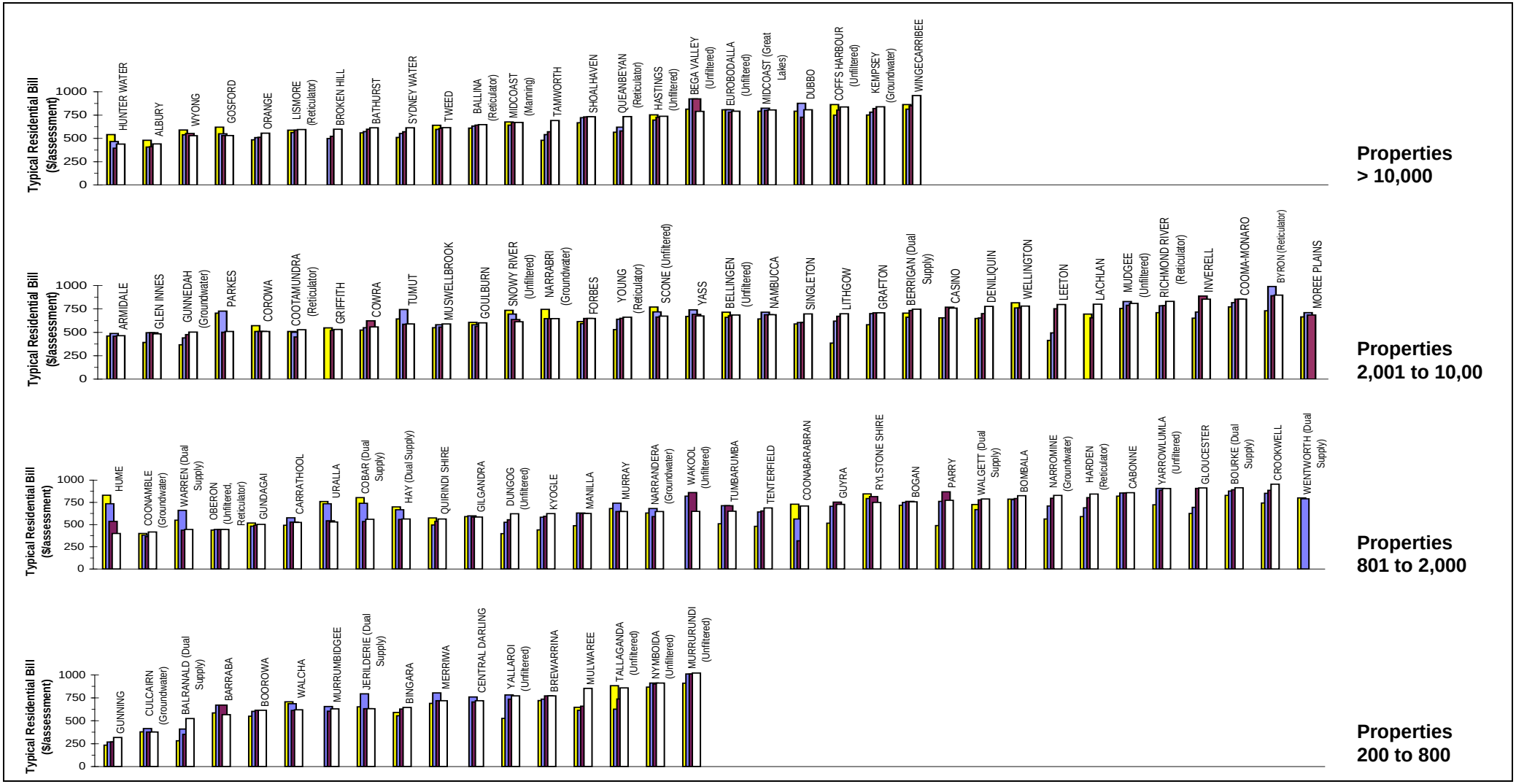


Parameter: Typical Water Supply Developer Charges (Fig. 1) + Typical Sewerage Developer Charges (Fig. 3)

Notes:

1. This figure shows ranked values of the typical developer charge for water supply and sewerage for each council.
2. The Statewide median typical developer charge for water supply and sewerage was $4,400 per equivalent tenement (ET).
3. For general notes see page 33.

7 Typical Residential Bill - Water Supply And Sewerage



Parameter: Typical Water Supply Residential Bill (Fig. 3) + Typical Sewerage Residential Bill (Fig. 5)

1996/97 1997/98 1998/99 1999/00

Notes:

1. This figure shows ranked values of the 1999/00 typical residential bill for water supply and sewerage for each council in 4 groups based on the number of water supply connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the water supply and sewerage bills for the 34 councils shown ***range*** from about ***$465 to $900*** per assessment. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median typical residential bill for water supply and sewerage was $650 per assessment (Table 5).
3. For general notes see page 33.

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4. 1998/99 WATER SUPPLY AND SEWERAGE FIGURES

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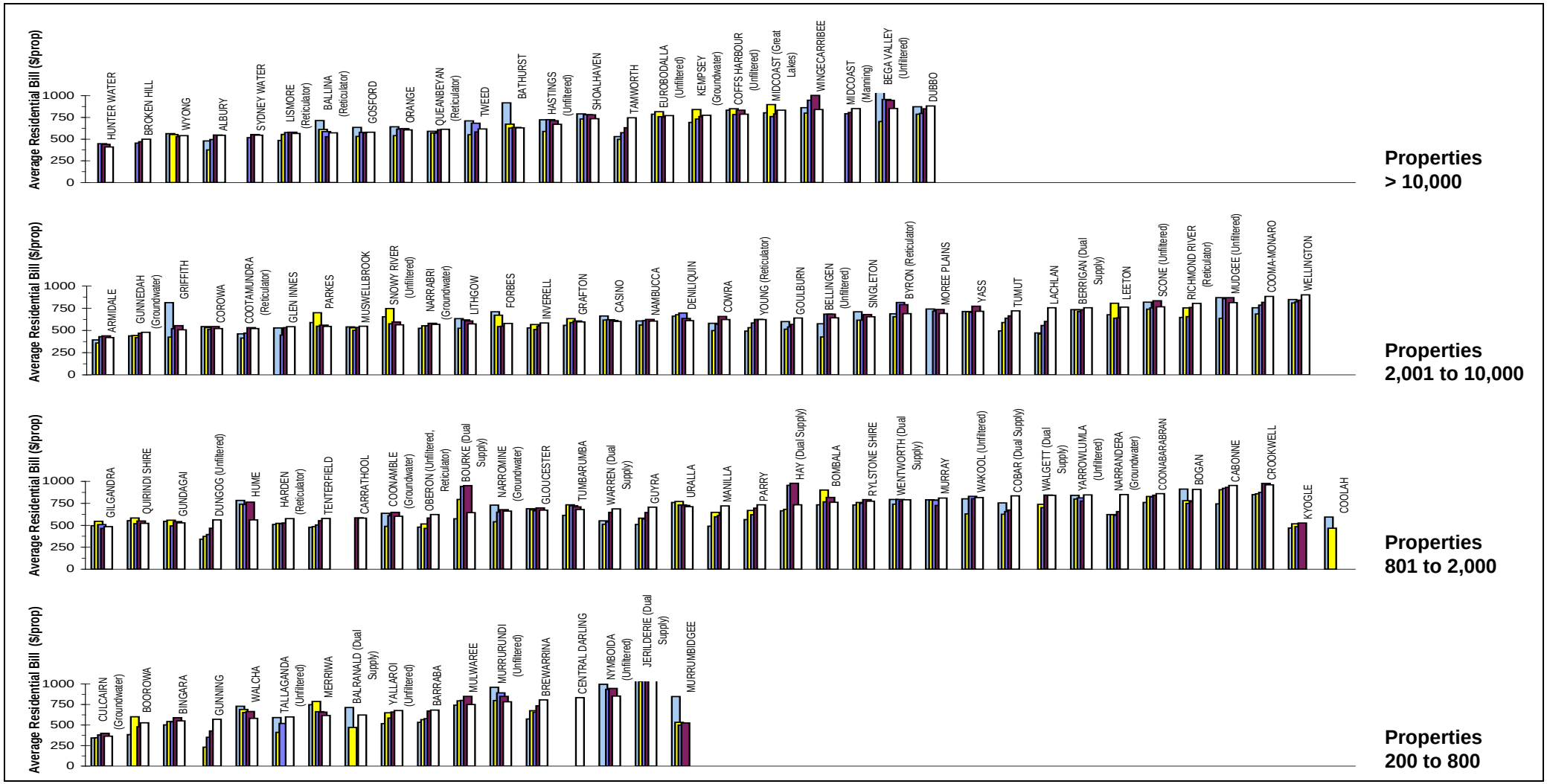
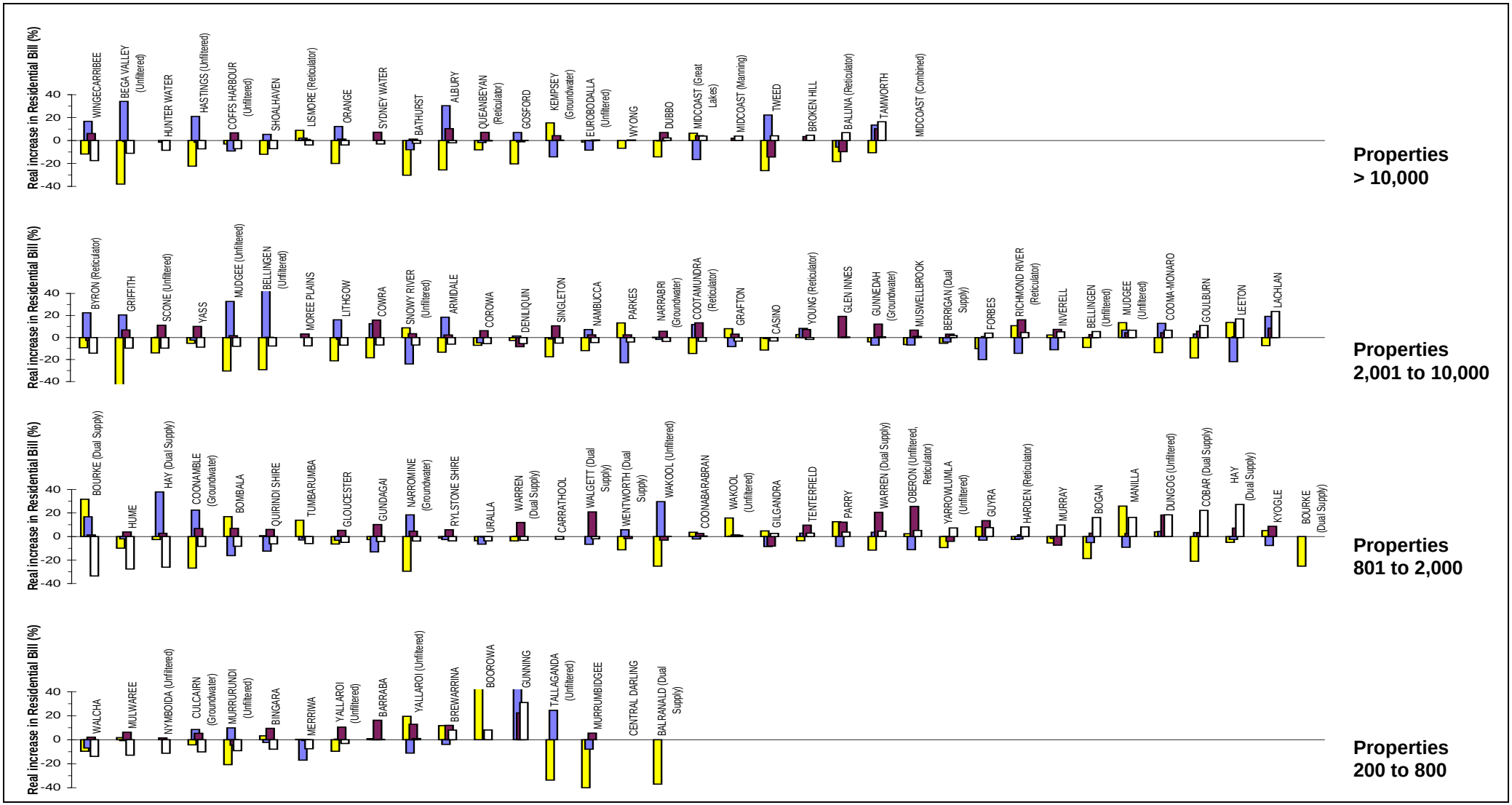


Parameter: Water Supply Average Residential Bill (Fig 28) + Sewerage Average Residential Bill (Fig 80)

Notes:

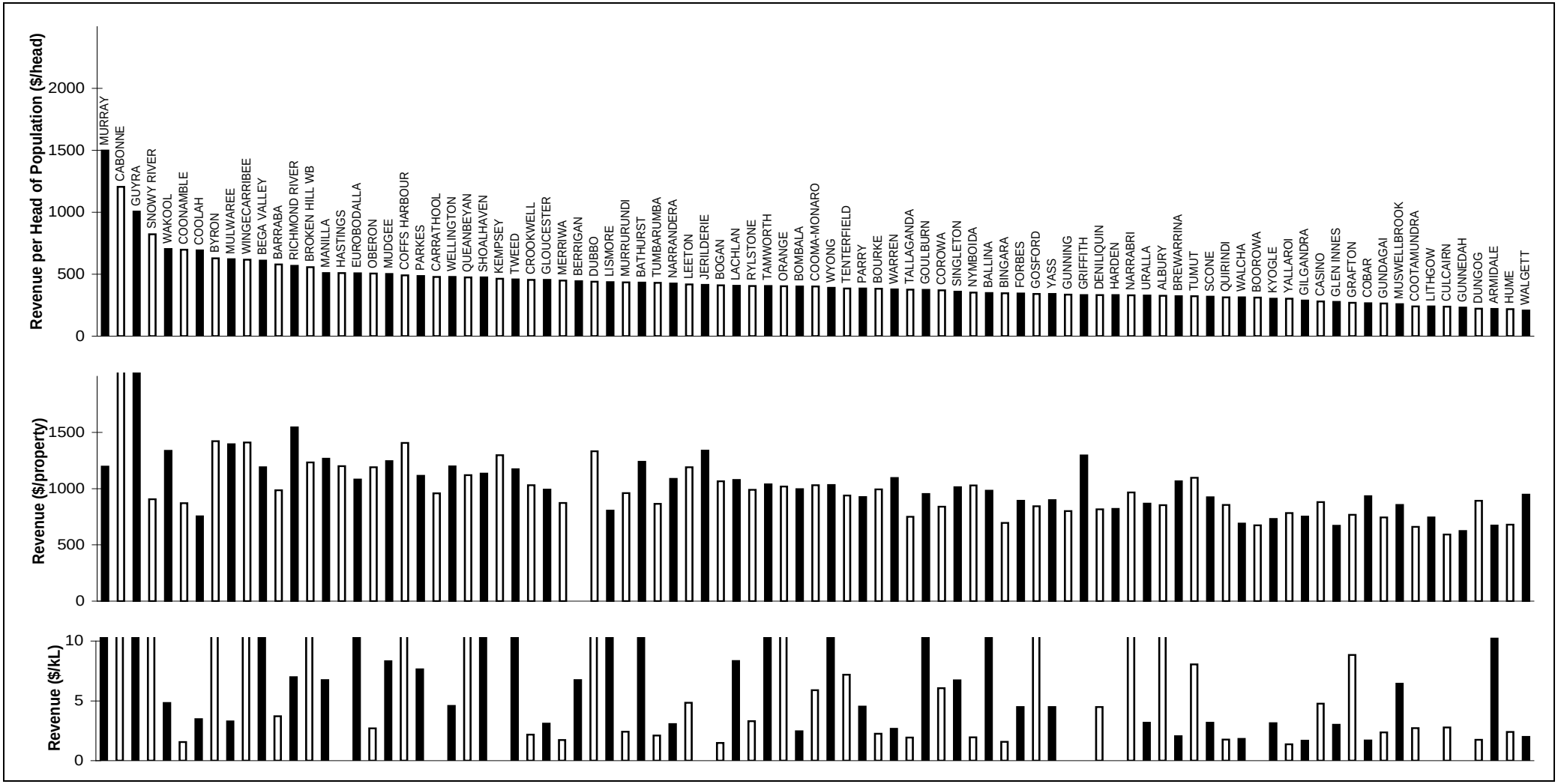
1. This figure shows ranked values of the 1998/99 average residential bill for water supply and sewerage for each council in 4 groups based on the number of water supply connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the water supply and sewerage average residential bills for the 34 councils shown ***range*** from about ***$420 to $900*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median average residential bill for water supply and sewerage was $620 per connected property.
3. For general notes see page 33.



Parameter: Water Supply Average Residential Bill for (Fig 28) + Sewerage Average Residential Bill (Fig 80)
(Water Supply Average Residential Bill (Fig 28) + Sewerage Average Residential Bill (Fig 80)) for previous year x (1+CPI increase)

Notes:

1. This figure shows ranked values of the 1998/99 real increase in the water supply and sewerage average residential bill for each council in 4 groups based on the number of water supply connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the real increase in the average residential bill for the 35 councils shown ***ranges*** from about ***–16% to 27%***.
2. For general notes see page 33.



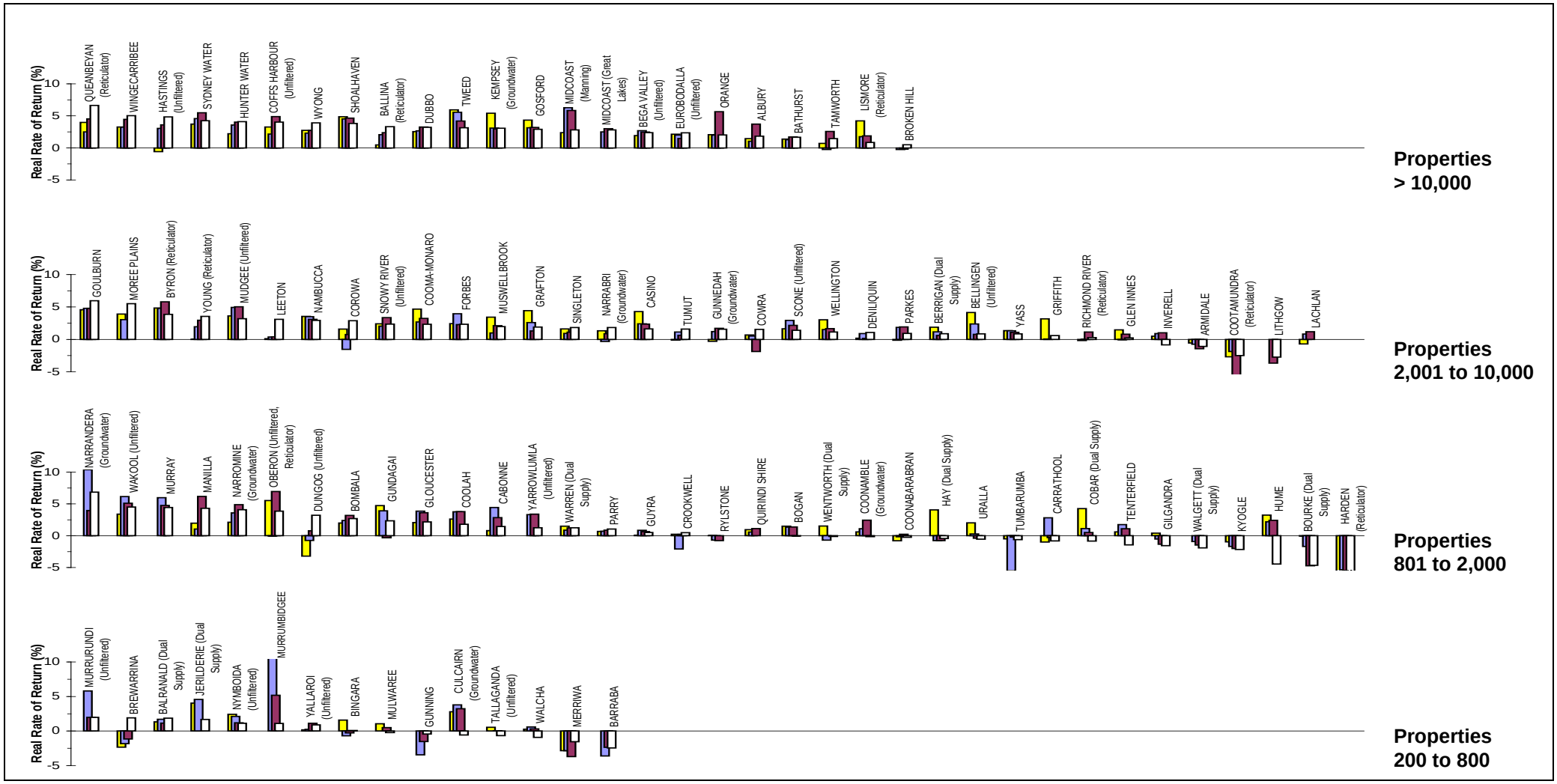
Parameter: $\frac{\text{Water Supply Revenue (W13)}}{\text{Water Supply Population (Q1a)}} + \frac{\text{Sewerage Revenue (S14)}}{\text{Sewerage Population (Q1a)}}$

Parameter: $\frac{\text{Water Supply Revenue (W13)}}{\text{Water Supply Properties (Q3)}} + \frac{\text{Sewerage Revenue (S14)}}{\text{Sewerage Properties (Q3)}}$

Parameter: $\frac{\text{Water Supply Revenue (W13)}}{\text{Water Consumption (Q17h)}} + \frac{\text{Sewerage Revenue (S14)}}{\text{Sewage Treated (Q21a)}}$

Notes:

1. For general notes see page 33.



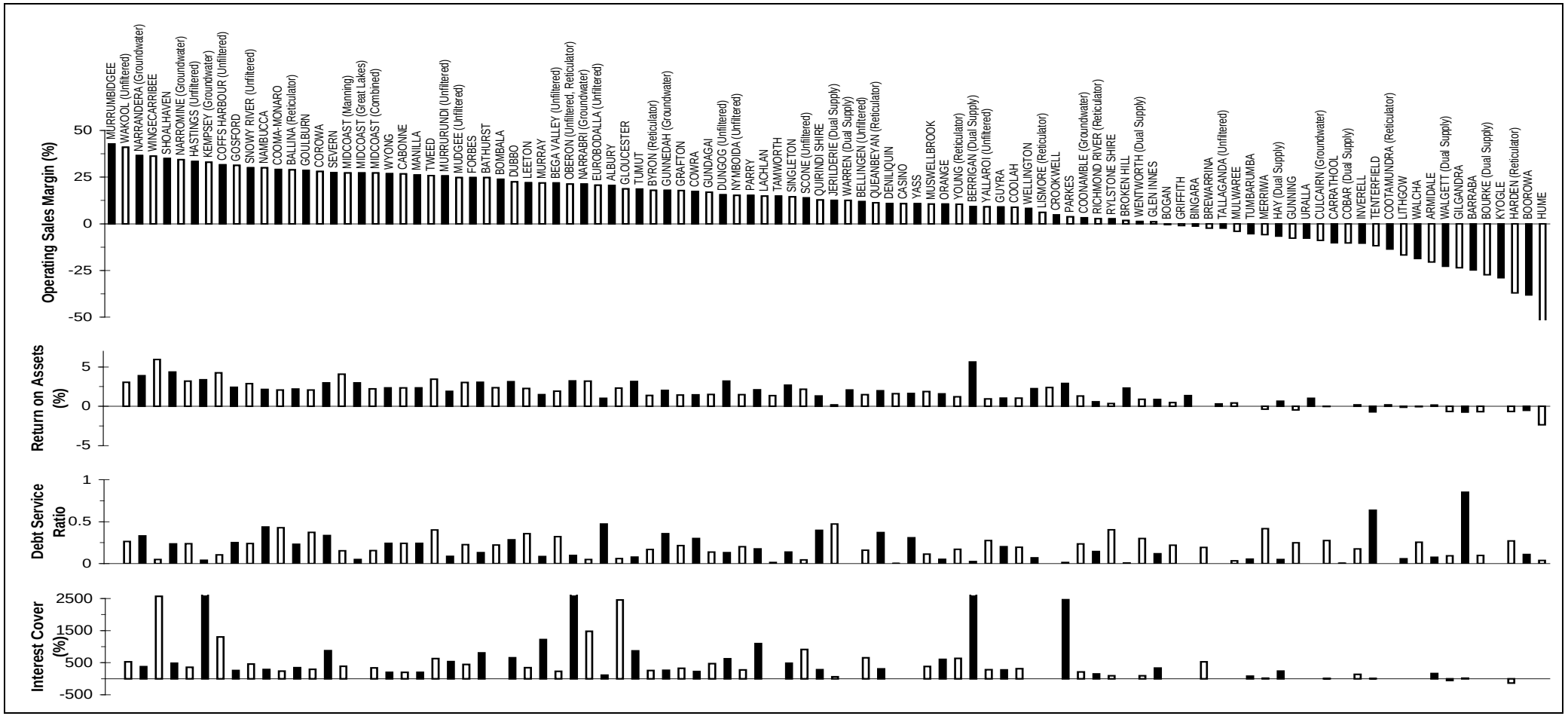
Parameter: (Revenue (S14+W13) - Grants for Acquisition of Assets (S12a+W11a) - Total Expenses (S5+W5) + Interest Expense (S4a+W4a) - Interest Income (S10+W9)) x 100
Written Down Replacement Cost of Property, Plant & Equipment (S43+W42)

1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows 1998/99 ranked values of the water supply and sewerage economic real rate of return for each council in 4 groups based on the number of water supply connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the real rates of return for the 35 councils shown ***range*** from about ***6% to –2.7%***.
2. The Statewide median economic real rate of return for water supply and sewerage was 2.9% (Table 5).
3. For general notes see page 33.

12 Operating Sales Margin, Return on Assets, Debt Service Ratio and Interest Cover – 1998/99



Parameter: $\frac{\text{Total Revenue (S14+W13) - Grants for Capital Works (S12a+W11a) - Developer Provided Assets (S13b+W12b) - Total Expense (S5+W5) + Interest Expenses (S4a+W4a)}}{\text{Total Revenue (S14+W13) - Grants for Capital Works (S12a+W11a) - Developer Provided Assets (S13b+W12b) - Interest on Investments (S10+W9)}}$

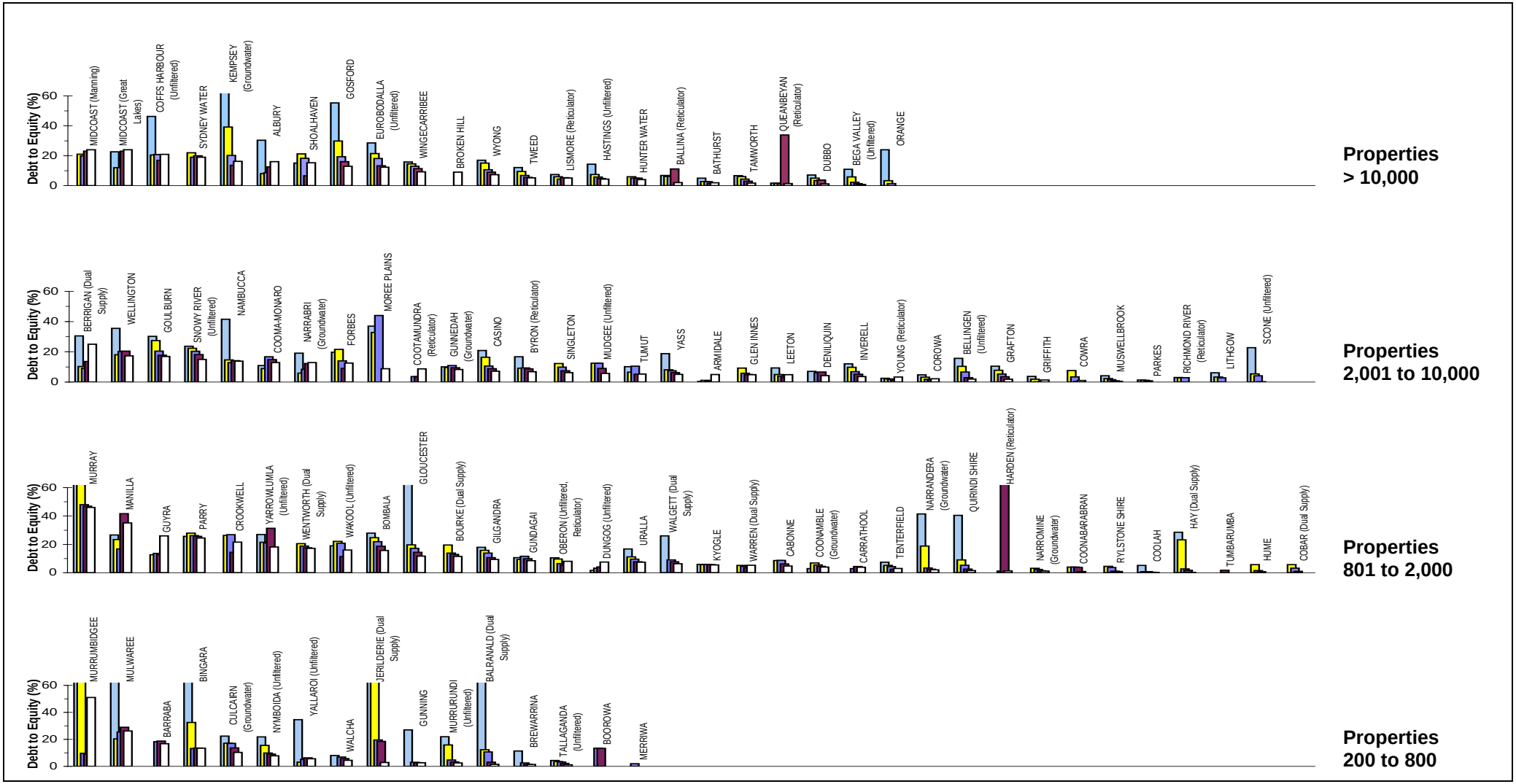
Parameter: $\frac{\text{Total Revenue (S14+W13) - Grants for Capital Works (S12a+W11a) - Total Expenses (S5+W5)}}{\text{Total Equity (S42+W41)}}$

Parameter: $\frac{\text{Payment of Debts (S18+W17) + Interest Expense (S4a+W4a)}}{\text{Total Revenue (S14+W13) - Grants for Capital Works (S12a+W11a) - Developer Provided Assets (S13b+W12b)}}$

Parameter: $\frac{\text{Total Revenue (S14+W13) - Grants for Capital Works (S12a+W11a) - Total Expenses (S5+W5) + Interest Expense (S4a+W4a)}}{\text{Interest Expense (S4a+W4a)}}$

Notes:

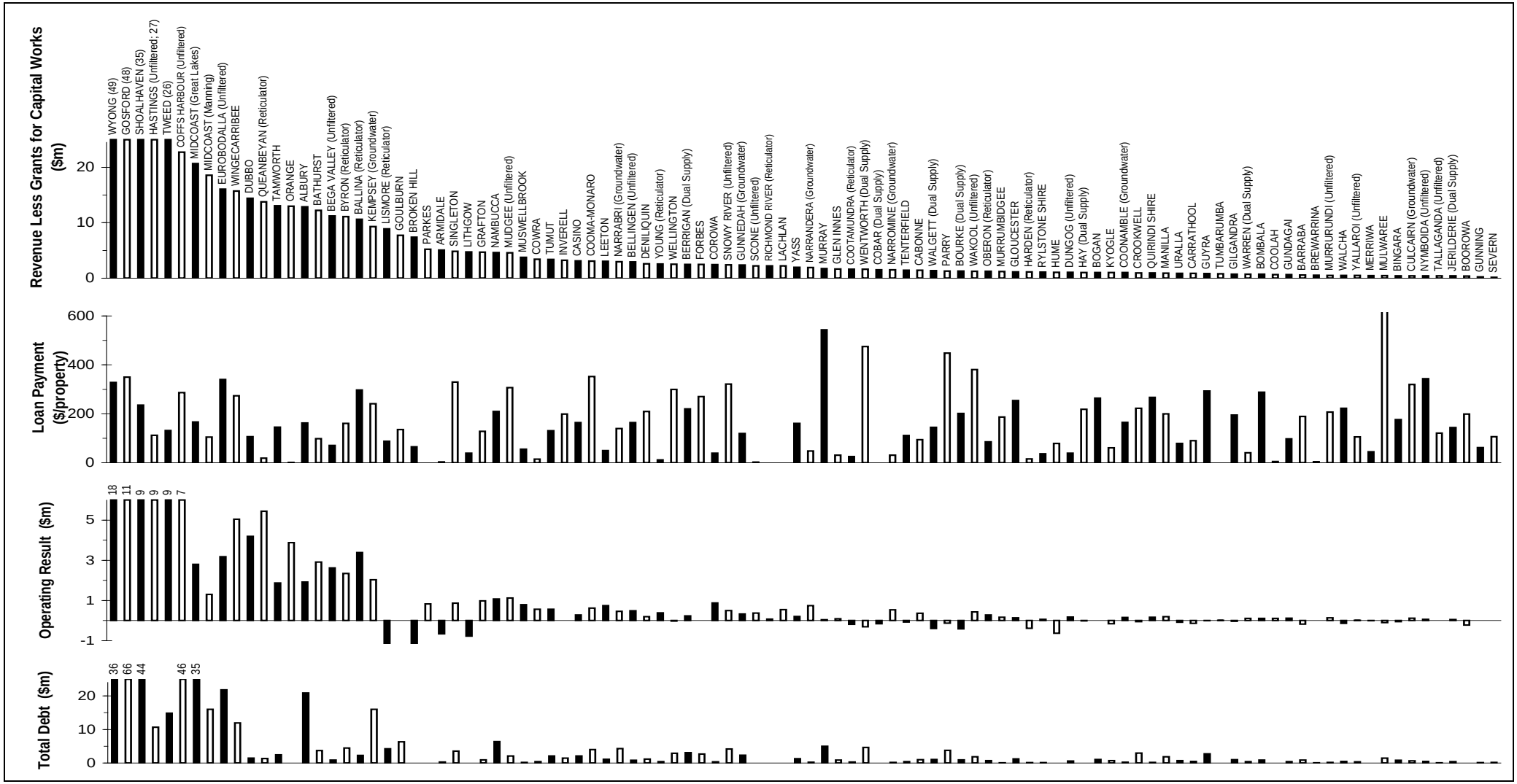
1. For general notes see page 33.



Parameter: $\frac{\text{(Bank Overdraft (S34+W33) + Borrowing (S36+W35)}}{\text{Total Equity (W42+W41)}}$

Notes:

1. This figure shows 1998/99 ranked values of the water supply and sewerage debt to equity for each council in 4 groups based on the number of water supply connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the debt to equity for the 35 councils shown ***ranges*** from about ***21% to 0%.***
2. The Statewide median debt to equity ratio for water supply and sewerage was 7% (Table 5).
3. For general notes see page 33.



Parameter: Total Revenue (S14+W13) - Grants for Capital Works (S12a+W11a)

Parameter: $$\frac{\text{Payment of Debts (S18+W17) + Interest Expense (S4a+W4a)}}{\text{(No. of Residential Properties (Water- Q3a) + No. of Non-Residential Properties (Q3b)) x No. of Connected Residential Properties per Assessment}}$$

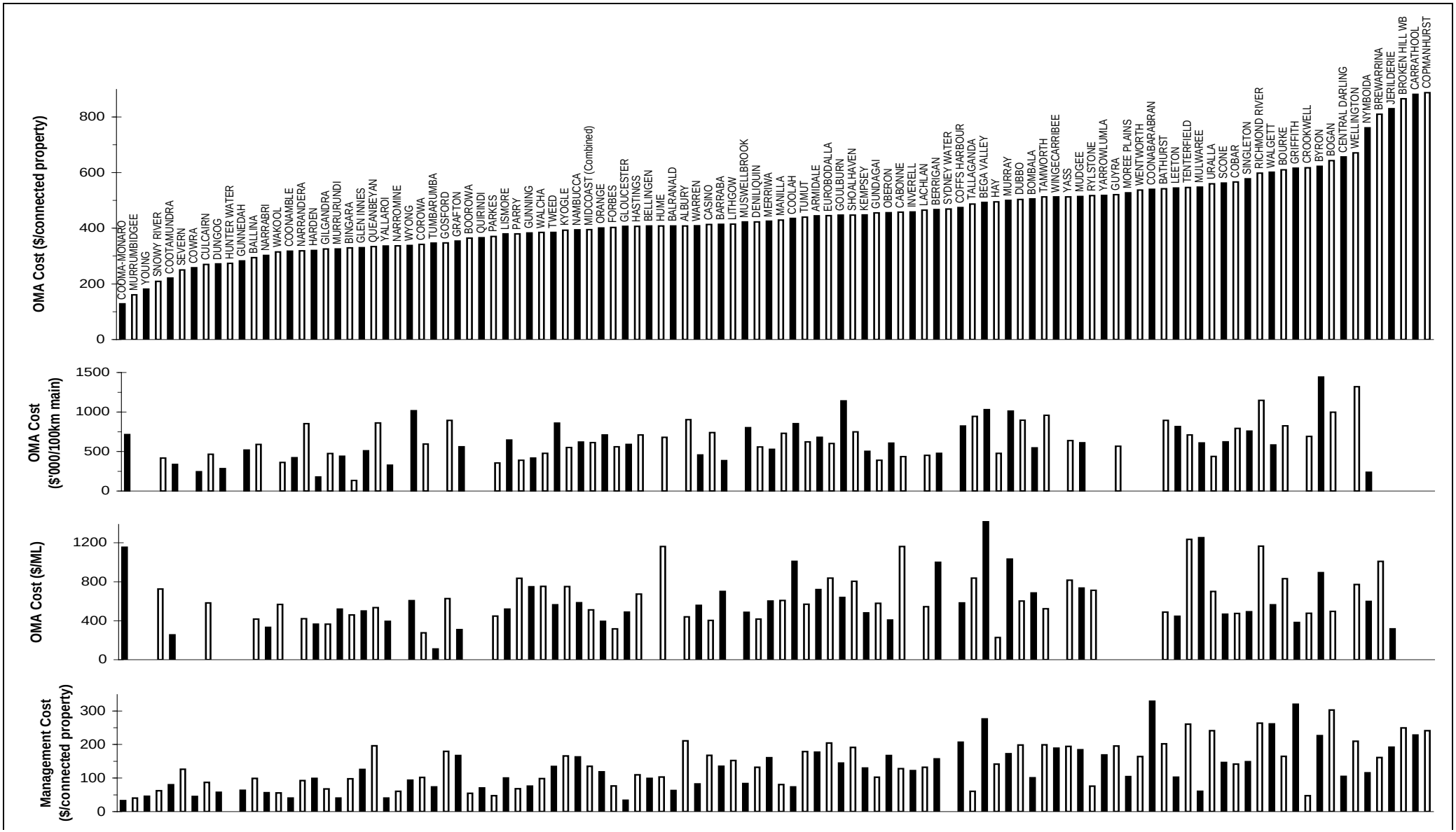
Parameter: Operating Result (S15+W17) - Grants for Capital Works (S12a+W11a)

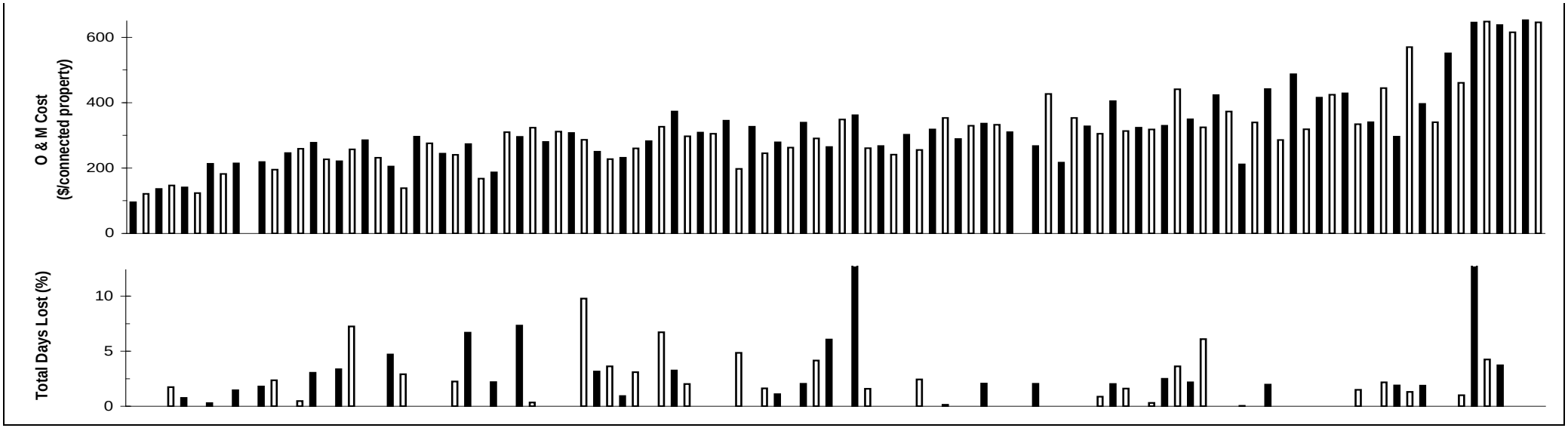
Parameter: Borrowings (S36 + W35) + Bank Overdraft (S34 + W33)

Notes:

1. For general notes see page 33.

15 Operating Cost, Management Cost, Operation and Maintenance Cost and Days Lost – 1998/99





Parameter: $\frac{\text{Management Expenses (S1+W1) + Operations Expenses (S2+W2) – Purchase of Water(W2o)}}{\text{(No. of Residential Properties (Water- Q3a) + No. of Non-Residential Properties (Q3b)) x No. of Connected Residential Properties per Assessment}}$

Parameter: $\frac{\text{Management Expenses (S1+W1) + Operations Expenses (S2+W2) – Purchase of Water(W2o)}}{\text{Length of Sewerage Mains (Q10a+Q10b) + Length of Water Mains (Q17a+Q17b+Q17c)}}$

Parameter: $\frac{\text{Management Expenses (S1+W1) + Operations Expenses (S2+W2) – Purchase of Water(W2o)}}{\text{Volume of Sewage Treated (Q36) + Water Consumption (Q18h)}}$

Parameter: $\frac{\text{Management Expenses (S1+W1)}}{\text{(No. of Residential Properties (Water- Q3a) + No. of Non-Residential Properties (Q3b)) x No. of Connected Residential Properties per Assessment}}$

Parameter: $\frac{\text{Operations Expenses (S2+W2) – Purchase of Water(W2o)}}{\text{(No. of Residential Properties (Water- Q3a) + No. of Non-Residential Properties (Q3b)) x No. of Connected Residential Properties per Assessment}}$

Parameter: $\frac{\text{Total No. of Sewerage Days Lost (Q27) + Total No. of Water Days Lost (Q36)}}{\text{(Equivalent Full-time Sewerage Employees (Q26) + Equivalent Full-time Water Employees (Q35)) x available working days (ie. 230)}}$

Notes:

1. For general notes see page 33.

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5. 1998/99 WATER SUPPLY FIGURES

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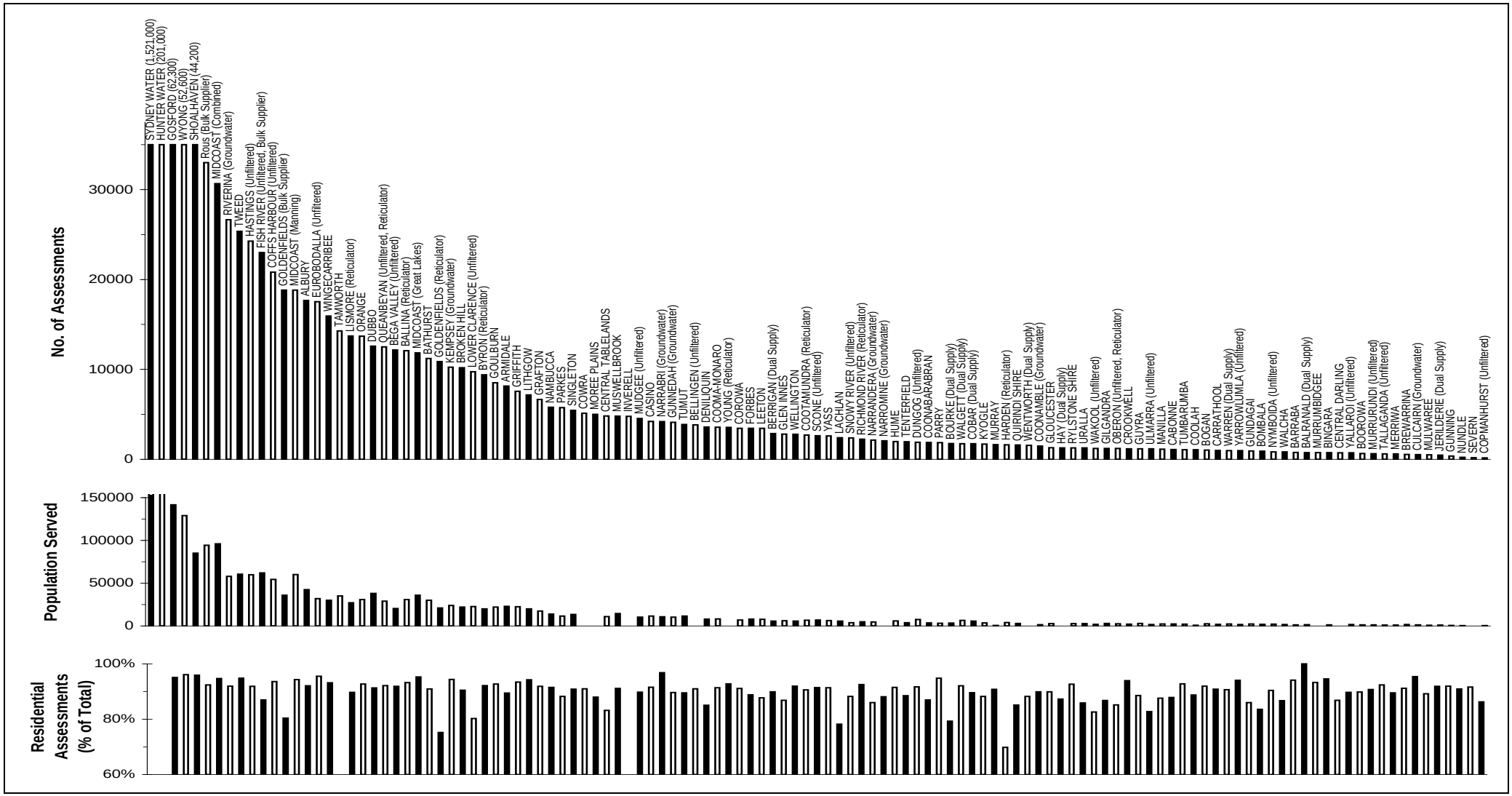


Parameter: No.of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)

Parameter: Population Served (Q1a)

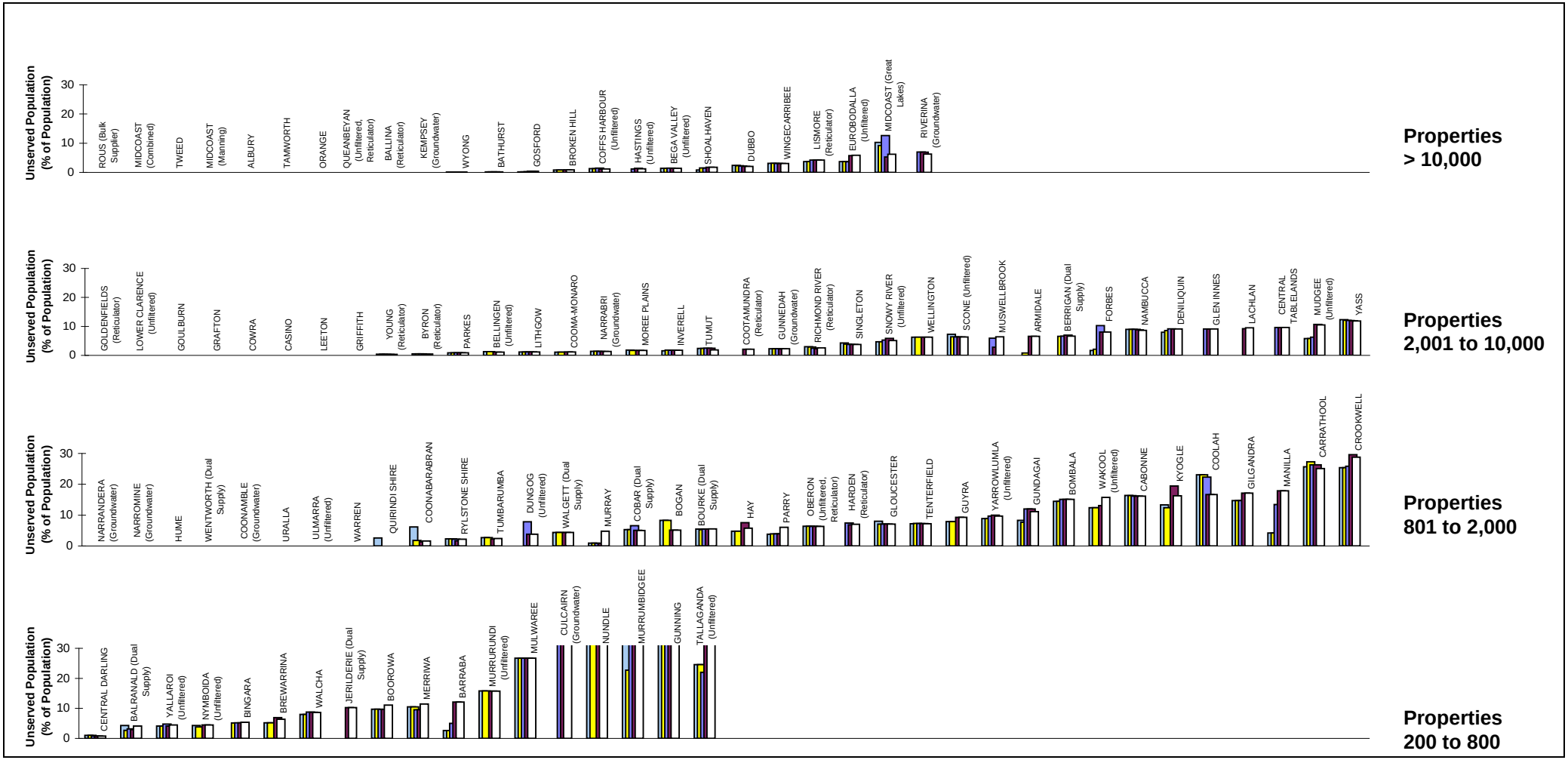
Parameter:

$$\frac{\text{No. of Residential Assessments (Q4a)} \times 100}{\text{No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)}}$$

Notes:

1. For general notes see page 33.

17 Urban Population without Water Supply

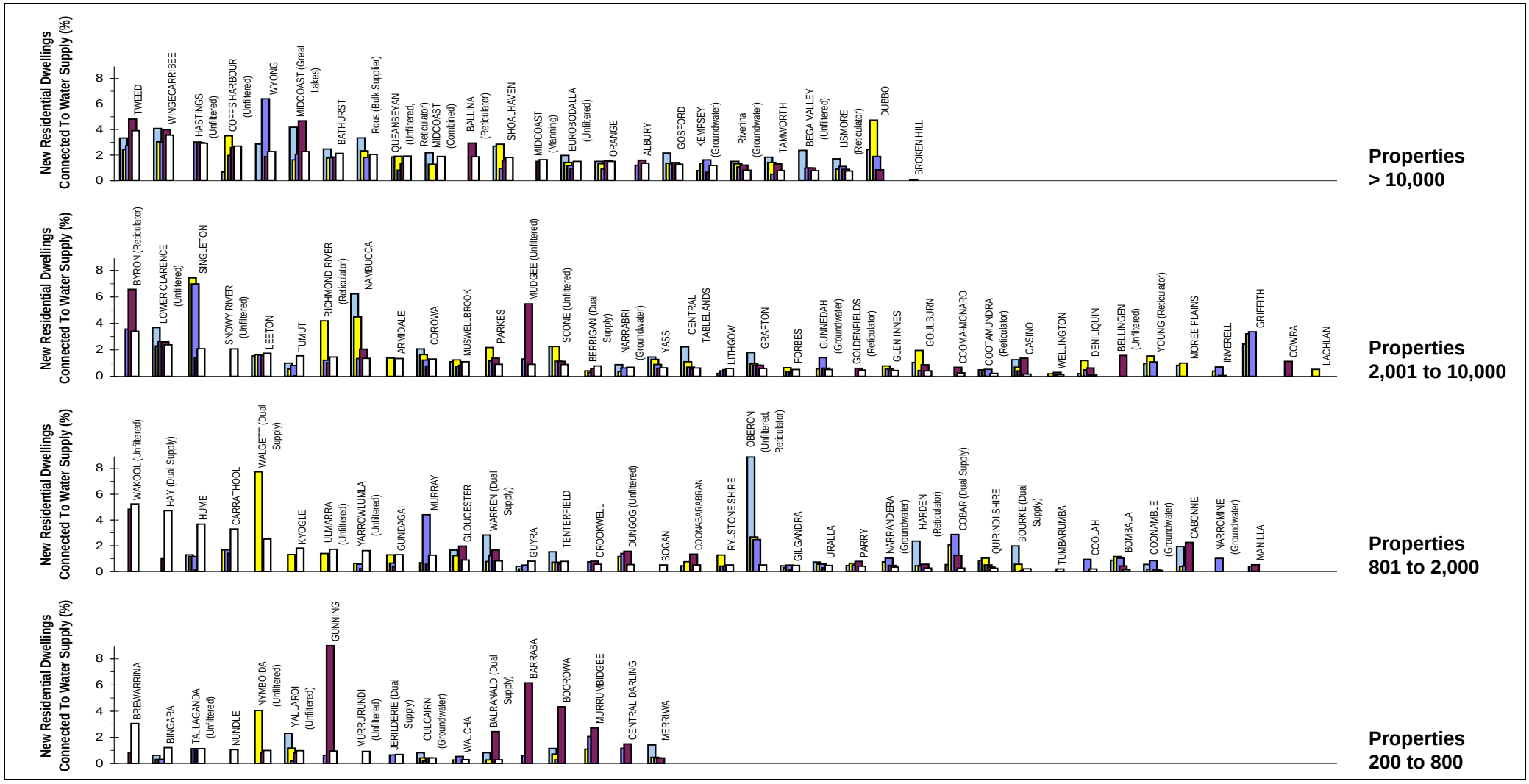


Parameter: $\dfrac{\text{Unserved Urban Population in Council Area (Q7b) x 100}}{\text{Population Served (Q1a) + Unserved Population (Q7b)}}$

Notes:

1. This figure shows 1998/99 ranked values of the percentage of urban population without a reticulated public water supply service for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one Council***. As an example, for the property range from 2001 to 10,000, the percentage of urban population without a reticulated public water supply for the 34 councils shown ***ranges*** from about ***0 to 13%***. Results for the previous four years are also shown.
2. The Statewide median urban population without a reticulated public water supply was 1.1 % based on 111 reporting councils (Table 1).
3. Of the 108 councils which reported, 32 councils had an urban population of at least 500 without a reticulated public water supply; 31 councils had over 10% of their urban population without a reticulated public water supply.
4. Of the 108 councils which reported, the percentage of urban population without a reticulated public water supply for the median council was 4.5%. 80% of councils had fewer than 11% of their urban population without such a water supply. The total reported urban population in non-metropolitan NSW without such a water supply service is 40,000.
5. 3% of councils did not report this item and should do so in future.

18 New Residential Dwellings Connected

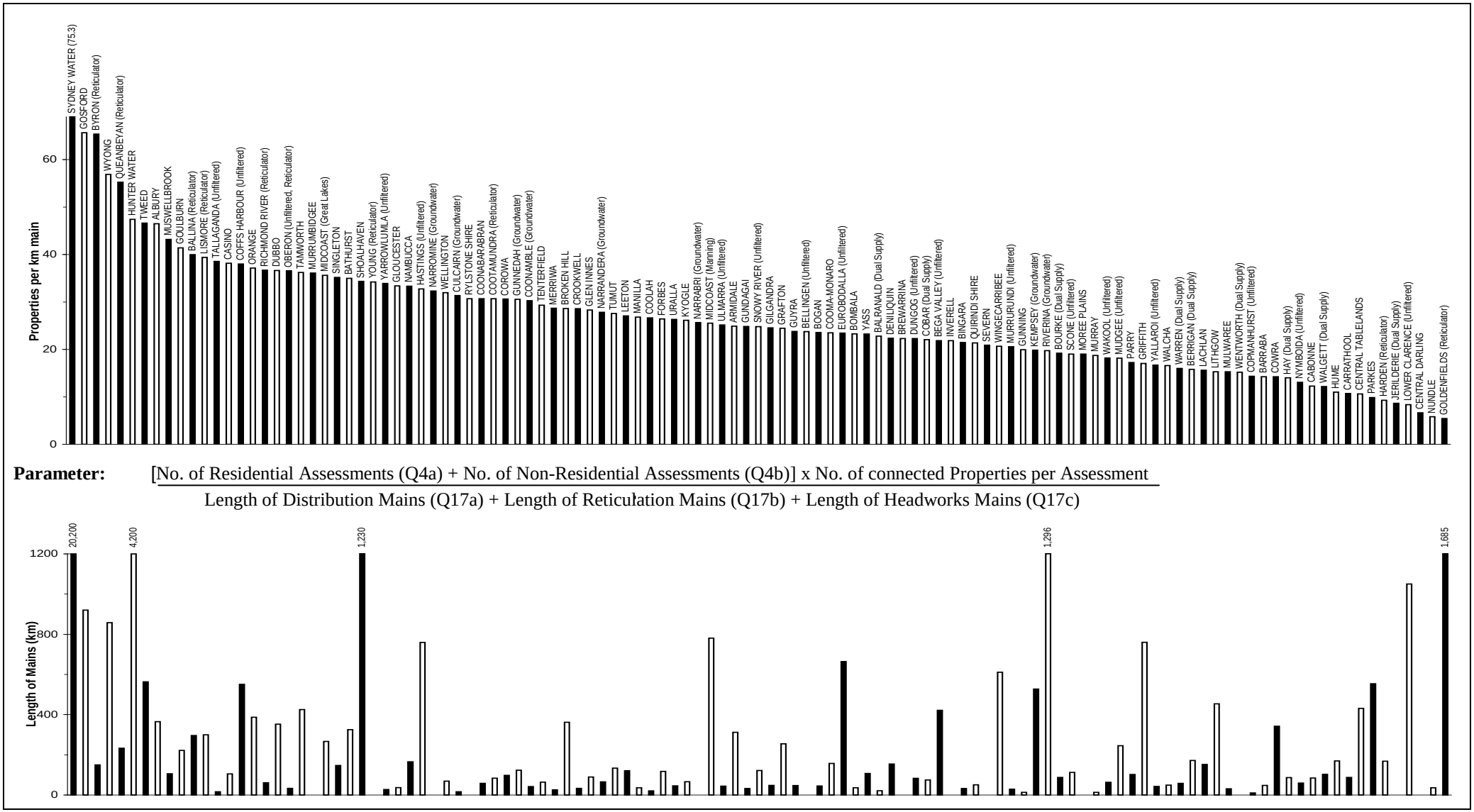


Parameter:

$$\frac{\text{No. of New Residential Dwellings Connected in Year (Q6) x 100}}{\text{No. of Residential Assessments (Q4a) x No. of connected Residential Properties per Residential Assessment}}$$

Notes:

1. This figure shows 1998/99 ranked values of the percentage of new residential dwellings connected to water supply for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one Council***. As an example, for the property range from 2,001 to 10,000, the percentage of new connections for the 37 councils shown ***ranges*** from about ***3.4 to 0***. Results for the previous 4 years are also shown.
2. The Statewide median percentage of new residential dwellings connected to water supply is 1.4 % of the existing number of connected residential properties (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.

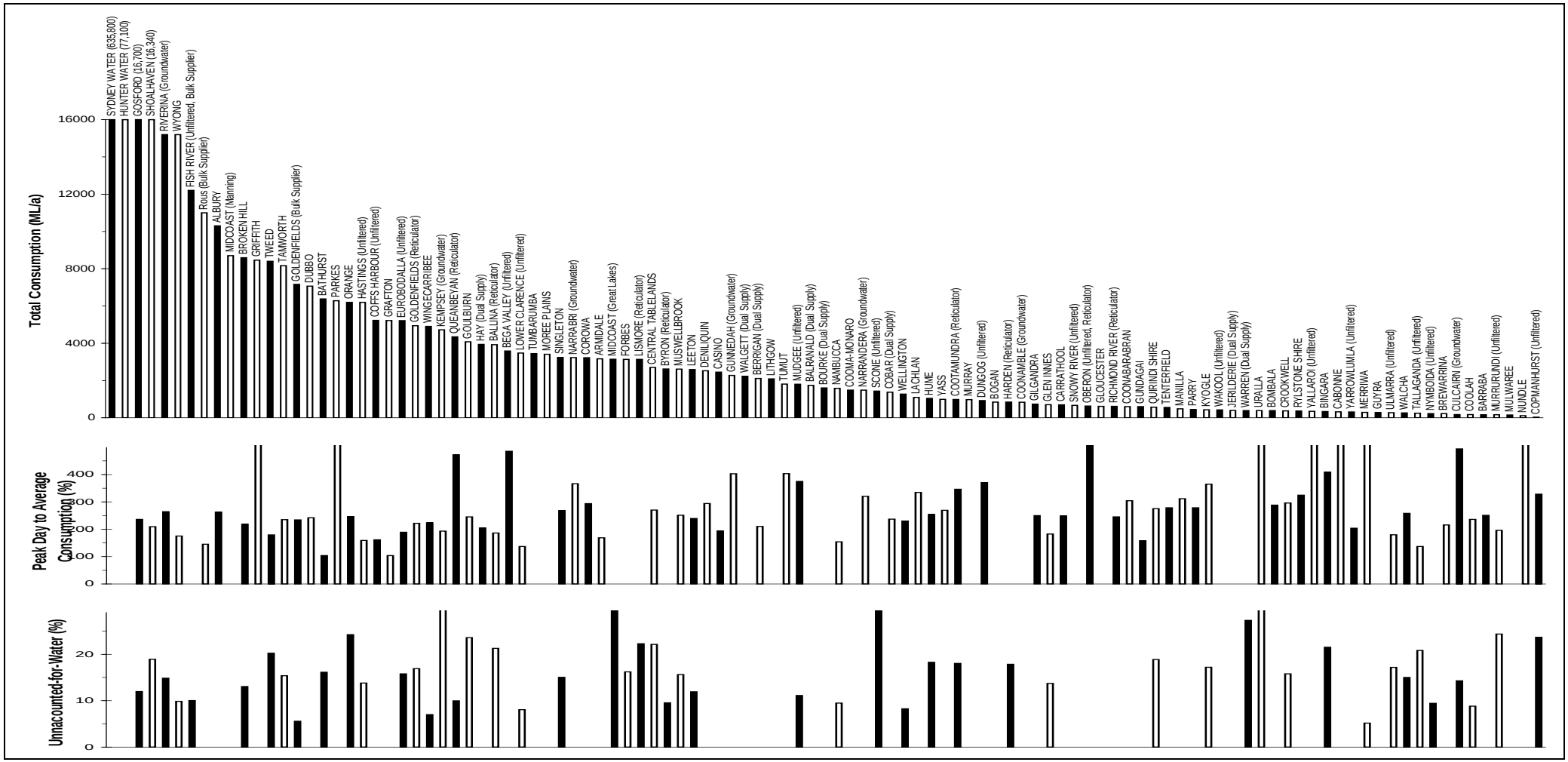


Parameter: $\frac{\text{[No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)] x No. of connected Properties per Assessment}}{\text{Length of Distribution Mains (Q17a) + Length of Reticulation Mains (Q17b) + Length of Headworks Mains (Q17c)}}$

Notes:

1. The top graph shows the ranked values of number of connected properties per km of water main for each council. ***Each bar represents one council***. The bottom graph of this figure shows the total length of mains for the corresponding councils**.**
2. The Statewide median water supply connected properties per km of main is 35 (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

20 Annual Total Consumption – 1998/99



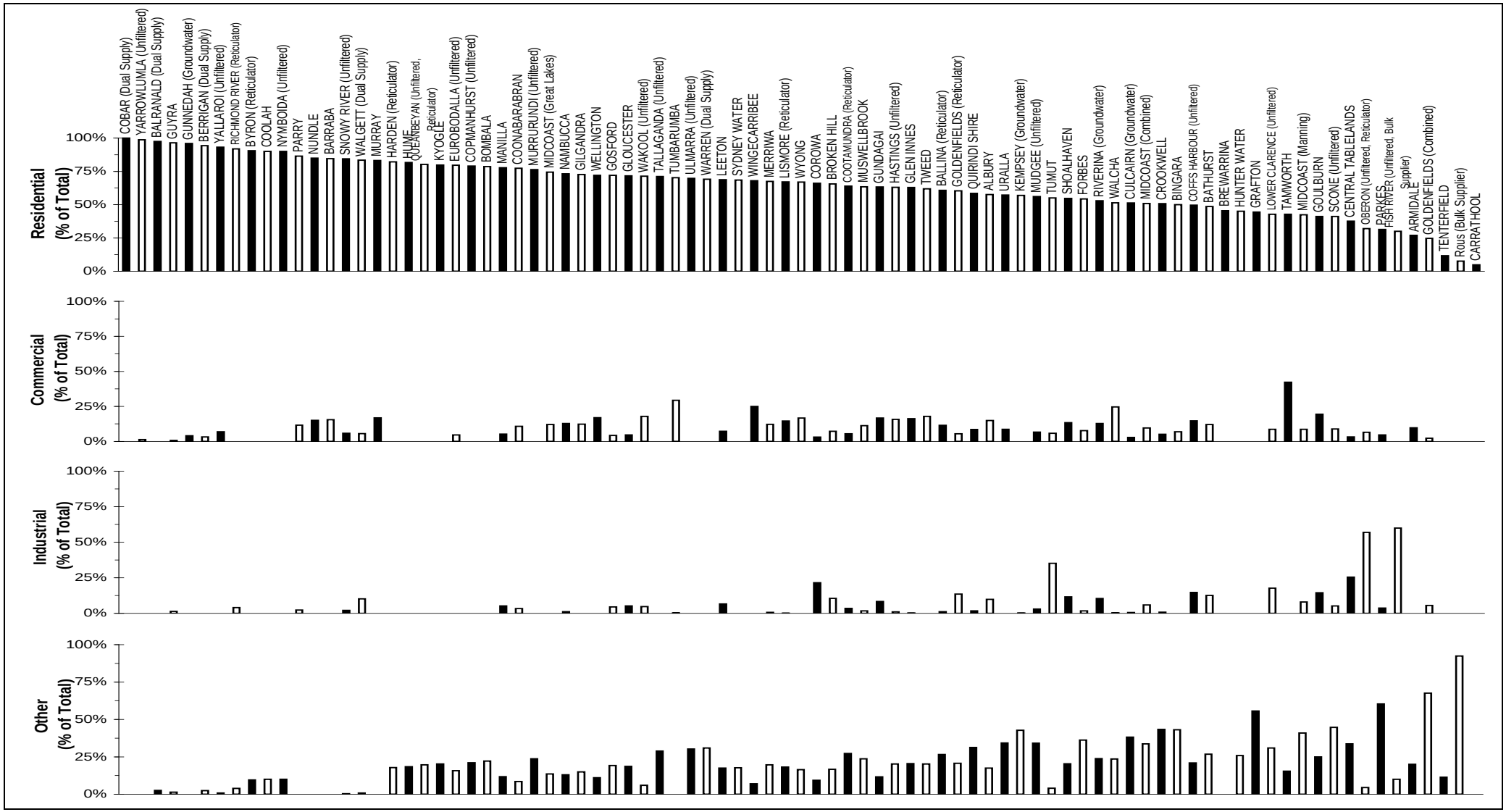
Parameter: Total Annual Potable Water Consumption (Q18i) + Raw Water Component (Q20) – Recycled Water (Q218)

Parameter:
$$\frac{\text{Peak Day Consumption (Q19)} \times 365 \times 100}{\text{Total Annual Potable Water Consumption (Q18i)}}$$

Parameter:
$$\frac{\text{Unaccounted-for-Water (including leakage) (Q18g)} \times 100}{\text{Total Annual Potable Water Consumption (Q18i)}}$$

Notes:

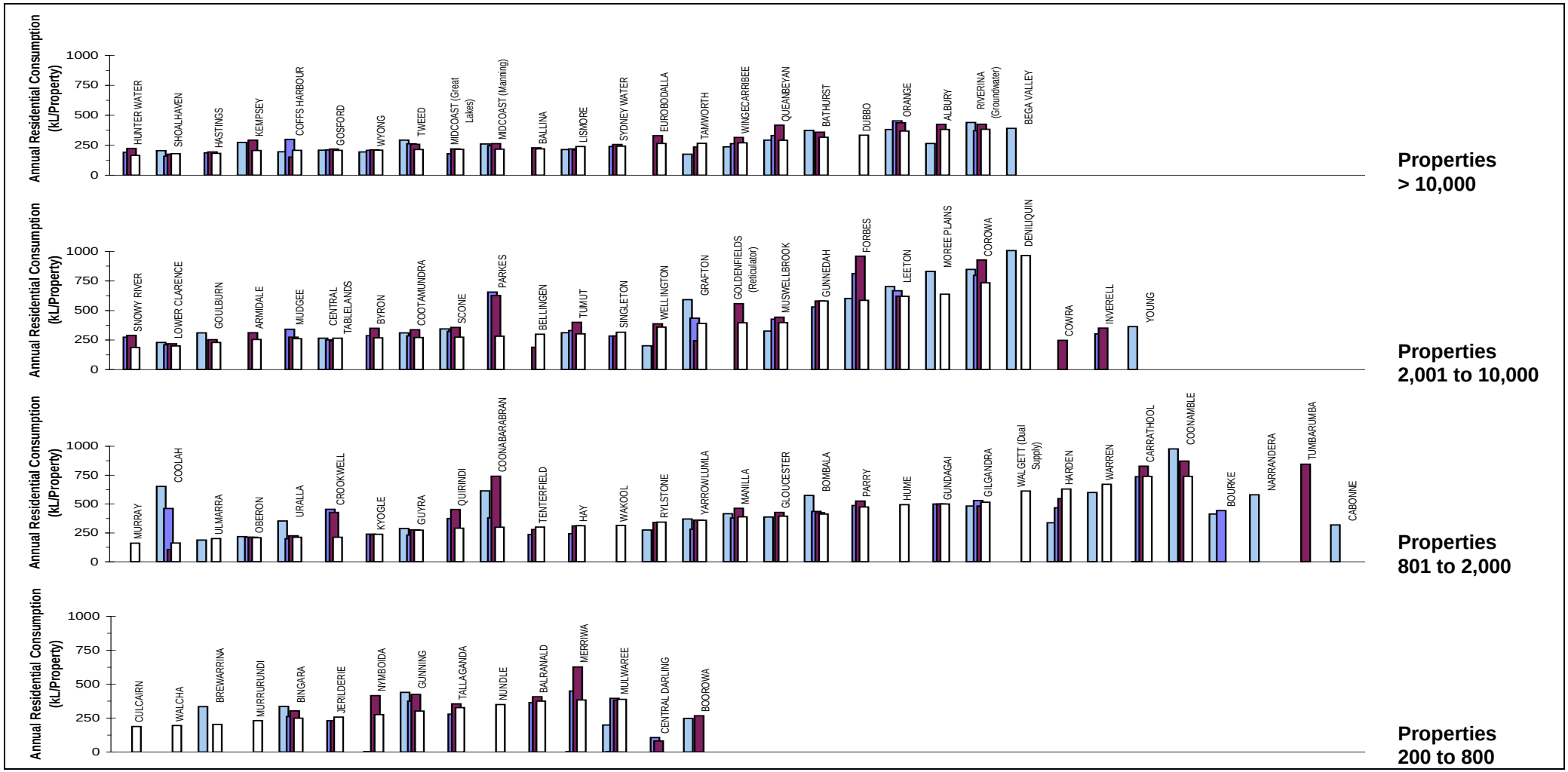
1. The top graph shows the total annual consumption. The second graph shows ranked values of the volume of peak day to average water consumption for each council. ***Each bar represents one council***. The third graph shows the percentage of unaccounted-for-water.
2. For general notes see page 33.



Parameter: Annual Consumption for ***Each*** Sector (Q18) x 100
Total Consumption for Above Sectors

Notes:

1. `Other' consumption comprises institutional uses, public uses and bulk sales; leakage and unaccounted-for-water are excluded.
2. For general notes see page 33.



Parameter:

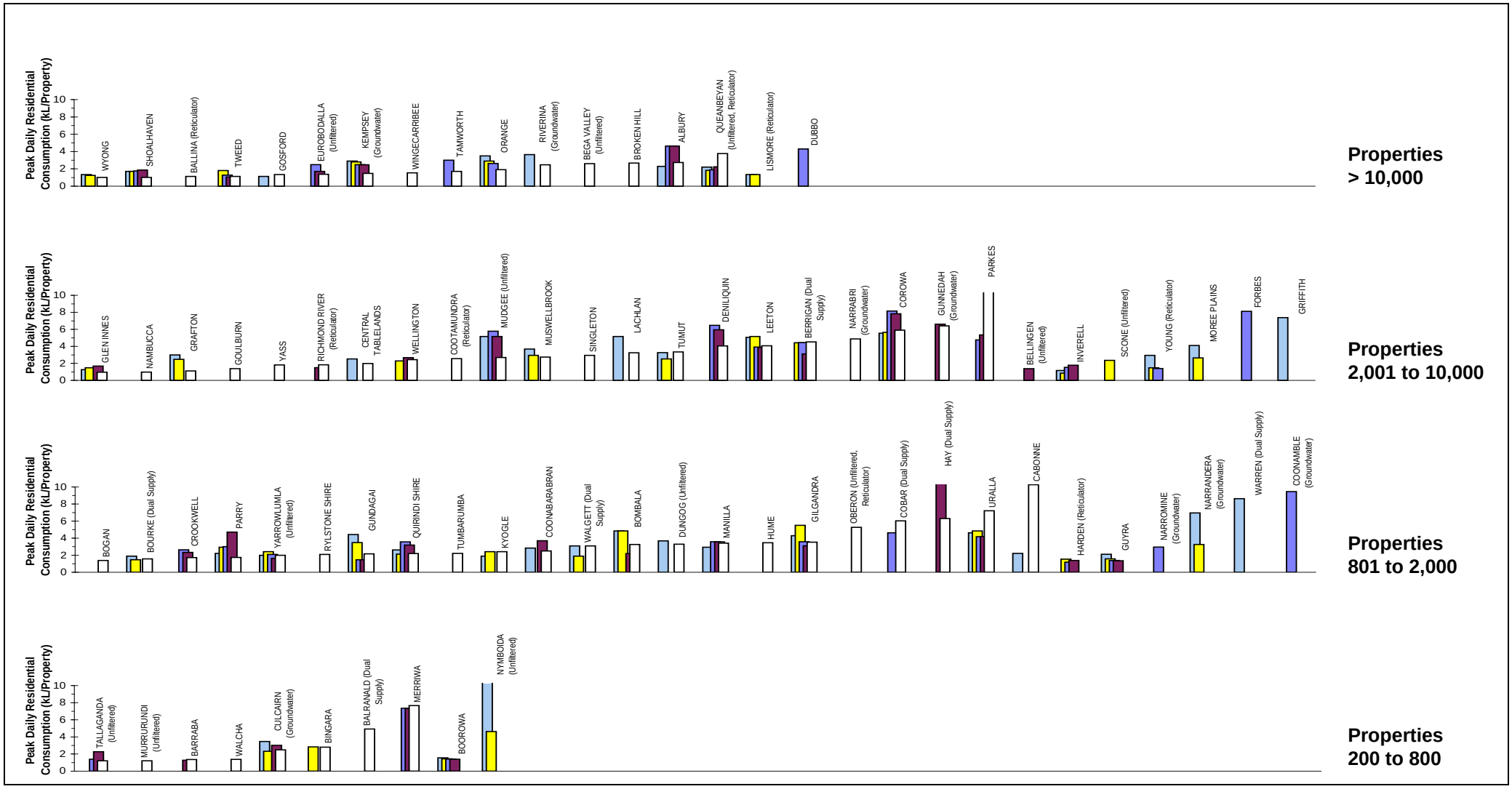
$$\frac{\text{Annual Residential Consumption (Q18a) x 1000}}{\text{No. of Residential Assessments (Q4a) x No. of Connected Residential Properties per Residential Assessment}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the1998/99 average annual residential water consumption per connected property for each council in 4 groups based on the number of connected properties served***. Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the annual residential water consumption in 1998/99 for the 30 councils shown ***ranges*** from about 188 *to 965* kL/a per connected property. Results for the previous 4 years are also shown.
2. The Statewide median annual residential water consumption is 230 kL/a per connected property (refer Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

23 Peak Daily Residential Consumption



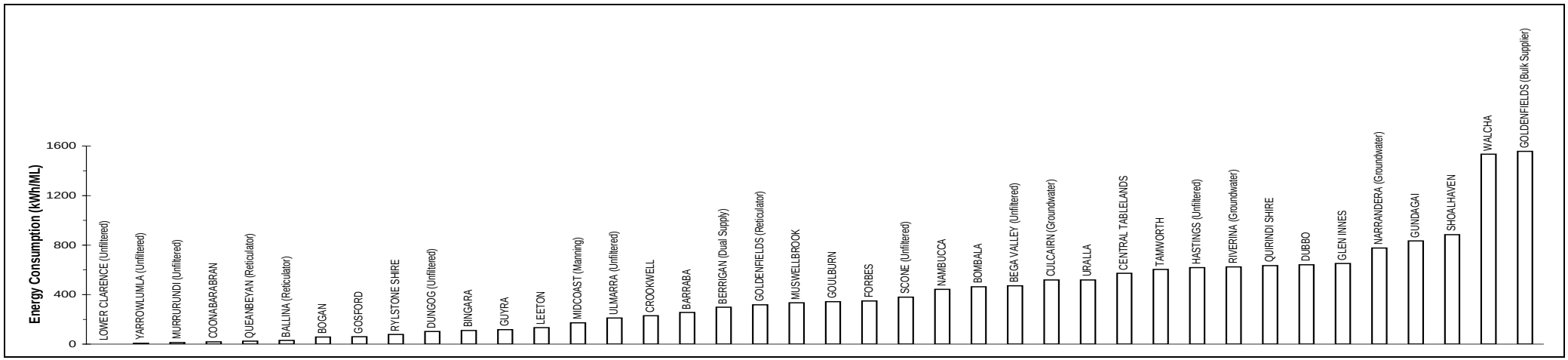
Parameter: Peak Daily Consumption (Q19) x Annual Residential Consumption (Q18a)/Total Annual Potable Consuption (Q18i) x 1000
No. of Residential Assessments (Q4a) x No. of Connected Residential Properties per Residential Assessment

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 peak daily residential water consumption for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the peak daily residential water consumption for the 31 councils shown ***ranges*** from about 2 to 9 kL/d per connected property. Results for the previous 4 years are also shown.
2. For general notes see page 33.

24 Energy Consumption per ML - 1998/99 Water Supply

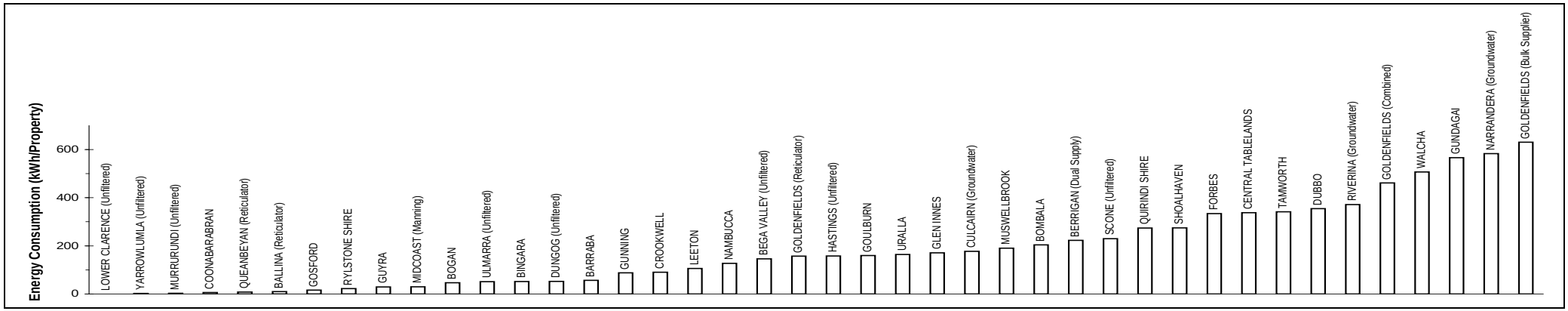


Parameter: $\frac{\text{Total Energy Usage (Q34)}}{\text{Total PotableWater Consumption (Q18i)}}$

Notes:

1. This figure shows ranked values of the 1998/99 total energy consumption per ML. The energy consumption per ML for the 40 councils shown ***ranges*** from about 0.4 to 1,560 kWh per ML.
2. For general notes see page 33.

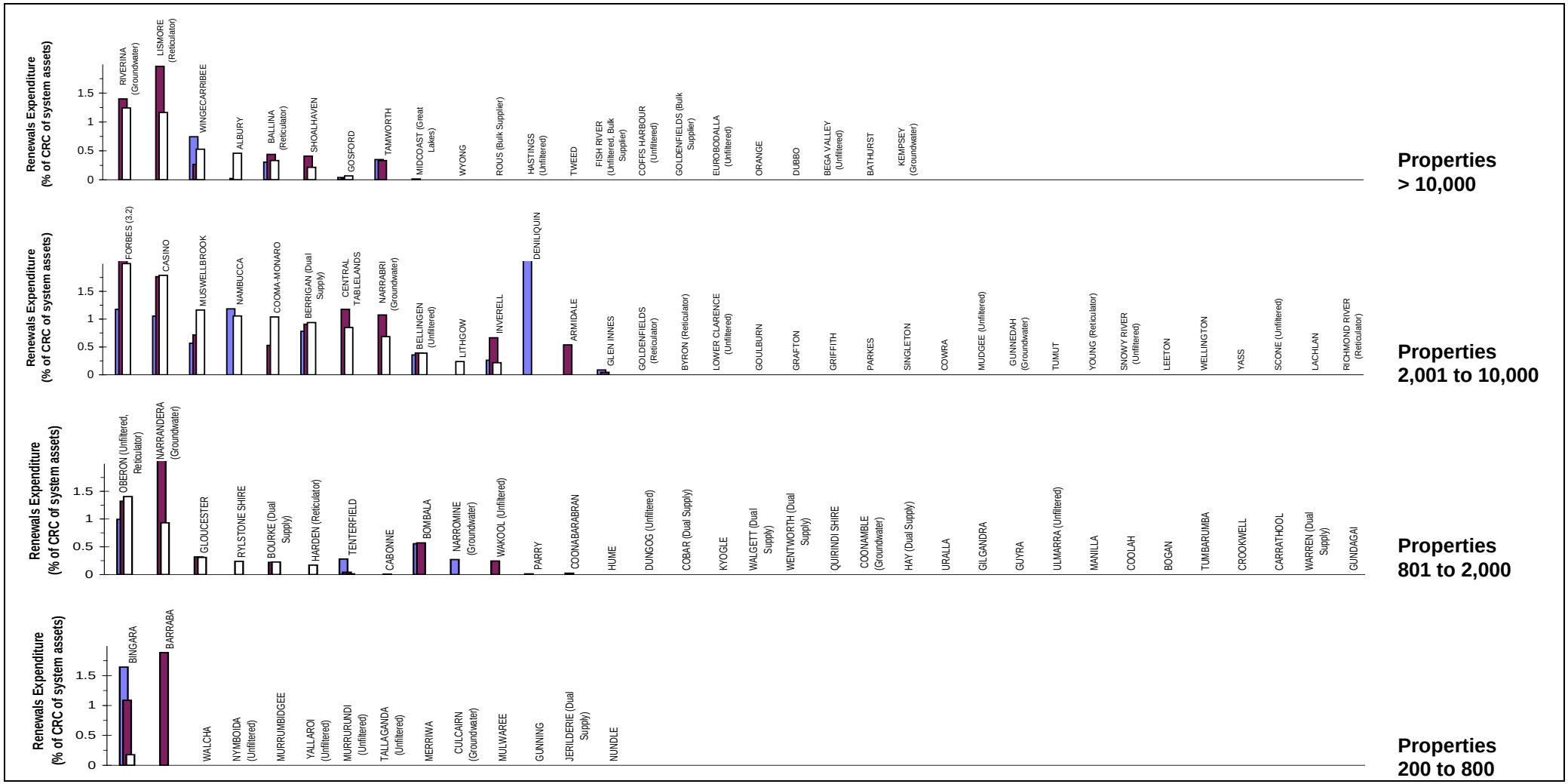
25 Energy Consumption per property – 1998/99 Water Supply



Parameter: $\frac{\text{Total Energy Usage (Q34)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b) x No. of Connected Properties per Assessment}}$

Notes:

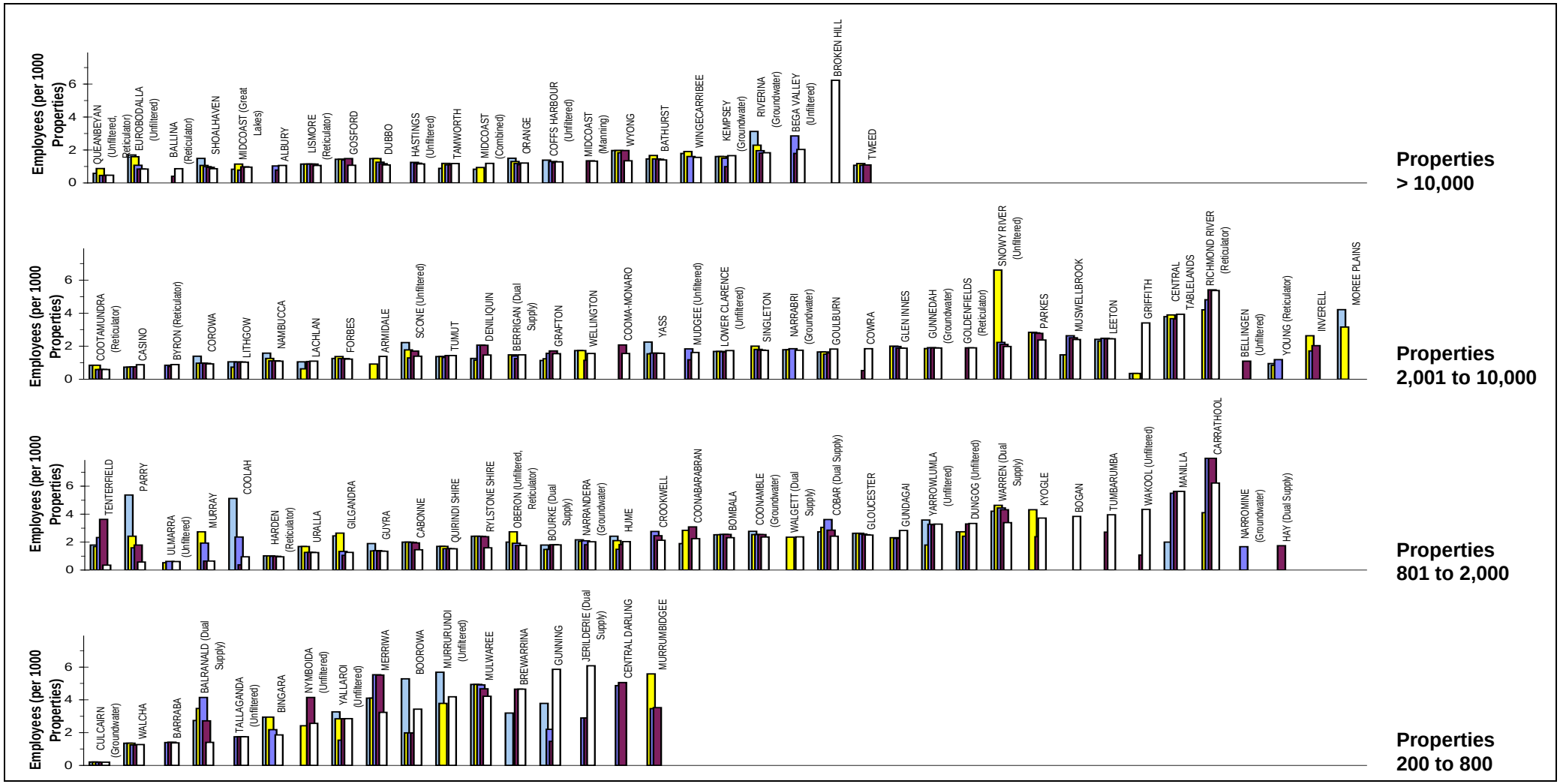
1. This figure shows ranked values of the 1998/99 total energy consumption per connected property. The energy usage per connected property for the 43 councils shown ***ranges*** from about 0.2 to 630 kWh per connected property.
2. For general notes see page 33.



Parameter: Renewals Expenditure (W16c) / Current Replacement Cost of System Assets (W42)

Notes:

1. This figure shows ranked values of the1998/99 renewals expenditure as a percentage the current replacement cost (CRC) of system assets for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the renewals expenditures for the 37 councils shown ***range*** from about 3.2*% to 0%* of the current replacement cost of system assets. Results for the previous 2 years are also shown.
2. Only 34 councils reported renewals expenditure in 1998/99. Councils should ensure that such expenditure is reported in Special Schedule No.3 of their annual financial statements. The Statewide median renewals expenditure is 0% (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.



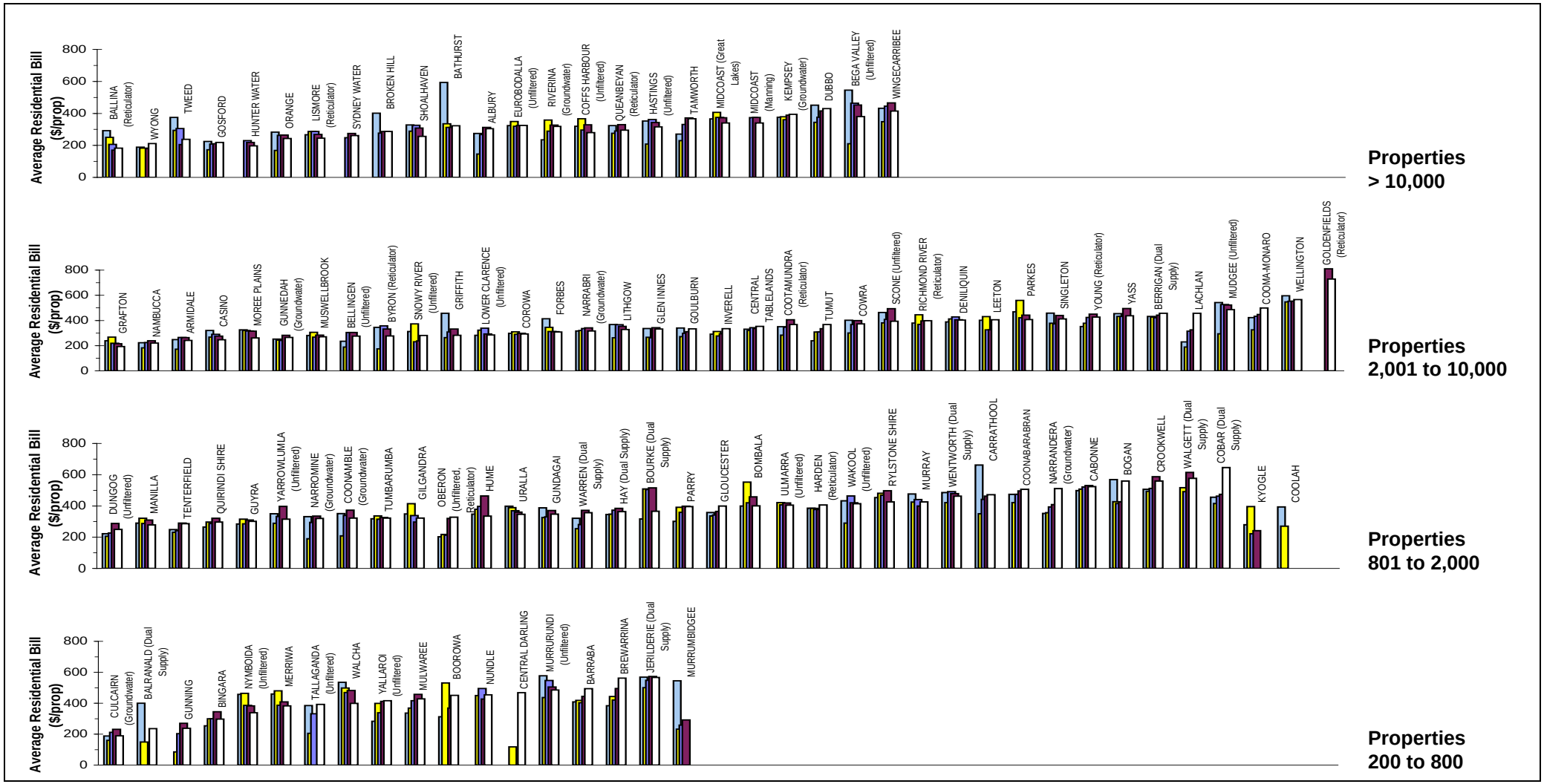
Parameter: Equivalent Full-time Employees (Q35) x 1000

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 water supply employees per 1000 properties for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the water supply employees per 1 000 connected properties for the 37 councils shown ***range*** from about ***0.6 to 5.4*** per connected property. Results for the previous 4 years are also shown.
2. The Statewide median number of water supply employees is 1.3 per 1000 connected properties (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

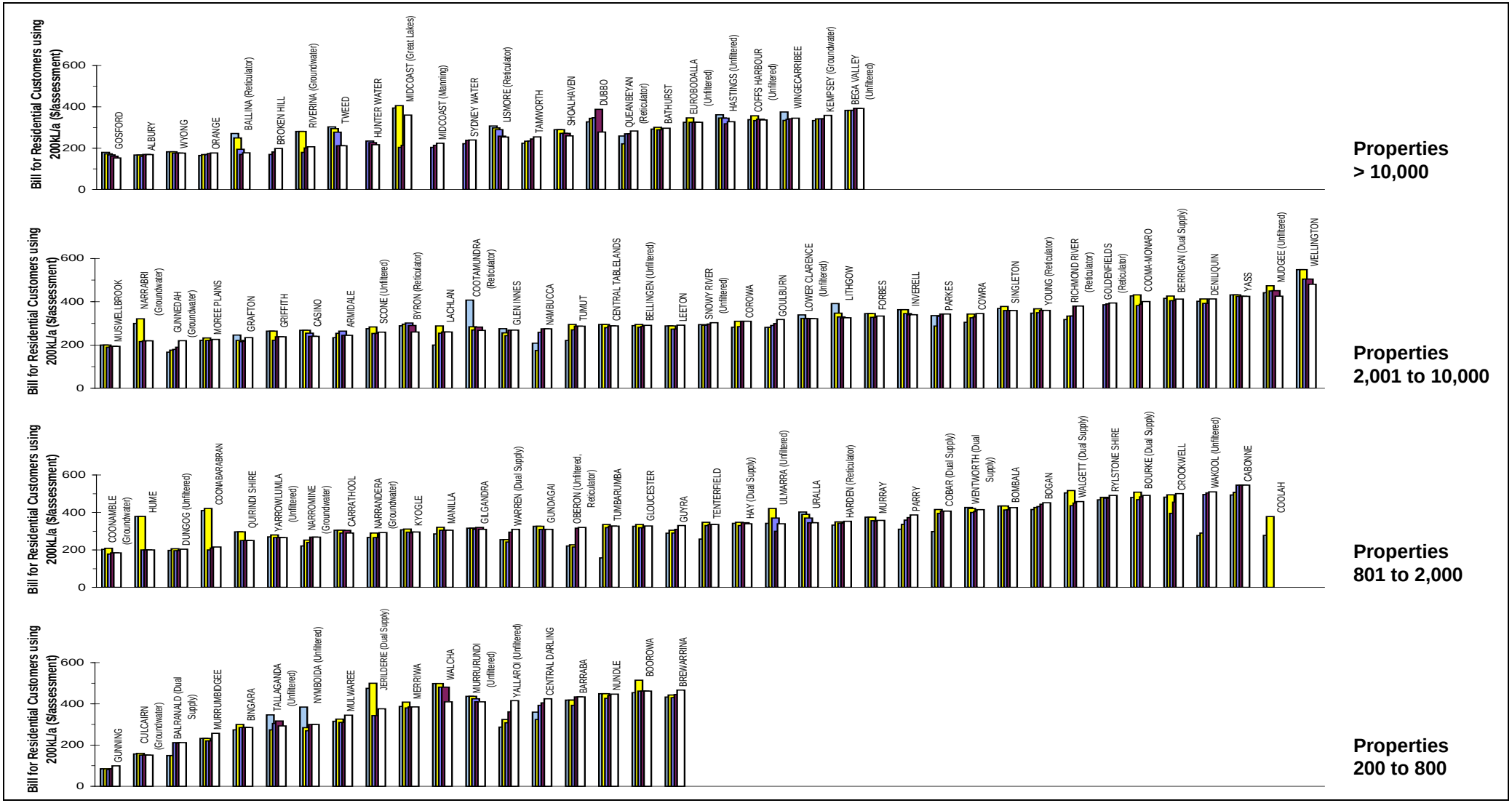


Parameter: Residential Rates & Service Availability Charges (W6a) + Residential User Charges (W7a) / No. of Residential Assessments (Q4a) x No. of Connected Residential Properties per Residential Assessment

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the1998/99 average residential bill for water supply for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the average residential bill in 1998/99 for the 37 councils shown ***ranges*** from about *$193 to $728* per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The 1998/99 Statewide median average residential bill for water supply is $295 per connected property (refer Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

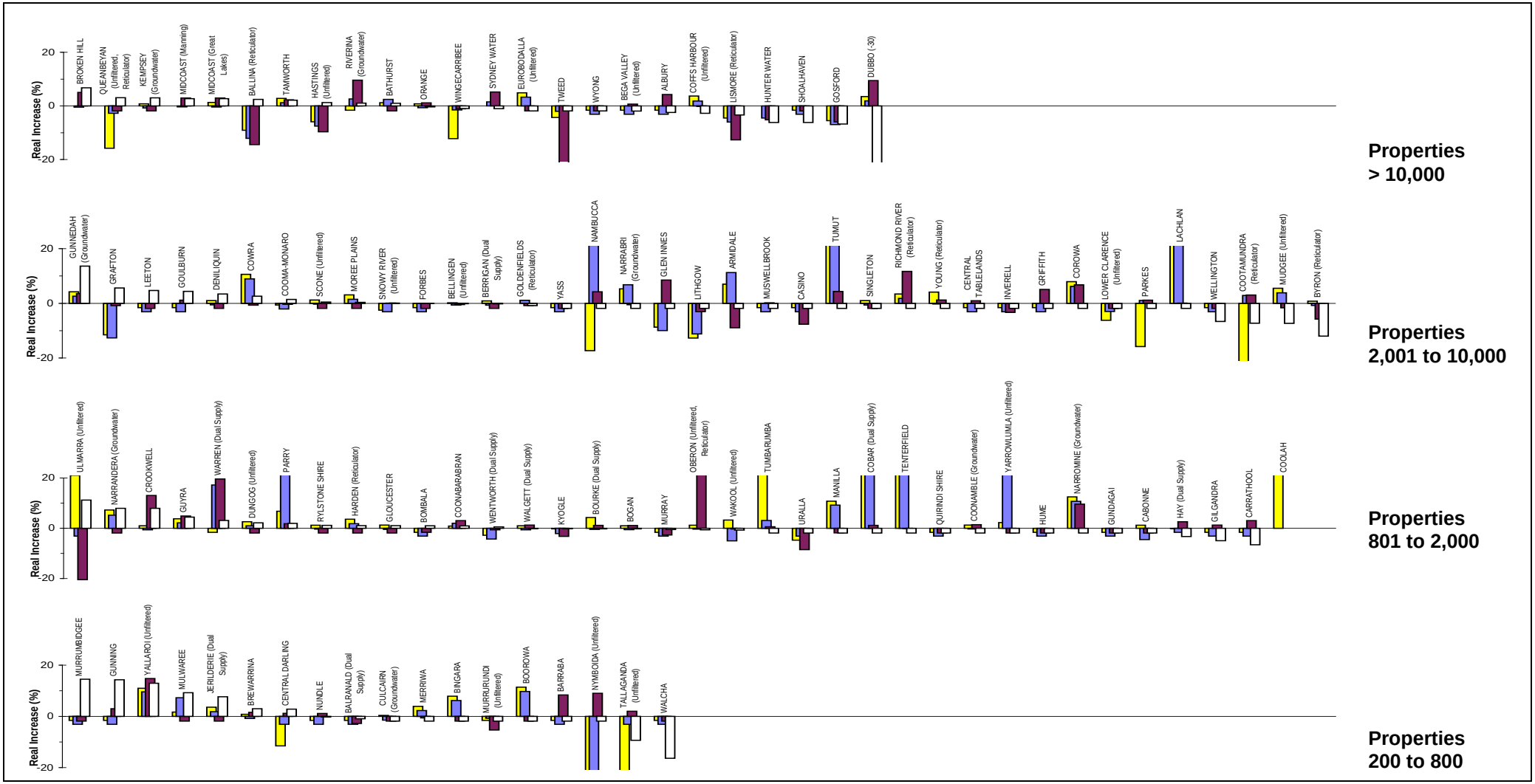


Parameter: Water Usage Charge (Q38) for 200kL + Minimum Annual Residential Charge (Q37b)

Notes:

1. This figure shows ranked values of the1998/99 bill for a residential customer using 200 kL/a for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the bill for a residential customer using 200 kL/a for the 37 councils shown ***ranges*** from about $194 to $480. Results for the previous 4 years are also shown in Jan 1999$.
2. The 1998/99 Statewide median bill for a residential customer using 200 kL/a is $260 (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.

30 Real Increase over Previous Year's Bill for Residential Customer using 200 kL/a

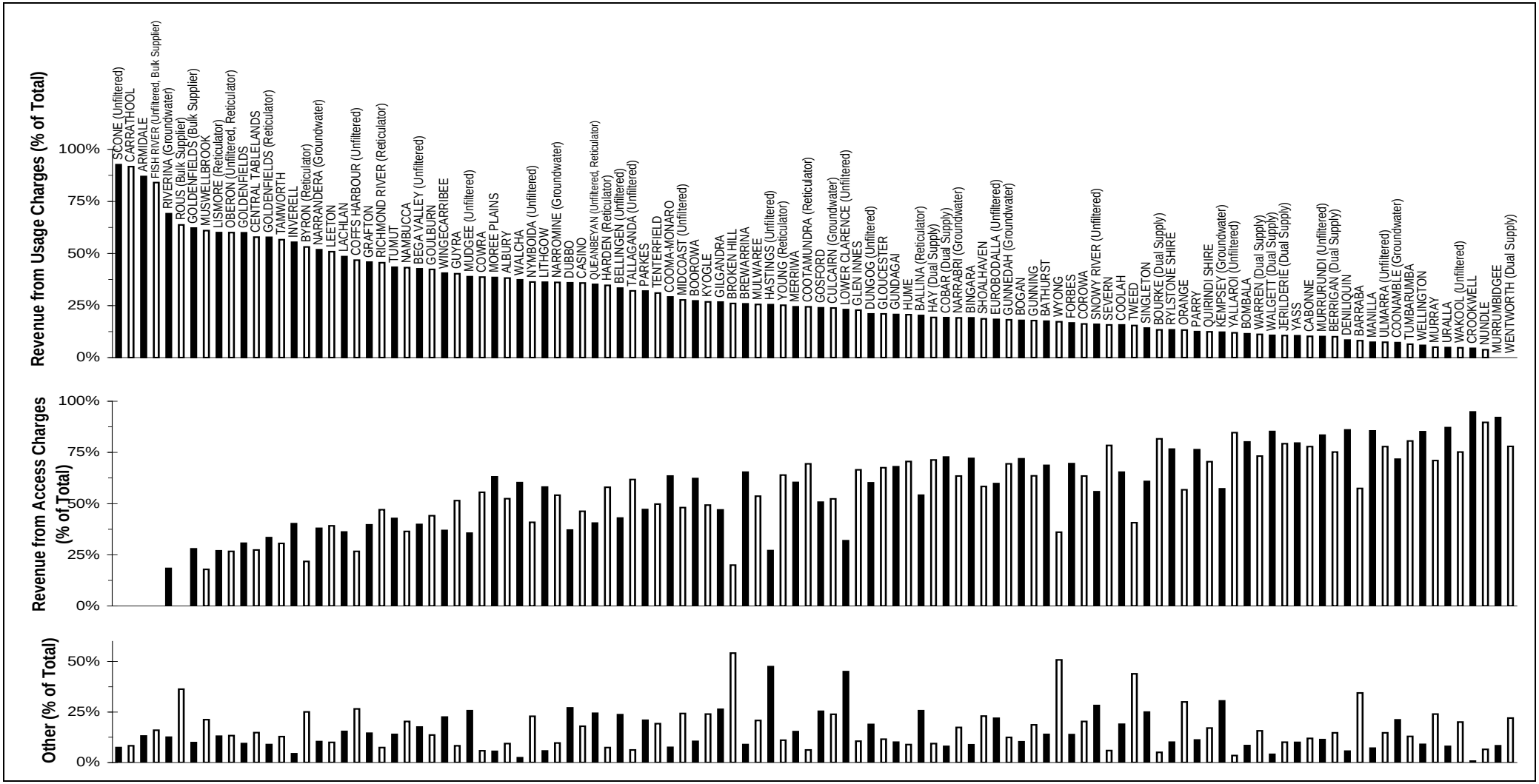


Parameter: Water Usage Charge (Q38) for 200kL + Minimum Residential Charge (Q37b) for Current Year

(Water Usage Charge (Q38) for 200kL + Minimum Annual Residential Charge (Q37b)) for Previous Year x (1 + CPI Increase)

Notes:

1. This figure shows ranked values of the1998/99 real increase over previous year's bill for a residential customer using 200 kL/a for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the real increase in 1998/99 for the 37 councils shown ***ranges*** from about –12% to 14%. Results for the previous 4 years are also shown.
2. The Statewide median real increase over previous year's bill for a residential customer using 200 kL/a is –2% (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

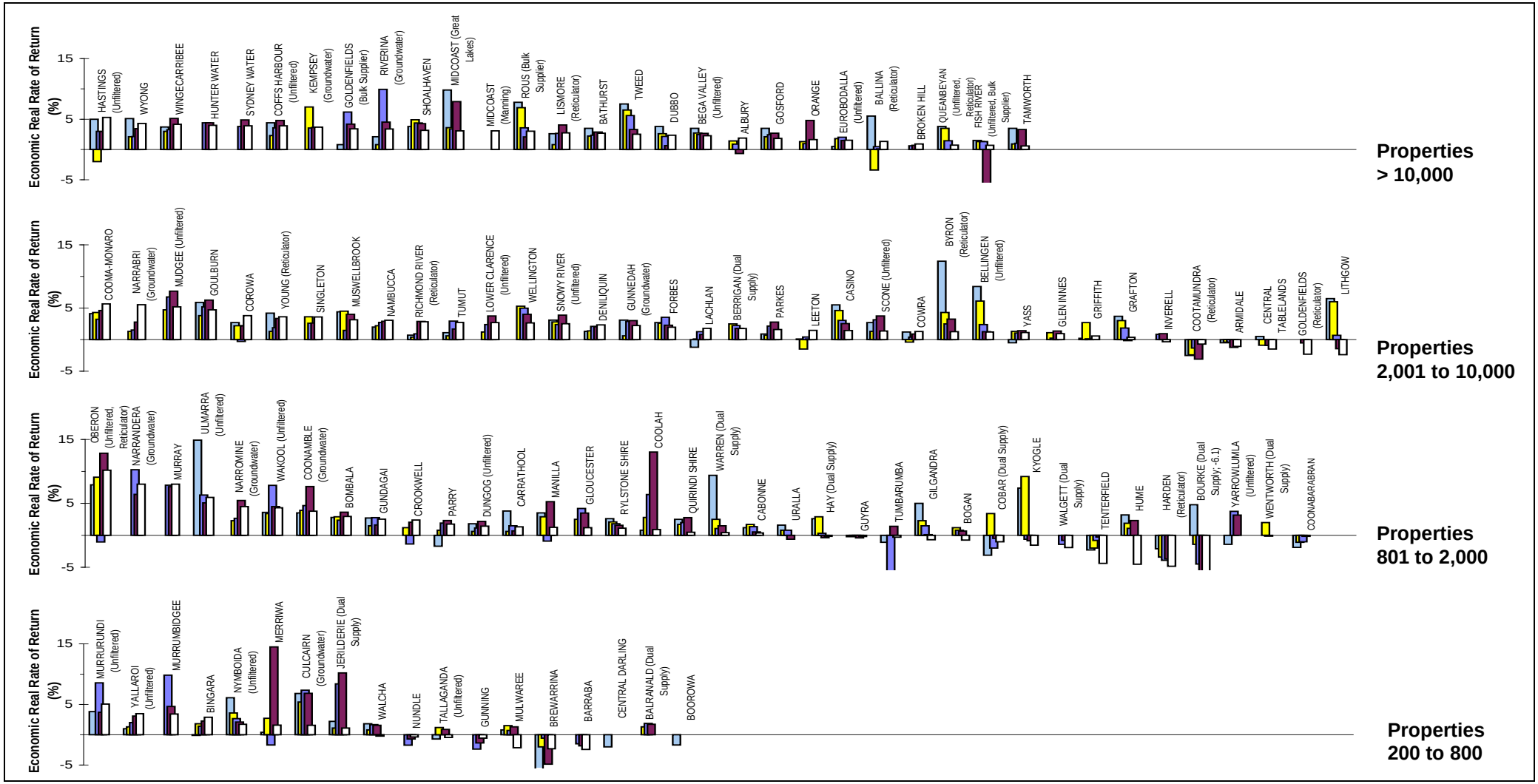


Parameter: Revenue from User Charges (W7) / Total Revenue (W13)

Parameter: Revenue from Rates and Service Availability Charges (W6) / Total Revenue (W13)

Parameter: Revenue from Other (W13 – W6 – W7) / Total Revenue (W13)

Notes:
1. For general notes see page 33.

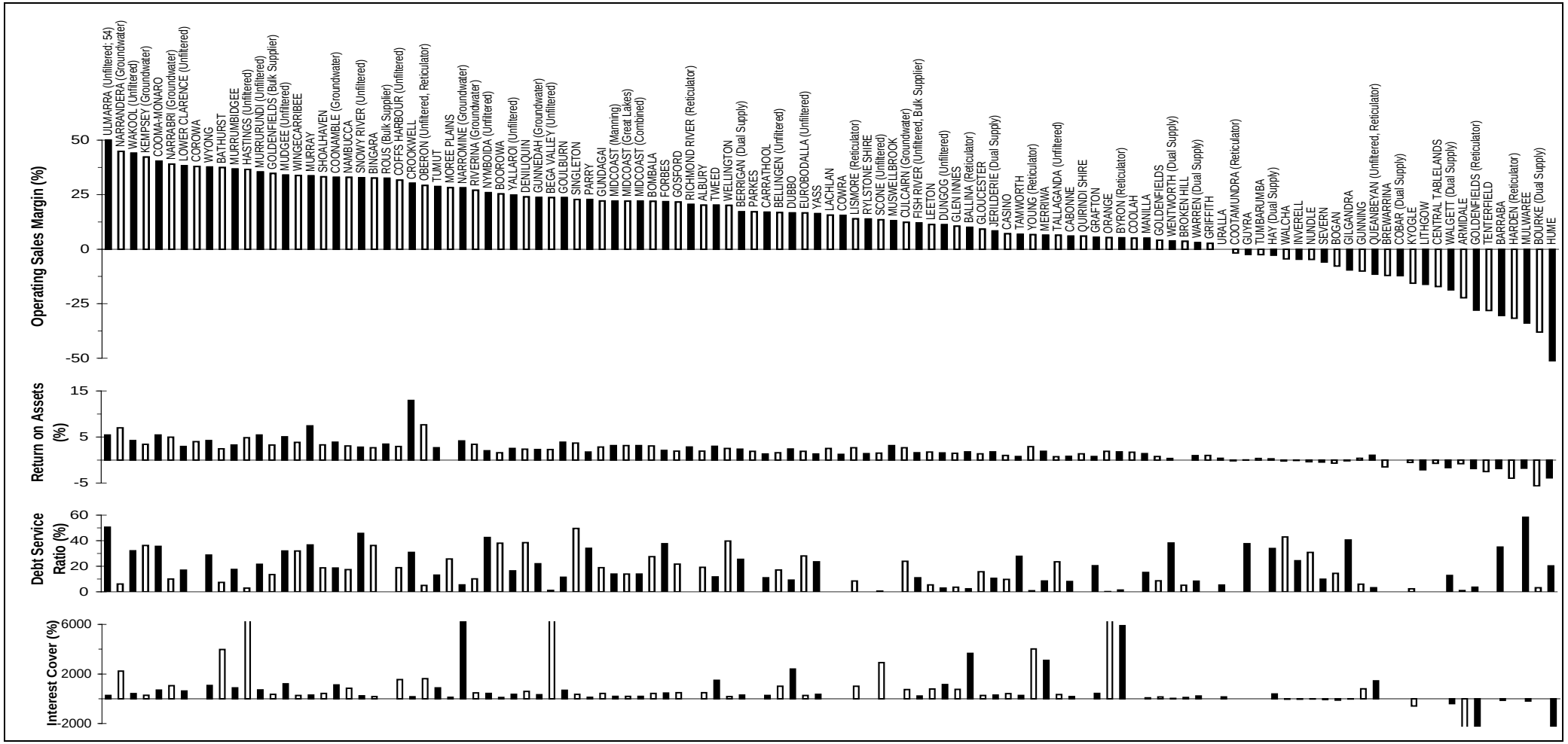


Parameter: (Operating Result (W14) + Interest Expense (W4a) - Interest Income (W9) - Grants for Acquisition of Assets (W11a)) x 100
Written Down Replacement Cost of Property, Plant & Equipment (W30)

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 water supply economic real rate of return for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the real rate of return for the 37 councils shown ***ranges*** from about 5.7*% to -2.4%*. Results for the previous 4 years are also shown.
2. The Statewide median water supply real rate of return is 2.4% (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.



Parameter: $\frac{\text{Operating Result (W14) + Interest Expenses (W4a) – Interest Income (W9) - Grants for Capital Works (W11a) – Developer Provided Assets (W12b) x 100}}{\text{Total Revenue (W13) – Grants for Capital Works (W11a) – Developer Provided Assets (W12b) – Interest Income (W9)}}$

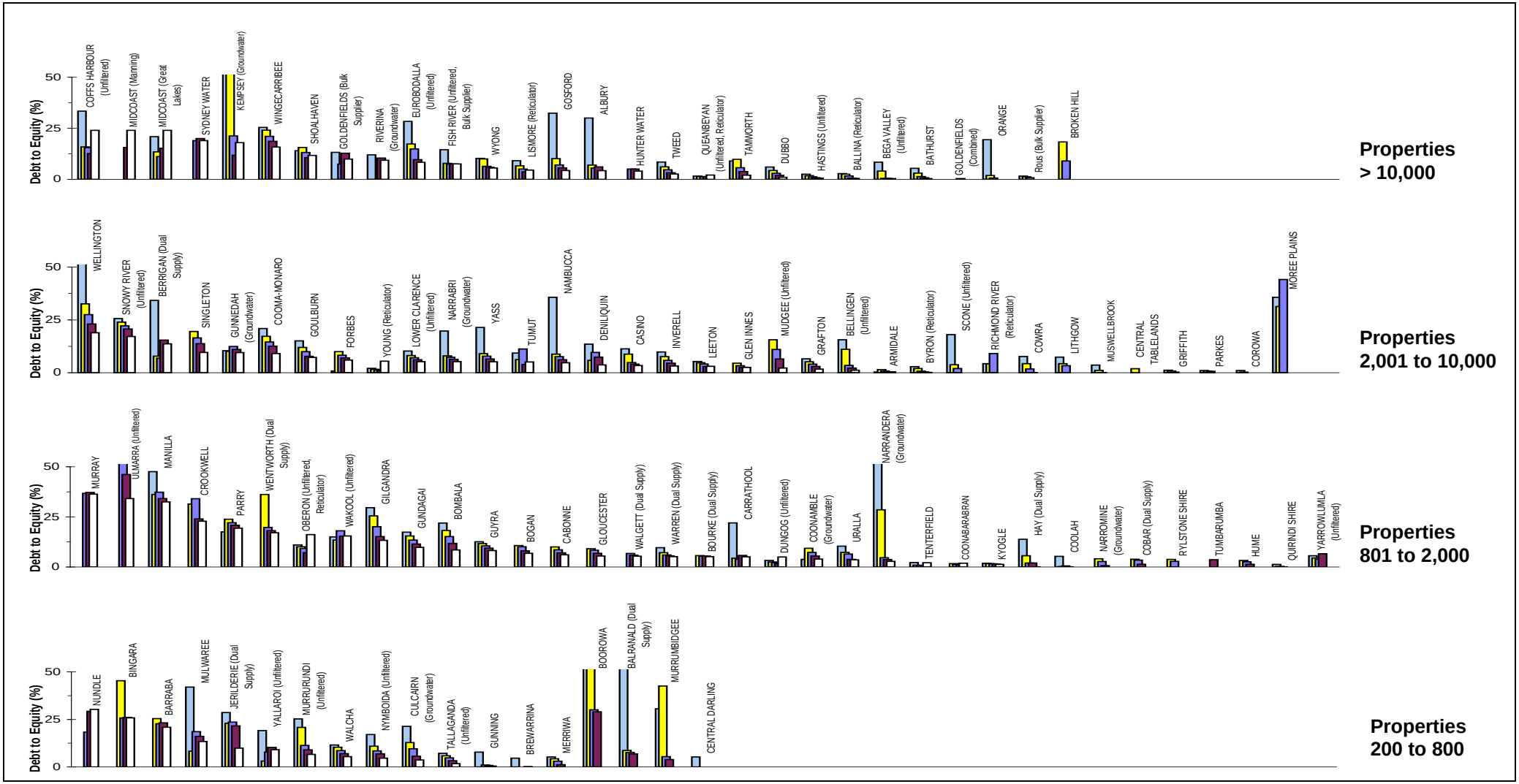
Parameter: $\frac{\text{Operating Result (W14) + Interest Expenses (W4a) – Grants for Capital Works (W11a)}}{\text{Total Assets (W31)}}$

Parameter: $\frac{\text{Interest Expenses (W4a) + Repayment of Debt (W17)}}{\text{Total Revenue (W13) – Grants for Capital Works (W11a) – Developer Provided Assets (W12b)}}$

Parameter: $\frac{\text{Operating Result (W14) + Interest Expenses (W4a) - Grants for Capital Works (W11a)}}{\text{Interest Expenses (W4a)}}$

Notes:

1. For general notes see page 33.



Parameter: $\frac{\text{(Bank Overdraft (W33) + Borrowings (W35)) x 100}}{\text{Total Equity (W41)}}$

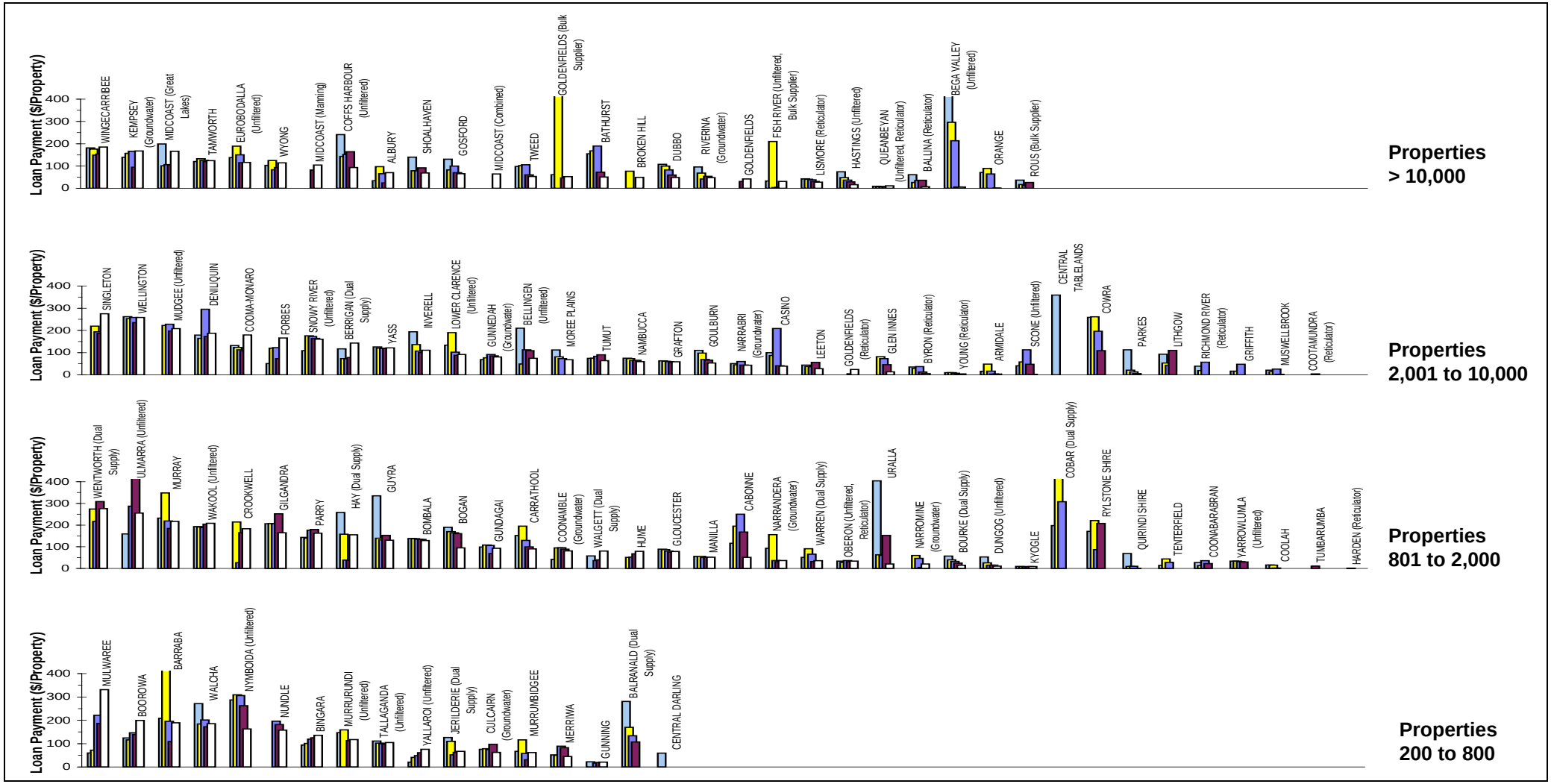
1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 water supply debt to equity for each council in 4 groups based on the number of connected properties served***.*** ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the debt to equity for the 35 councils shown ***ranges*** from about 18.9 to 0 percent***.*** Results for the previous 4 years are also shown.

2. The Statewide median debt to equity is 4% (refer to Table 1 – percentage of connected properties basis).

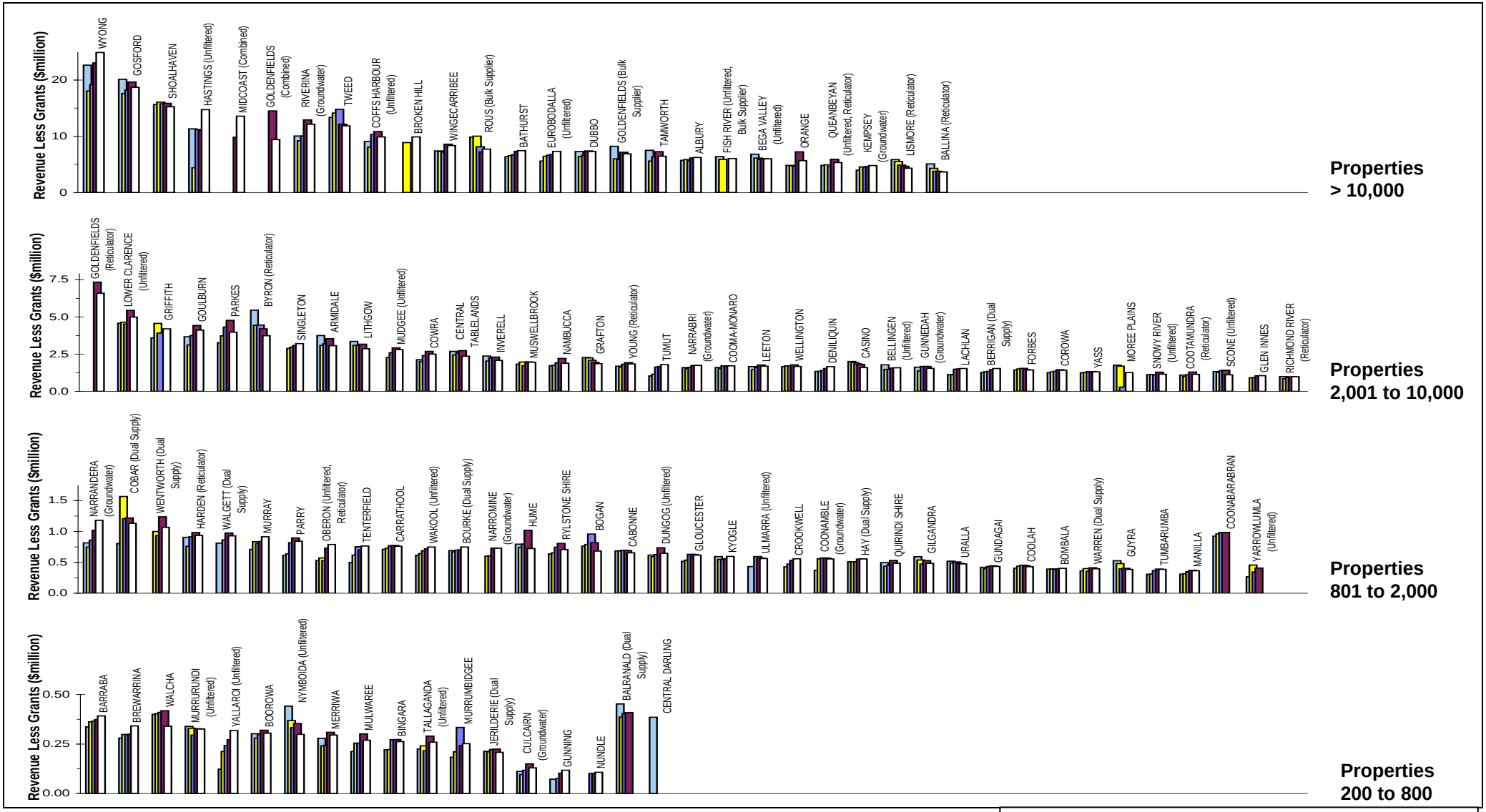
3. For general notes see page 33.



Parameter: $$\frac{\text{Repayment of Debt (W17) + Interest Expenses (W4a)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties p}}$$

Notes:

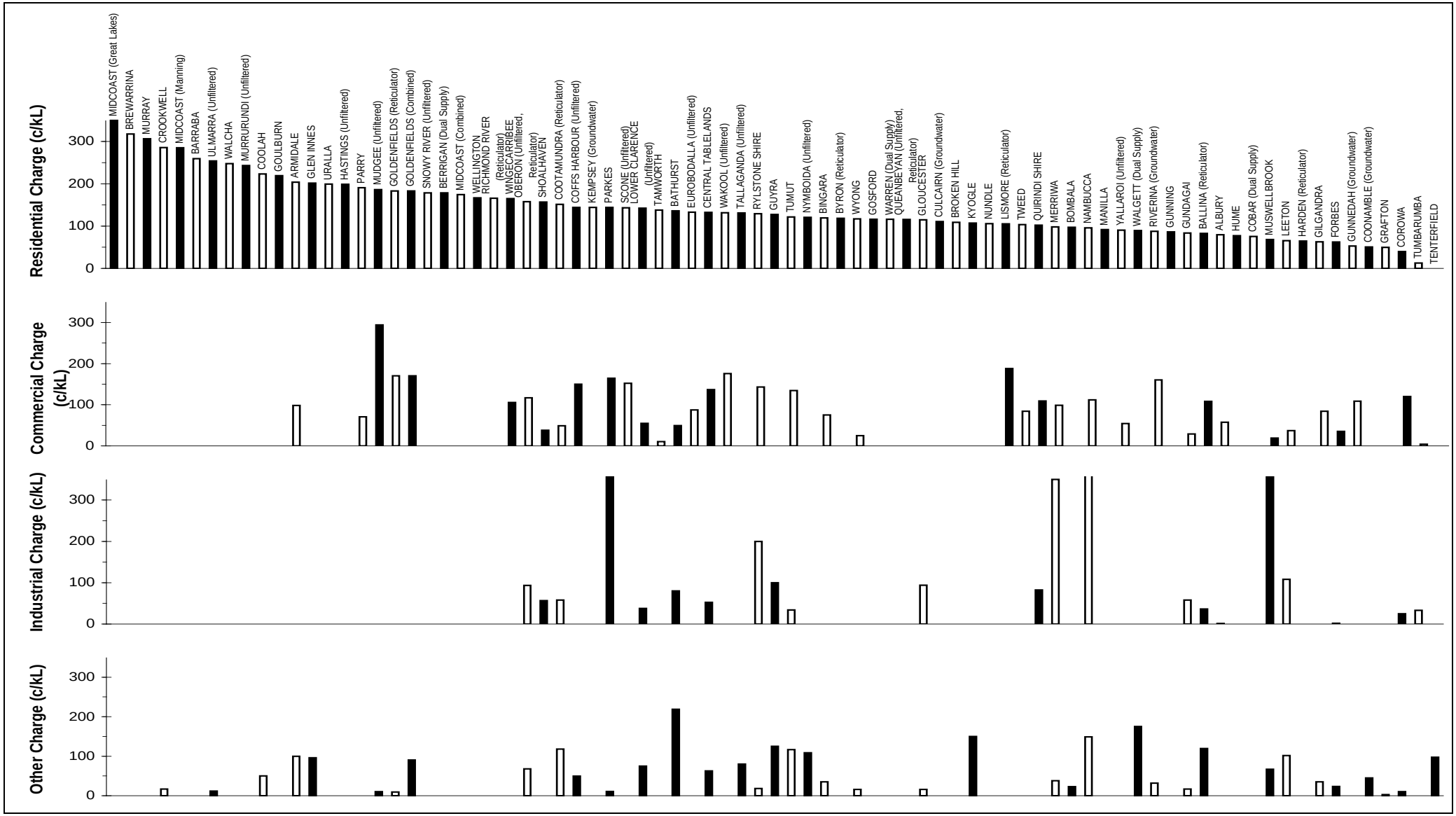
1. This figure shows the 1998/99 ranked values of the water supply loan payment for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the water supply loan payments for the 35 councils shown ***range*** from about ***$275 to $0*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median water supply loan payment is $60 per connected property (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.



Parameter: Total Revenues (W13) - Grants for Acquisition of Assets (W11a)

Notes:

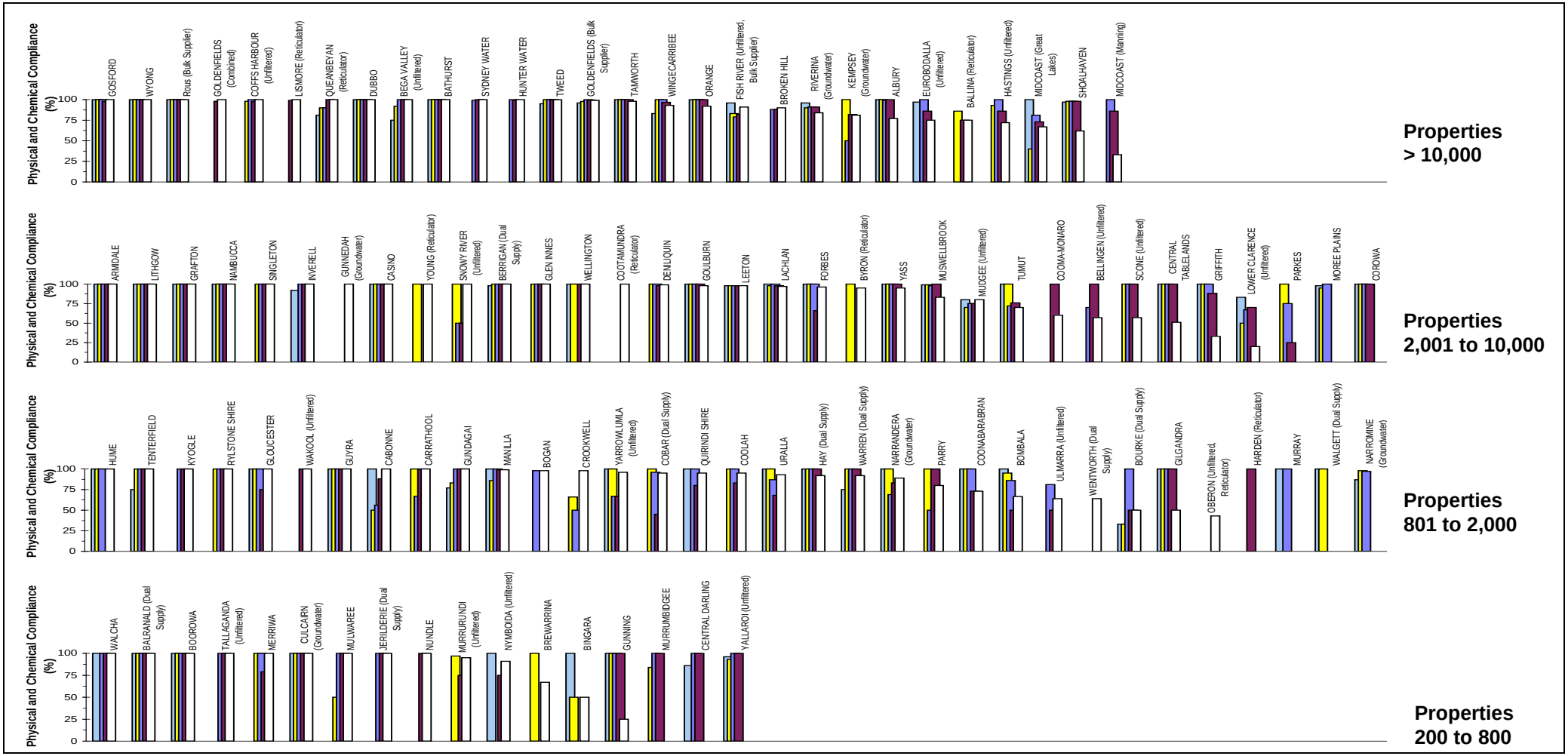
1. This figure shows the 1998/99 ranked values of the water supply revenue less grants for capital works (i.e. turnover) for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the revenue less grants for capital works for the 37 councils shown ***ranges*** from about ***$6.59 m to $98,000***. Results for the previous 4 years are also shown in Jan 1999$.
2. For general notes see page 33.



Parameter: Rate & Services Availability Charges for ***Each*** Sector (W6) + User Charges for ***Each*** Sector (W7)
Annual Consumption for ***Each*** Sector (Q18) x 10

Notes:

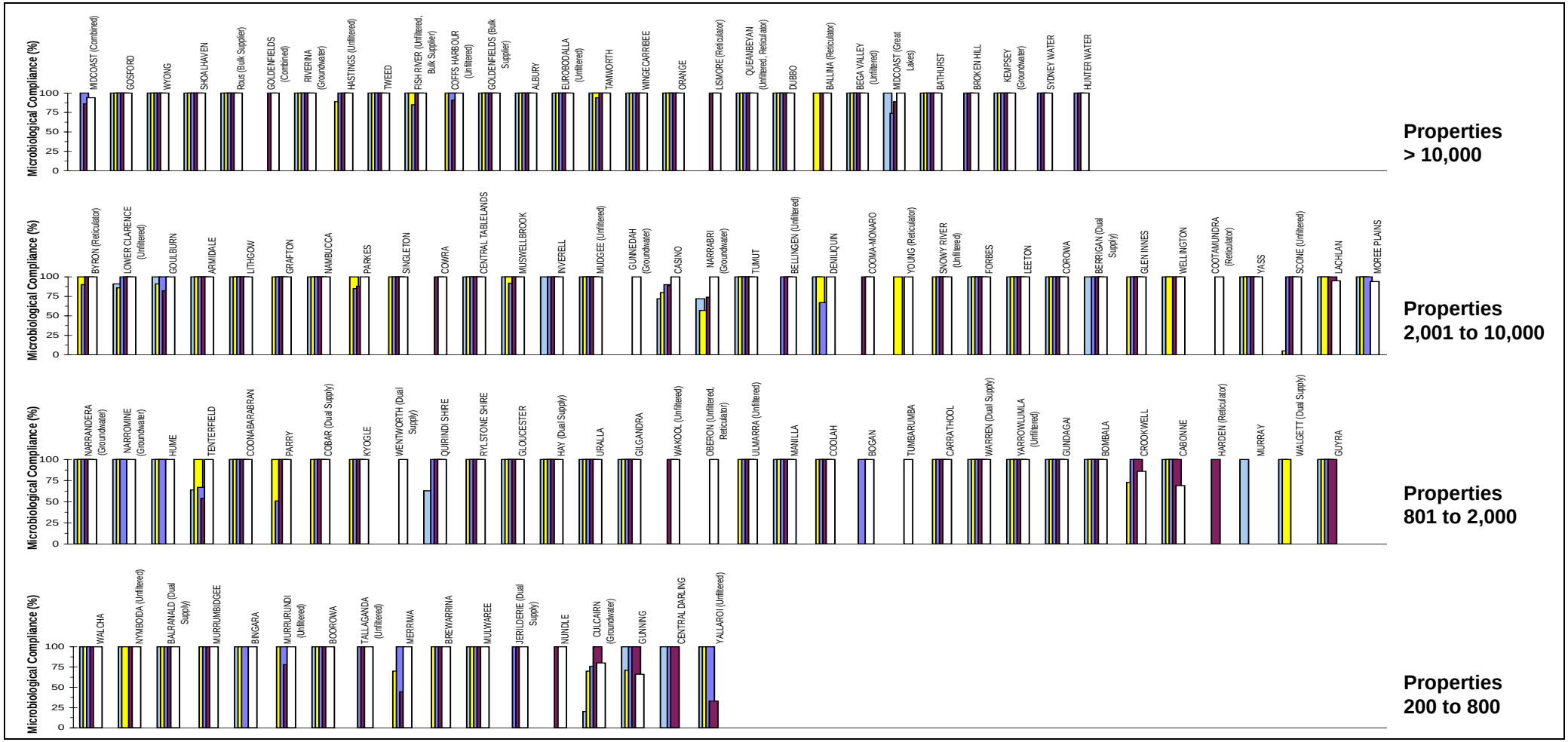
1. 'Other' consumption comprises institutional uses, public uses and bulk sales; unaccounted-for-water (including leakage) is excluded.
2. For general notes see page 33.



Parameter: Percentage of distribution system water samples complying with physical and chemical criteria of the 1987 NHMRC/AWRC Drinking Water Quality Guidelines (Q47a to Q47d).

Note:

1. This figure shows the 1998/99 ranked values of distribution system compliance with the 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines for physical and chemical water quality for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the physical and chemical water quality compliance for the 30 councils shown ***range*** from about ***100 to 20%***. Results for the previous 4 years are also shown.
2. From 1994/95 to 1997/98, results are based on 1987 NHMRC/AWRC Drinking Water Quality Guidelines.
3. For councils with more than one water treatment works, the reported compliance for 1998/99 has been pro-rated on the basis of the number of samples tested at each treatment works. For 1994/5 to 1997/98, the compliance for each Council's principal treatment works has been reported.
4. The Statewide median physical and chemical water quality compliance is 98 percent (refer to Table 1 - percentage of connected properties basis).
5. For general notes see page 33.

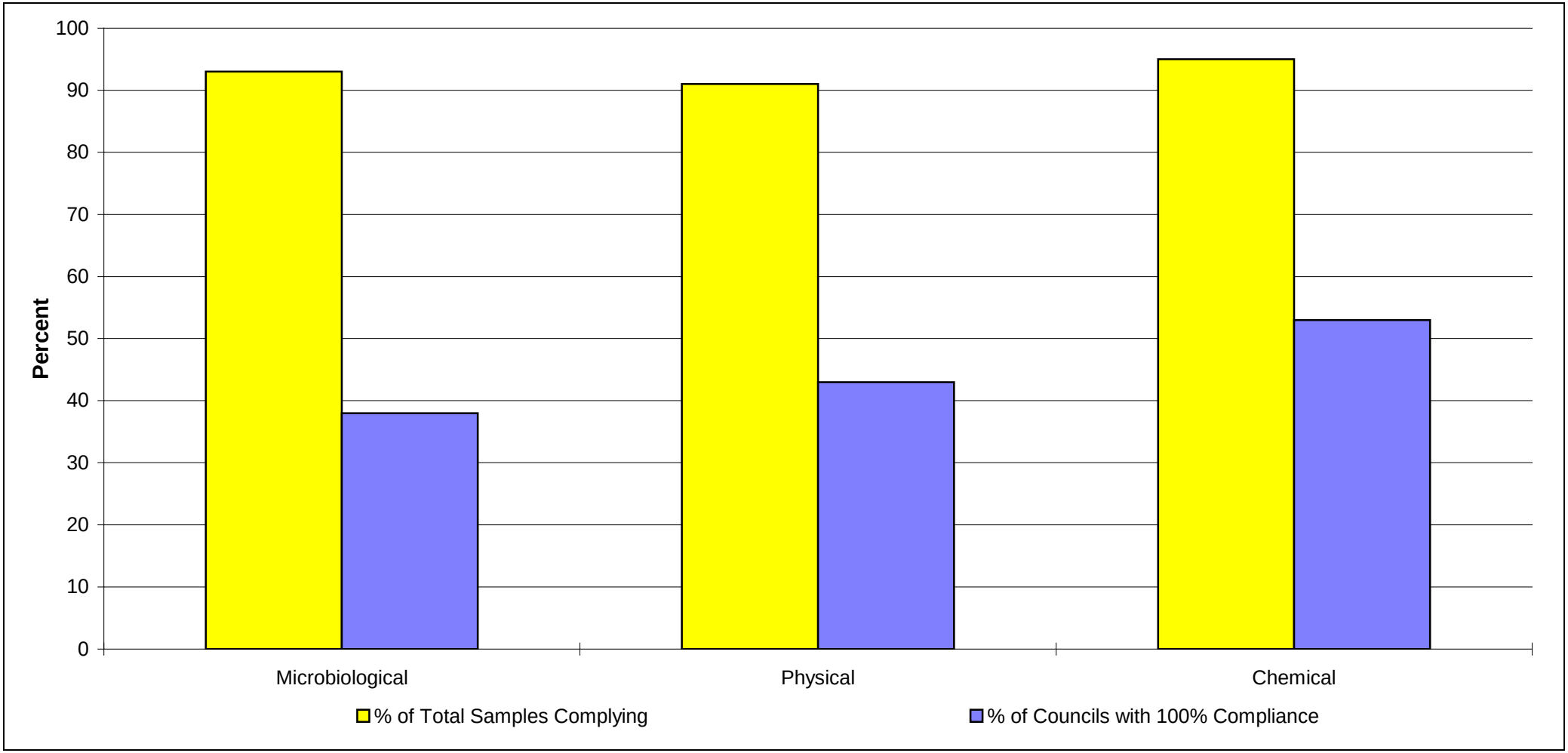


Parameter: Percentage of distribution system water samples complying with microbiological criteria of the 1987 NHMRC/AWRC Drinking Water Quality Guidelines (Q47k & m)

Notes:

1. This figure shows the 1998/99 ranked values of distribution system compliance with the 1987 NHMRC/AWRC microbiological water quality guidelines for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, results for the 36 councils are shown of which 32 comply and 4 do not comply. Results for the previous 4 years are also shown.
2. From 1998/99, reporting is required on the basis of the 1996 NHMRC/AWRC water quality guidelines, the results for which are shown in Figure 40 and 40A.
3. For councils with more than one water treatment works, the reported compliance for 1998/99 has been pro-rated on the basis of the number of samples tested at each treatment works. For 1994/95 to 1997/98, the compliance for each councils principal treatment works has been reported.
4. Microbiological compliance with the 1987 NHMRC/AWRC Guidelines has been determined on the basis of the criteria for long-term compliance. These are summarised in Schedule 1 of Appendix F of the NSW Government's Water Supply and Sewerage Management Guidelines, 1991. For councils which do not comply, the percentage of samples complying is shown. For Sydney, reported compliance is with the 1980 NHMRC/AWRC Guidelines.
5. The Statewide median microbiological water quality compliance is 100% (refer to Table 1 – percentage of connected properties basis).
6. 11% of councils did not report on this important item. ***All councils should carry out the necessary distribution system water quality sampling and report thereon in future.***
7. For general notes see page 33.

40 Compliance with 1996 Australian Drinking Water Guidelines – 1998/99



Comments:

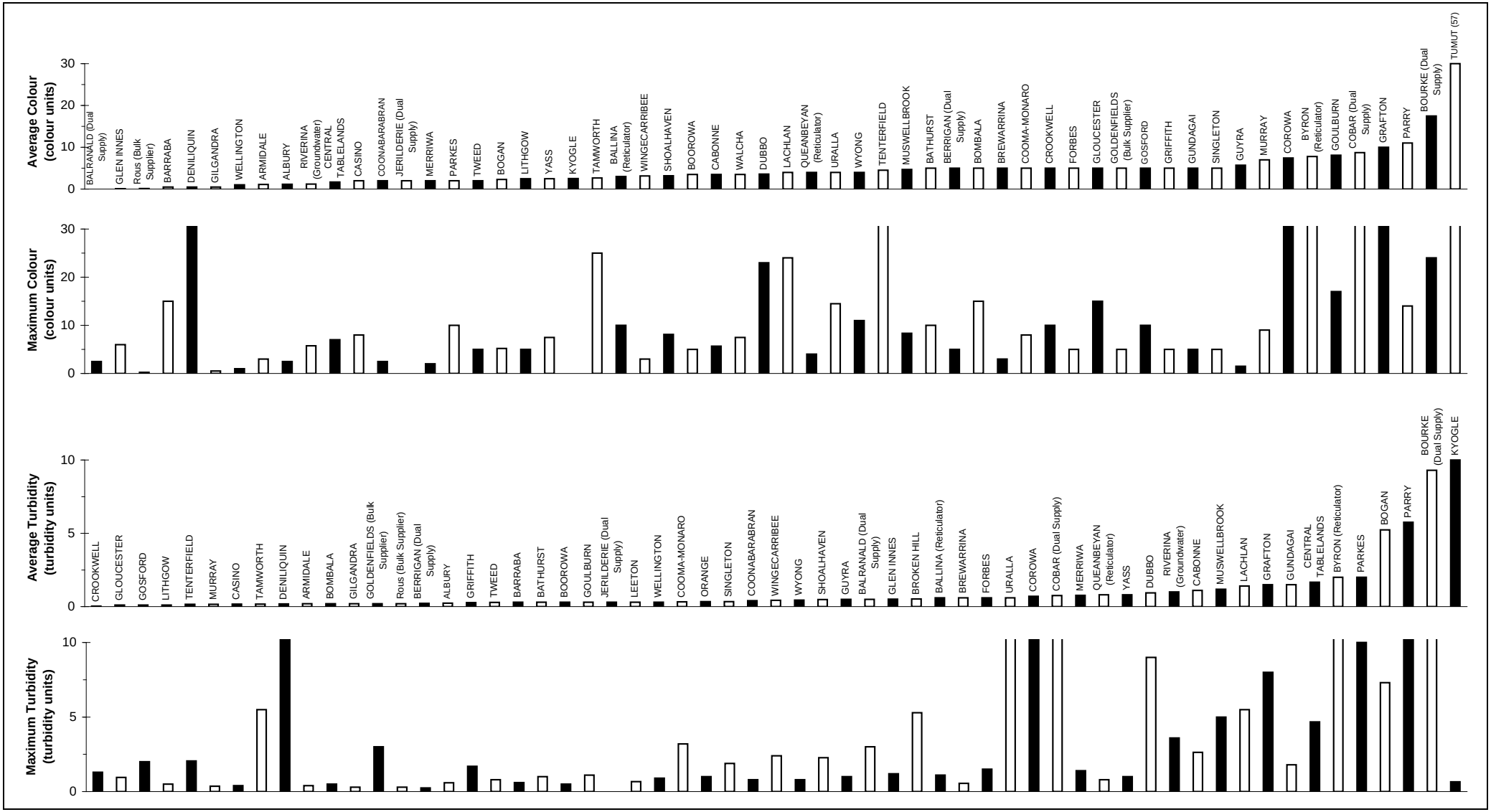
1. 93% of the 9,000 samples tested for non-metropolitan NSW complied with the 1996 Microbiological Water Quality Guidelines; 38% of councils complied with these guidelines.
2. 91% of the 13,000 samples tested for non-metropolitan NSW complied with the 1996 Physical Water Quality Guidelines; 43% of councils complied with these guidelines.
3. 95% of the 10,500 samples tested for non-metropolitan NSW complied with the 1996 Chemical Water Quality Guidelines; 53% of councils complied with these guidelines.
4. 11% of councils did not report on microbiological, physical and chemical water quality compliance. All councils should carry out the necessary water quality sampling and report thereon in future.

40A Microbiological Compliance with 1996 Australian Drinking Water Guidelines – 1998/99 Water Supply

Parameter: Percentage of distribution system water samples complying with microbiological criteria of the 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines (Q47k&m).

Notes:

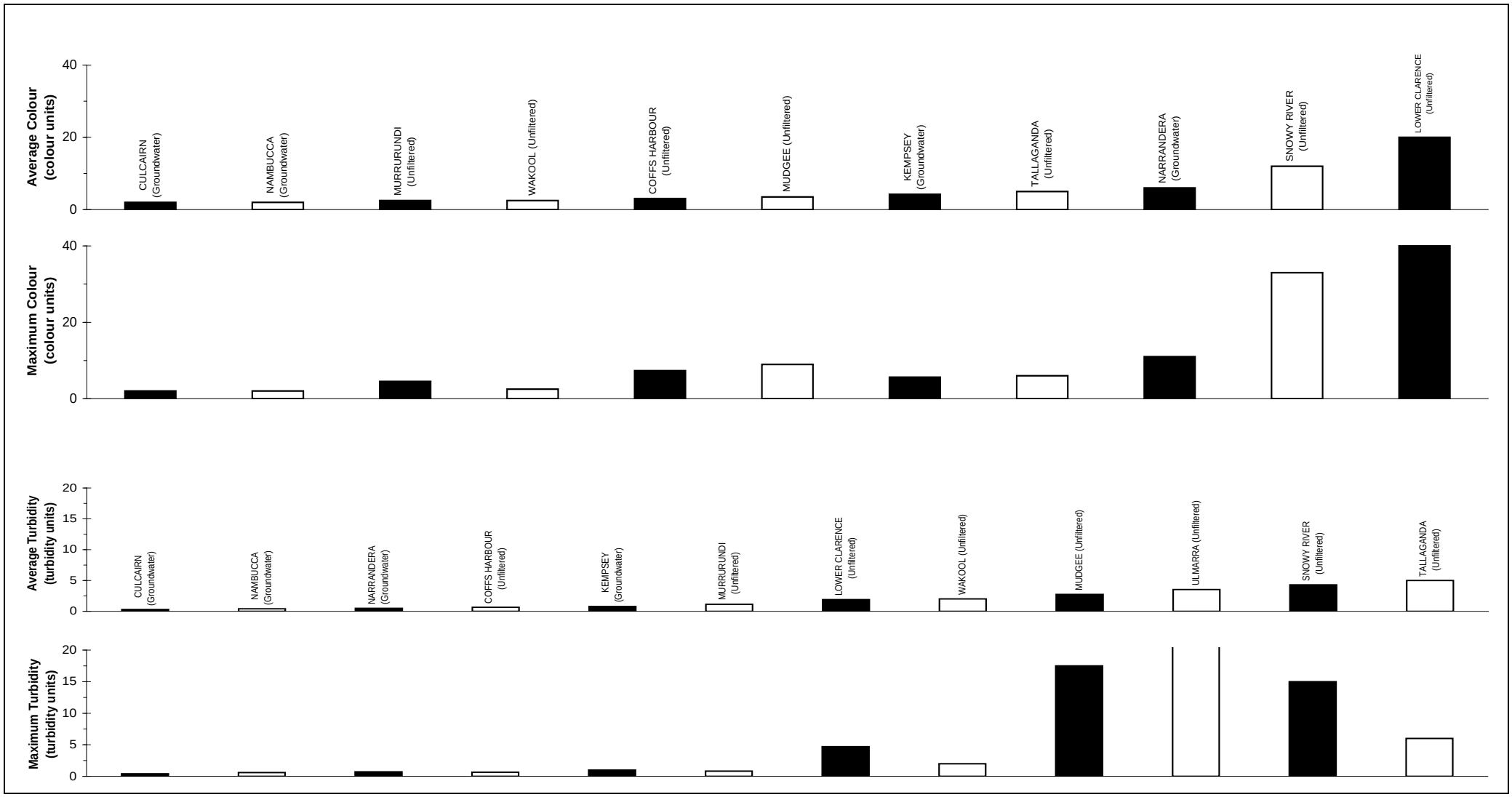
1. This figure shows the 1998/99 ranked values of distribution system compliance with the 1996 NHMRC/ARMCANZ microbiological water quality guidelines for each council.
2. For councils with more than one water treatment works, the reported compliance has been pro-rated on the basis of the number of samples tested at each treatment works.
3. The 1996 guidelines are more stringent than the 1987 guidelines. For example:
   - A council with 12 samples of which 9 complied would achieve 100% compliance with the 1987 guidelines but only 75% compliance with the 1996 guidelines.
   - A council with 100 samples of which 95 complied would achieve 100% compliance with the 1987 guidelines but only 95% compliance with the 1996 guidelines.
4. Sampling frequency should be at least one sample per week for populations over 5000, in accordance with the NHMRC/ARMCANZ Guidelines. The sampling frequency for many councils was significantly less than recommended.
5. 11% of councils did not report on this important item. All councils should carry out the necessary distribution system water quality sampling and report thereon in future.
6. For general notes see page 33.



Parameter: Treated Water Average Turbidity (Q45f), Maximum Turbidity (Q45d), Treated Water Average Colour (Q44f), Maximum Colour (Q44d).

Notes:

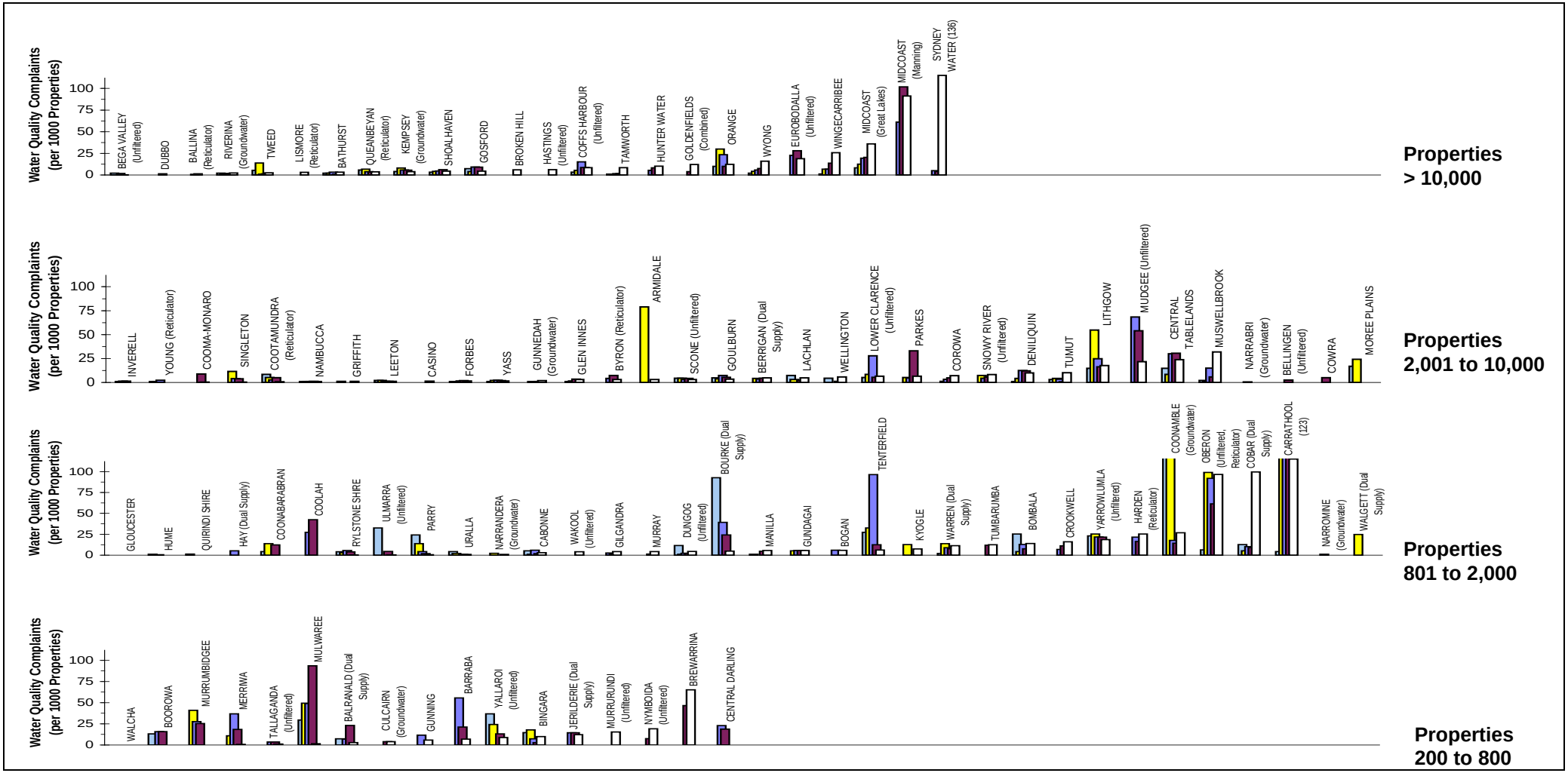
1. Only filtered reporting supplies have been considered.
2. 97% of the 60 reporting councils had average turbidity not exceeding 7 turbidity units. 79% of these councils had average turbidity not exceeding 1 turbidity unit.
3. 97% of the 60 reporting councils had average colour not exceeding 14 colour units. 83% of these councils had average colour not exceeding 5 colour units.
4. 32% of councils were unable to report on these items. All councils should carry out the necessary sampling and report thereon in future.



Parameter: Treated Water Average Turbidity (Q45f), Maximum Turbidity (Q45d), Treated Water Average Colour (Q44f), Maximum Colour (Q44d).

Notes:

1. Only unfiltered reporting supplies have been considered.
2. 92% of the 12 reporting councils had average turbidity not exceeding 7 turbidity units. 50% of these councils had average turbidity not exceeding 1 turbidity unit
3. 75% of the 12 reporting councils had average colour not exceeding 14 colour units. 36% of these councils had average colour not exceeding 5 colour units.
4. 56% of councils were unable to report on these items. All councils should carry out the necessary sampling and report thereon in future.

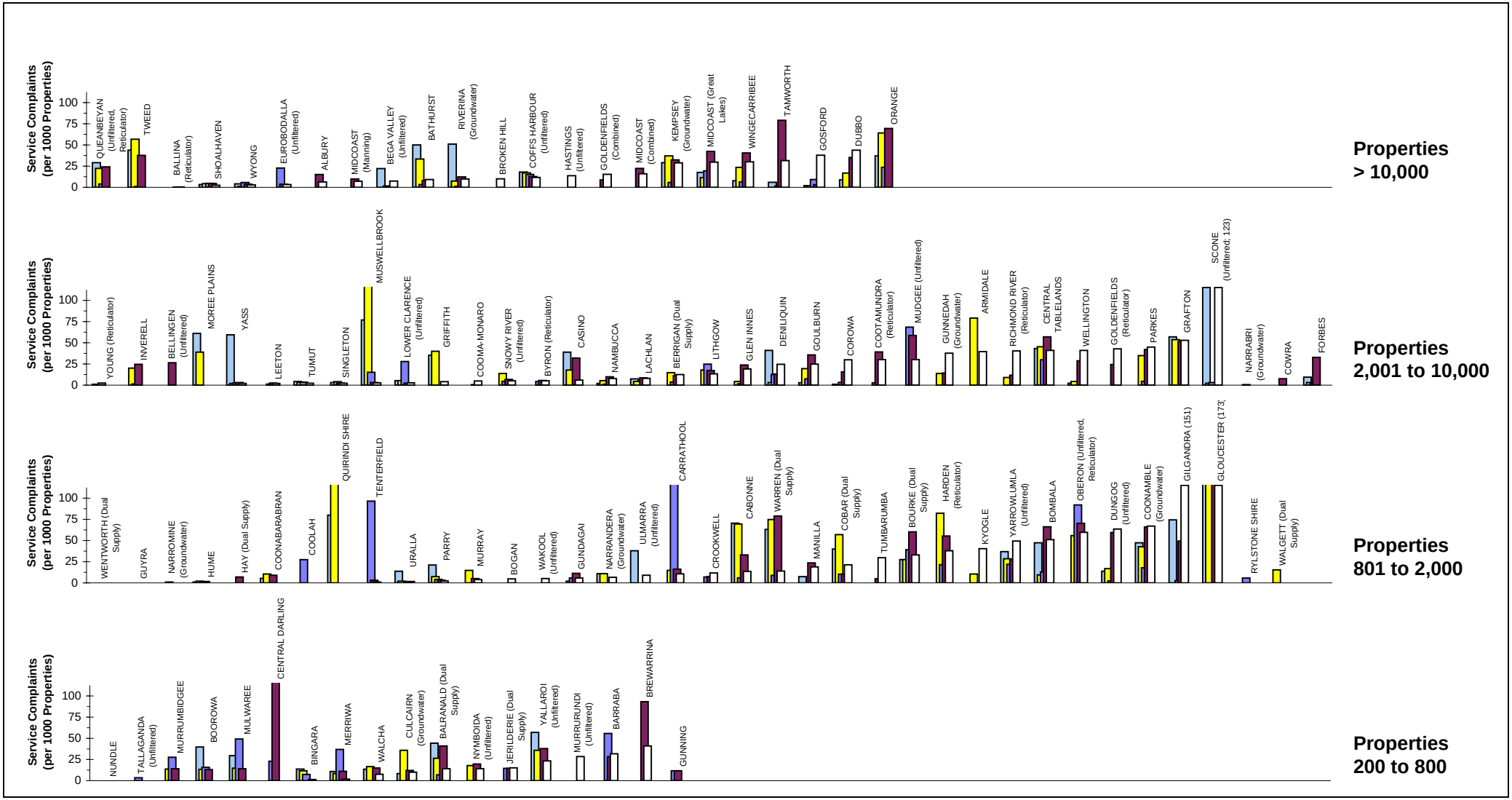


Parameter: No. of Water Quality Complaints (Q25) x 1000

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. This figure shows the 1998/99 ranked values of the number of water quality complaints per 1000 connected properties for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the water quality complaints for the 34 councils shown ***range*** from about ***nil to 32*** per 1000 connected properties.
2. The Statewide median number of water quality complaints is 4 per 1000 connected properties (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.



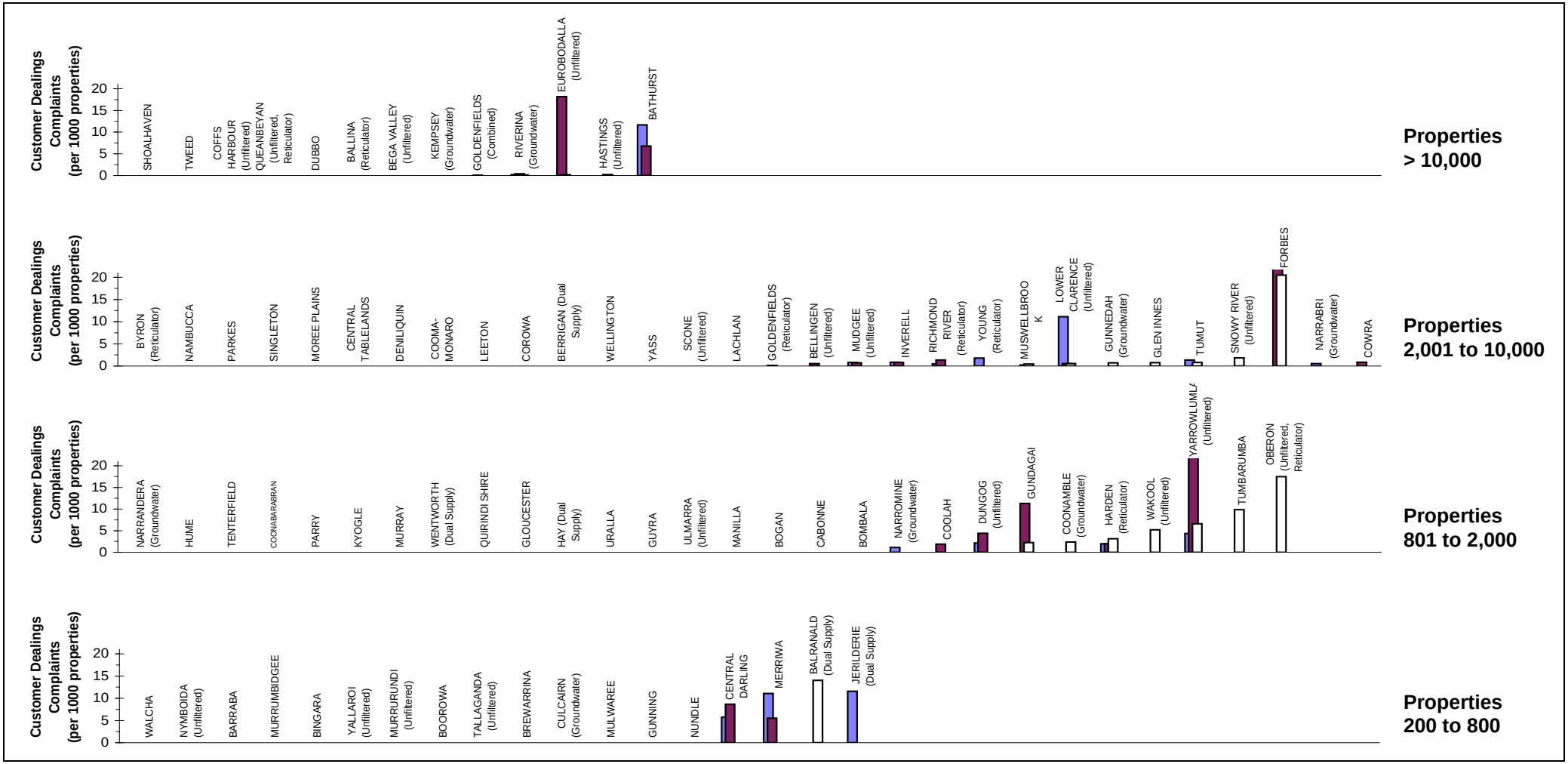
Parameter: No. of Water Service Complaints (Q27) x1000

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows the 1998/99 ranked values of the number of service complaints per 1000 properties for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the service complaints for the 37 councils shown ***range*** from about *0 to 115* per 1000 connected properties. Results for the previous 4 years are also shown.
2. The Statewide median number of service complaints is 10 per 1000 connected properties (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

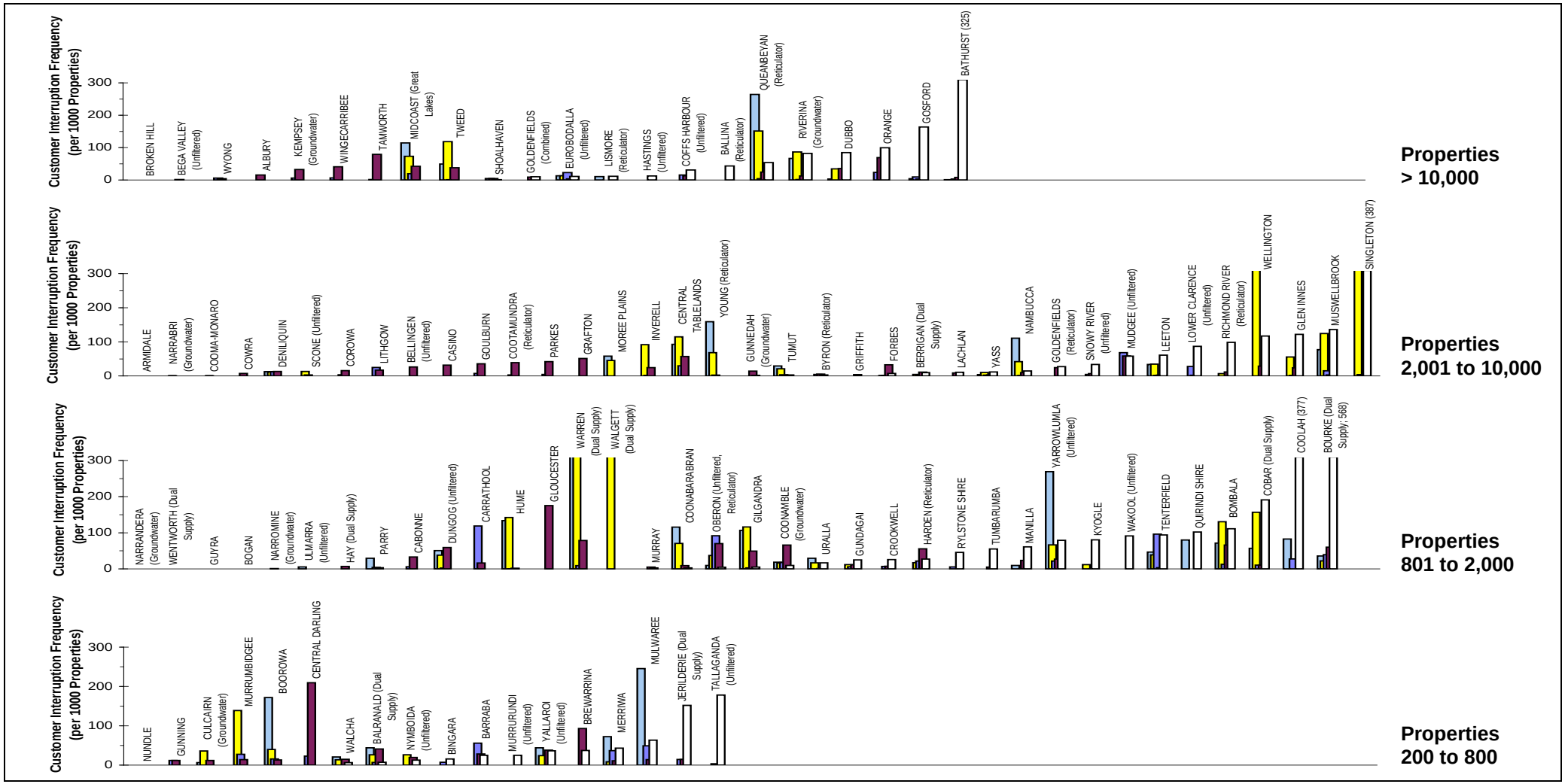


Parameter: No. of Customer Dealings Complaints (Q29) x1000

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

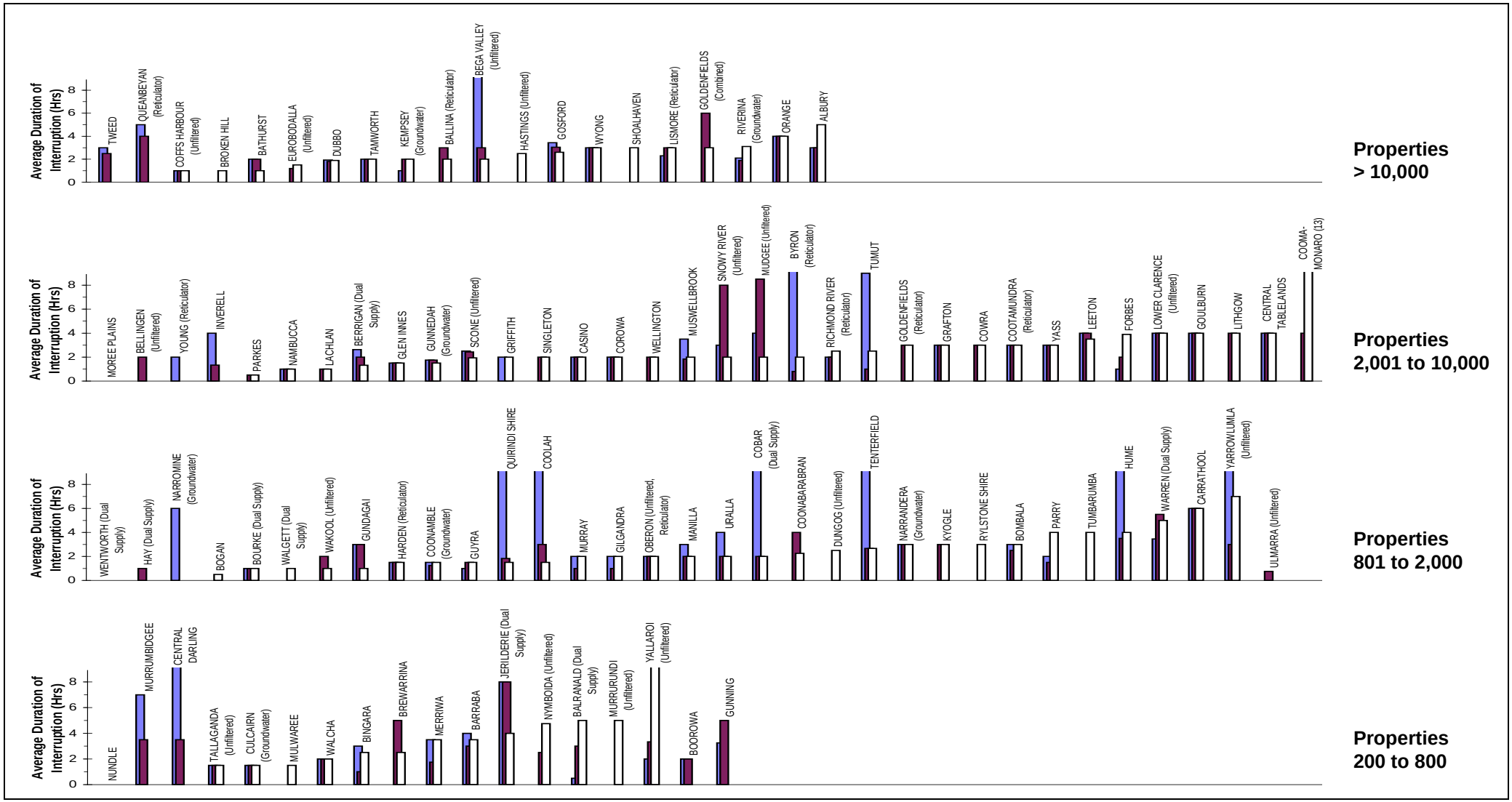
1. This figure shows the 1998/99 ranked values of the number of customer dealings complaints per 1000 properties for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the customer dealings complaints for the 30 councils shown ***range*** from about 0 to 21. Results for the previous 2 years are also shown.
2. Only 21 non-zero values for this item were reported by councils.
3. 20% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
4. The Statewide median customer dealing complaints is nil (refer to Table 1 - percentage of connected properties basis).
5. For general notes see page 33.



Parameter: No. of Properties Affected by an Unplanned Interruption to Supply (Q30a + Q30b) x1000 / (No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Residential Properties per Assessment

Notes:

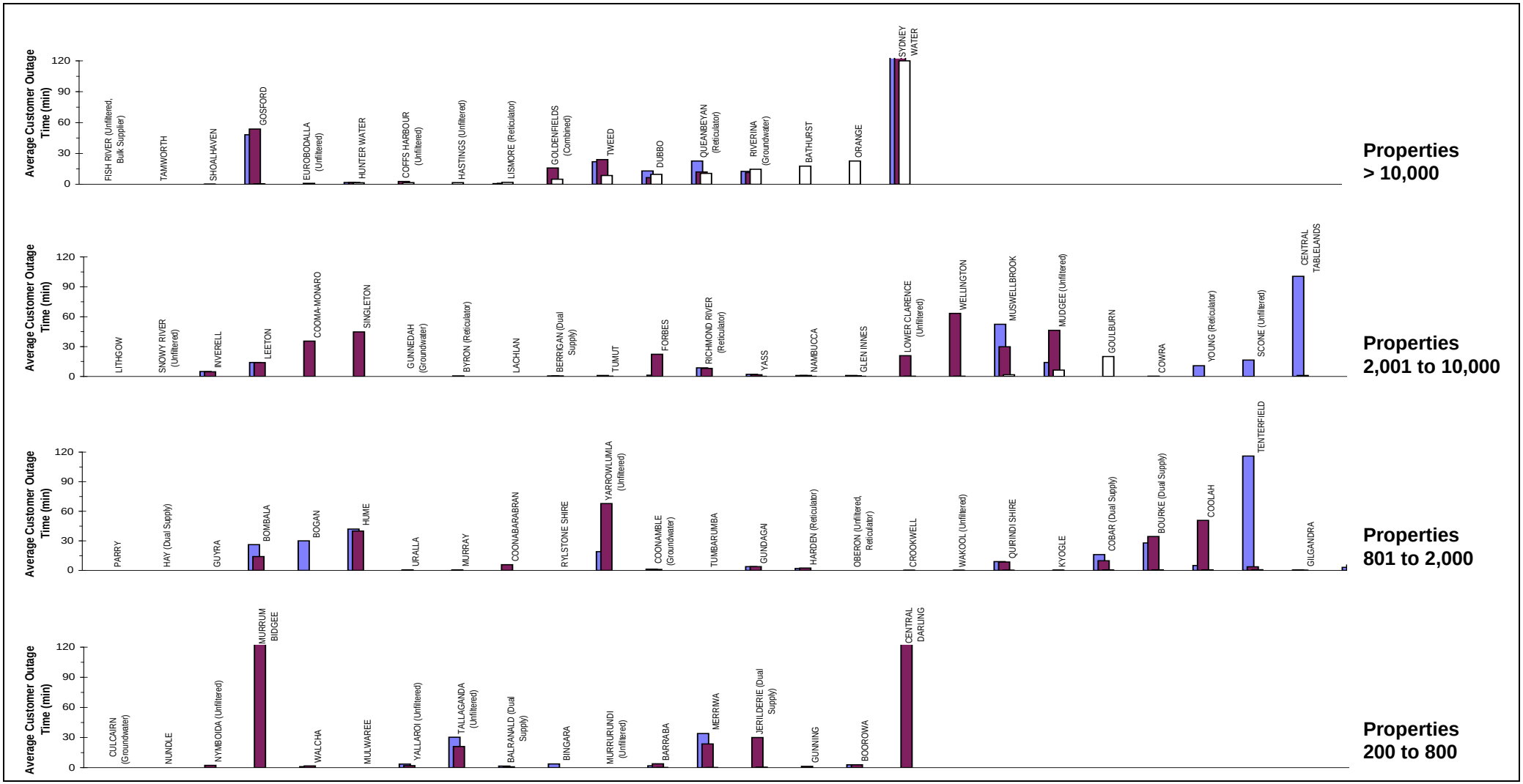
1. This figure shows the 1998/99 ranked values of customer interruption frequency per 1000 properties for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the interruption frequencies for the 37 councils shown *range* from *nil to 389*. Results for the previous 4 years are also shown.
2. The Statewide median customer interruption frequency is 3 (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.



Parameter: Average Time Taken to Restore an Interrupted Supply (Q31) in hours

Notes:

1. This figure shows the 1998/99 ranked values of the average duration of interruptions for each council in 4 groups based on the number of connected properties served. *Each white bar represents one council*. As an example, for the property range from 2,001 to 10,000, the average duration of interruptions for the 34 councils shown *ranges* from about *0 to 4* hours. Results for the previous 2 years are also shown.
2. The Statewide median average duration of interruptions is 3 hours (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

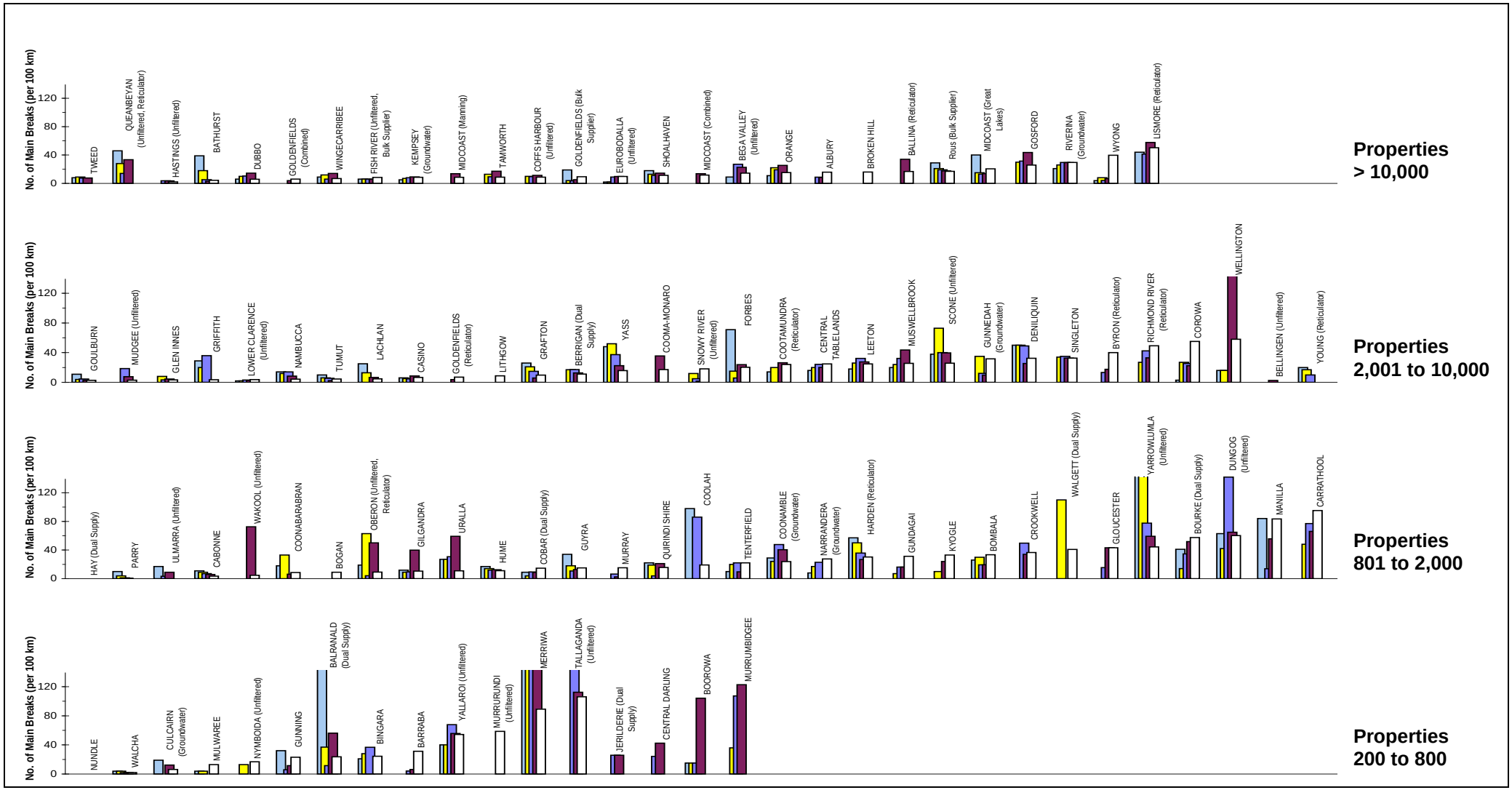


Parameter: $$\frac{\text{No. of Properties Affected by an Unplanned Interruption to Supply (Q30a + Q30b) x Average Time Taken to Restore an Interrupted Supply (Q31)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

Note:

1. This figure shows the 1998/99 ranked values of the average customer outage time per property for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the average customer outage times for the 25 councils shown ***range*** from about ***nil to 20 minutes***. Results for the previous 2 years are also shown.
2. The Statewide median average customer outage time is 1 minute (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

49 Number of Water Main Breaks



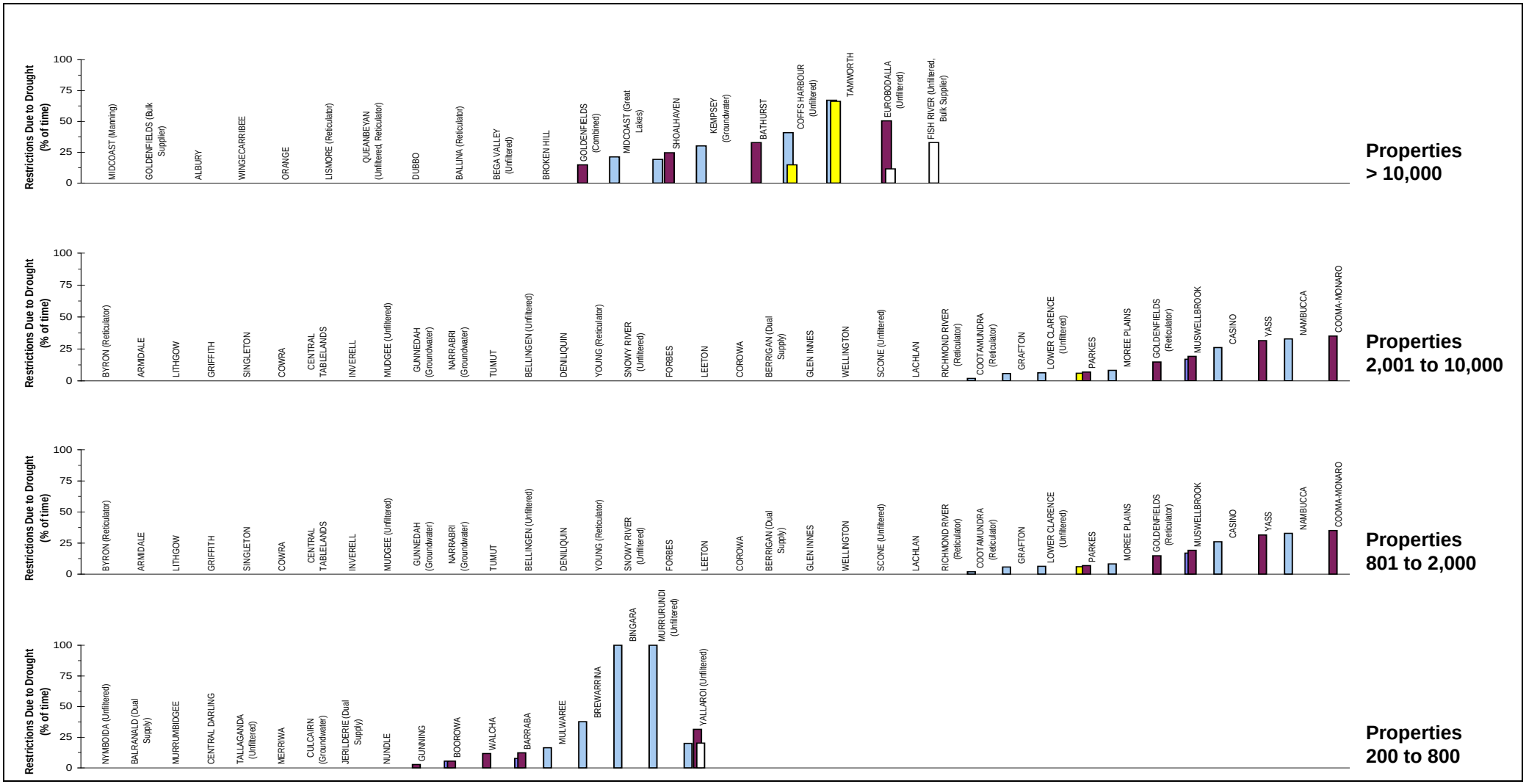
Parameter:

$$\frac{\text{No. of Pipeline Breaks (Q33)} \times 100}{\text{Length of Distribution Trunk Mains (Q17a)} + \text{Length of Reticulation (Q17b)} + \text{Length of Headwork Trunk Mains (Q17c)}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Note:

1. This figure shows the 1998/99 ranked values for water supply main breaks for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one counil.*** As an example, for the property range from 2,001 to 10,000, the number of main breaks for the 33 councils shown ***range*** from 2.7 to 58 breaks per 100 km of water mains. Results for the previous 4 years are also shown.
2. The Statewide median number of water supply main breaks is 15 per 100km of water main (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.

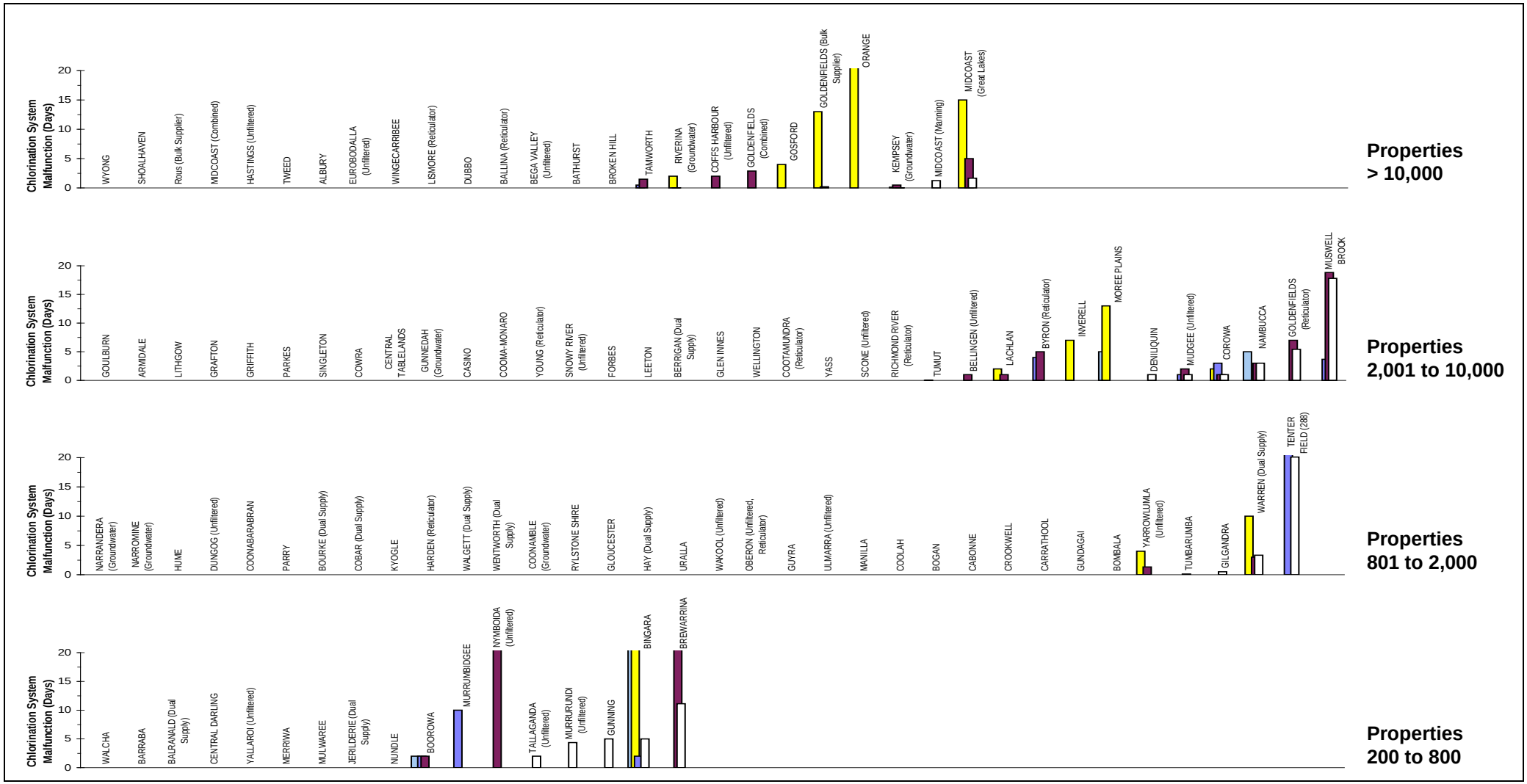


Parameter: $\frac{\text{No. of Days of Water Restrictions Due to Drought (Q32) x 100}}{\text{356 Days}}$

Notes:

1. This figure shows the 1998/99 ranked values of water restrictions due to drought for each council in 4 groups based on the number of connected properties served. ***Each bar white represents one council***. As an example, for the property range from 2,001 to 10,000, the water restrictions for the 37 councils all show restrictions for ***0 %*** of the time. Results for the previous 4 years are also shown.
2. The Statewide median water restrictions is 0% (refer to Table 1 - percentage of connected properties basis)
3. For general notes see page 33.

51 Chlorination System Malfunction

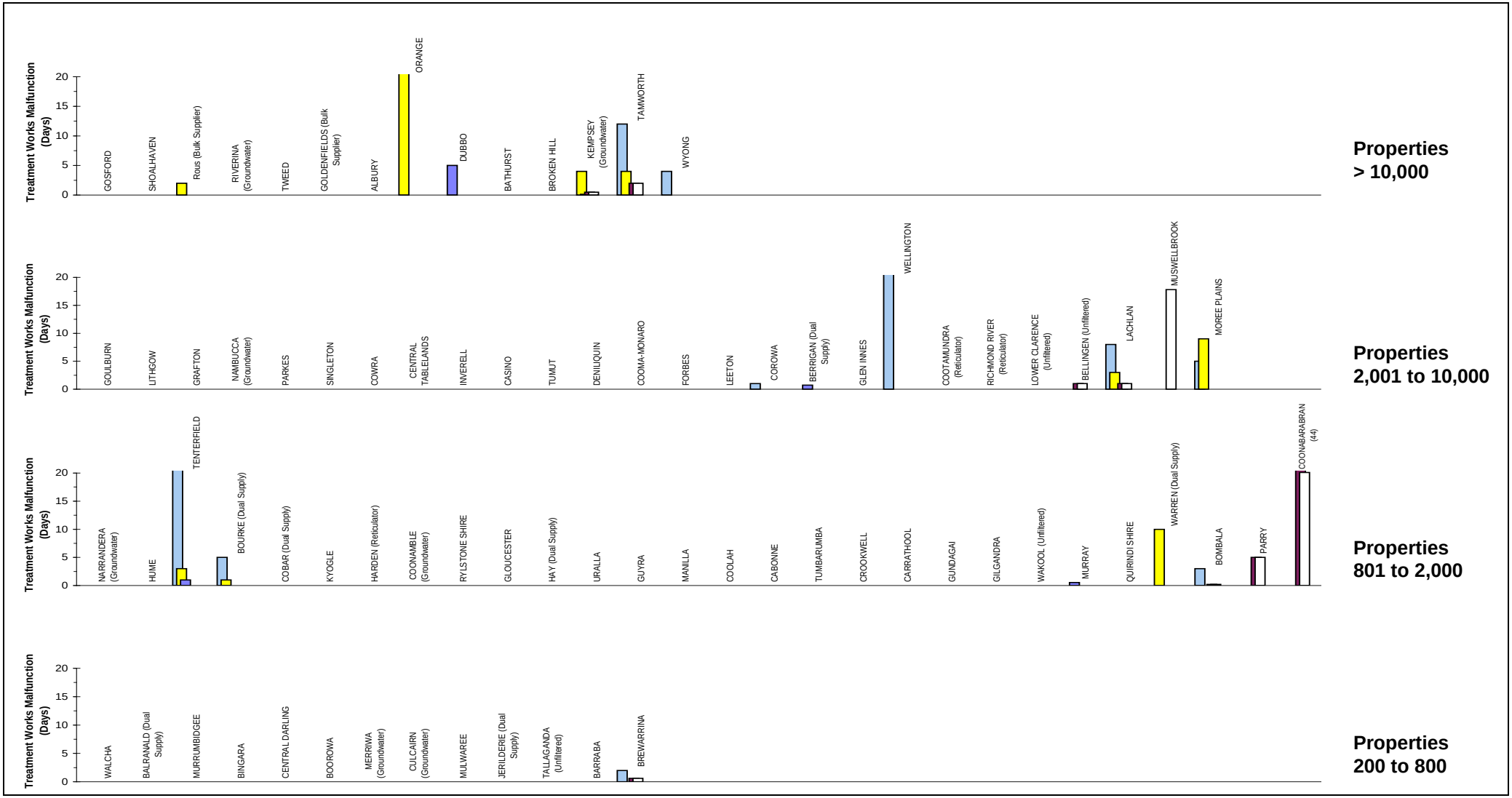


Parameter: Numbers of Days Chlorination System failed to Operate (Q49)

Note:

1. This figure shows the 1998/99 ranked number of days the chlorination system did not operate for each council in 4 groups based on the number of connected properties served. ***Each bar white represents one council***. As an example, for the property range from 2,001 to 10,000, the number of days the chlorination system did not operate for the 35 councils show ***range*** from 0 *to 18 days*. Results for the previous 4 years are also shown.
2. For Councils with more than one chlorination system, the weighted average (based on capacity) of days was used.
3. For general notes see page 33.

52 Treatment Works Malfunction

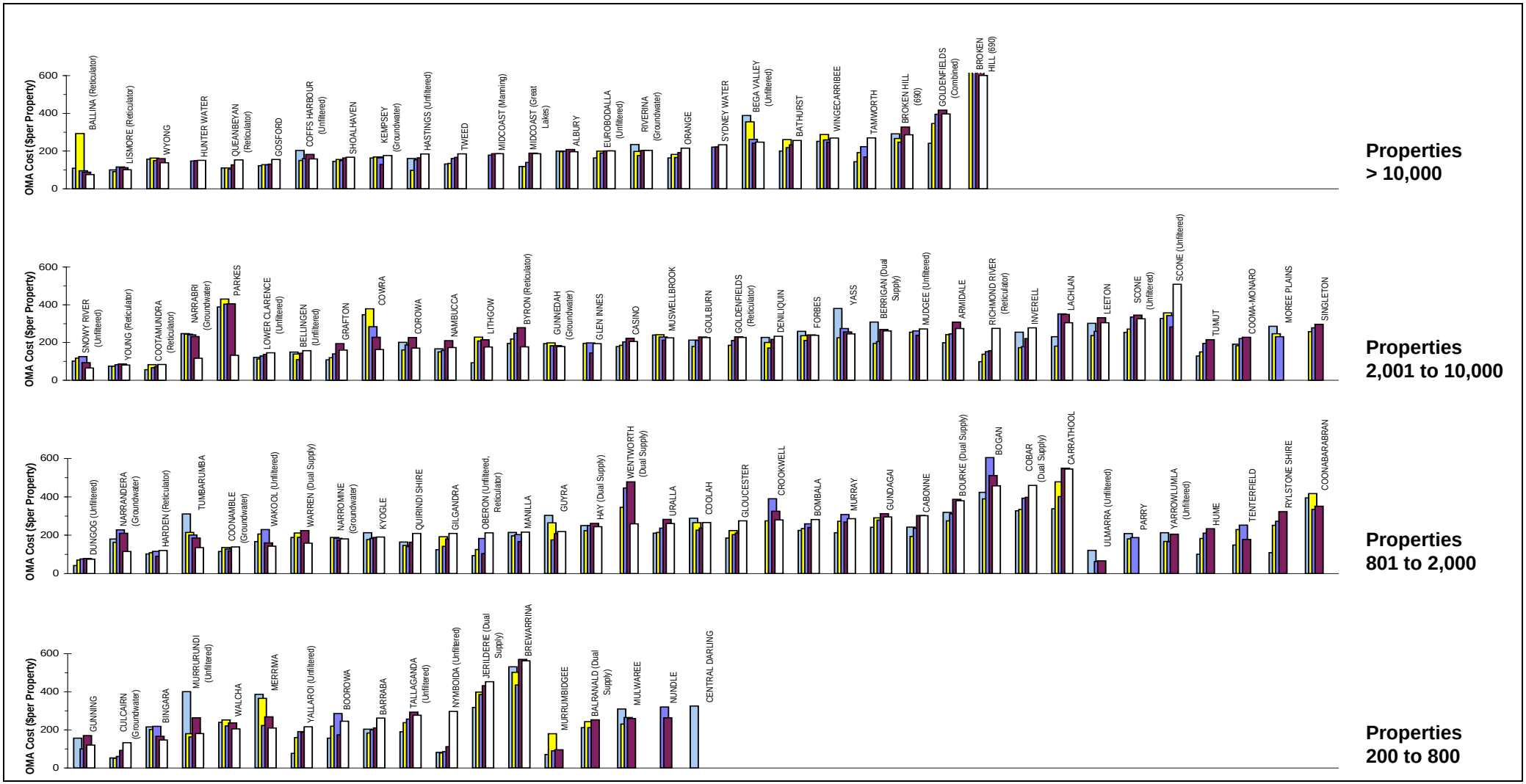


Parameter: Number of days of major Malfunction of Treatment Processes (Q50)

Notes:

1. This figure shows the 1998/99 ranked number of days of major malfunction of treatment processes for each council in 4 groups based on the number of connected properties served. ***Each bar white represents one council***. As an example, for the property range from 2,001 to 10,000, the number of days of treatment work malfunction for the 29 councils shown ***range*** from 0 to 18 days. Results for the previous 4 years are also shown.
2. For Councils with more than one treatment works, the weighted average days of malfunction (based on treatment works capacity) was used.
3. For general notes see page 33.

53 Operating Cost (OMA) per property



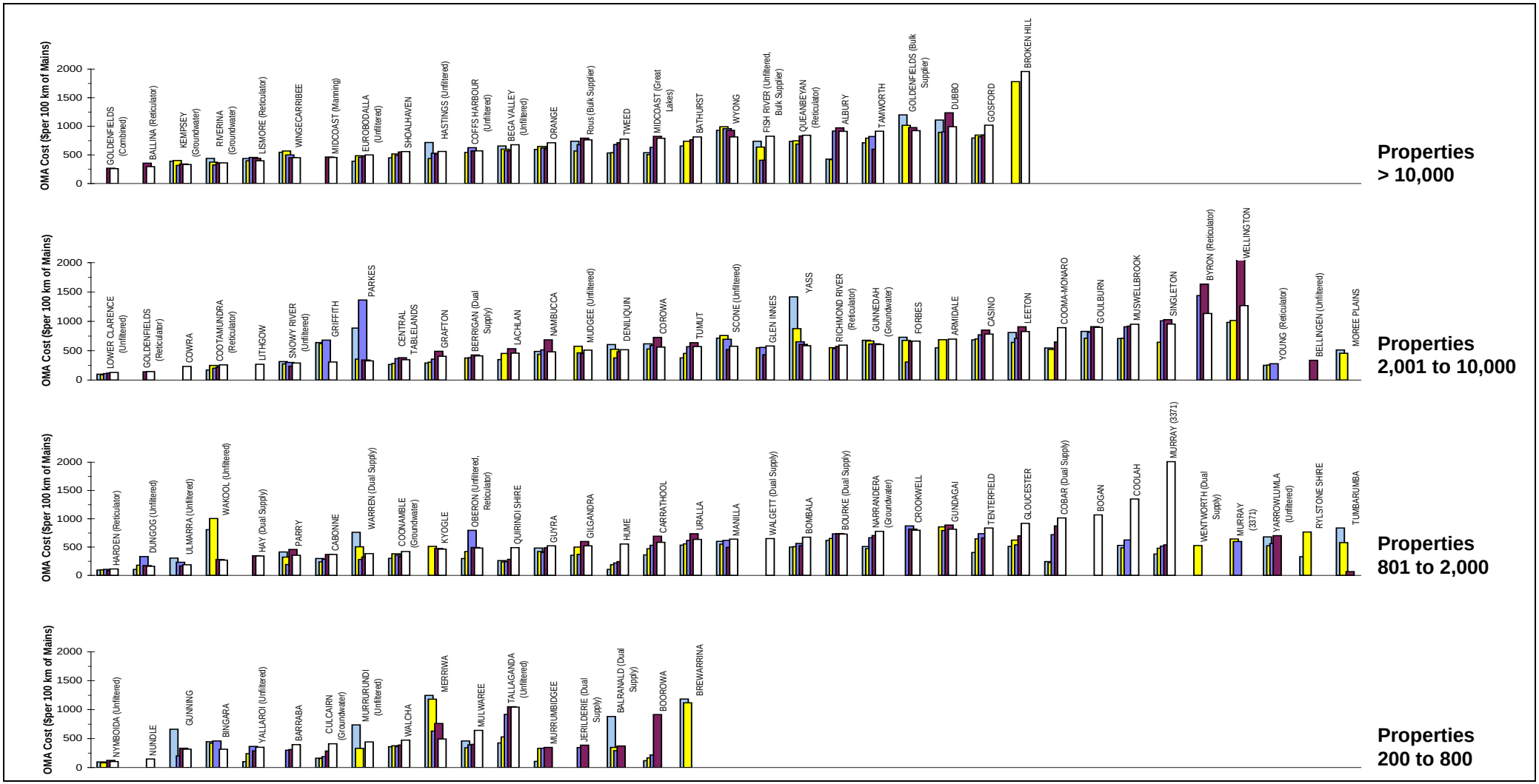
Parameter: Management Expenses (W1) + Total Operations Expenses (W2) - Purchase of Water (W2o)

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. This figure shows the 1998/99 ranked values of the water supply operating cost (OMA - operation, maintenance and administration) per property for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the operating costs for the 36 councils shown ***range*** from about ***$65 to $509*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median operating cost per connected property is $185 (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.

54 Operating Cost per 100 km of main

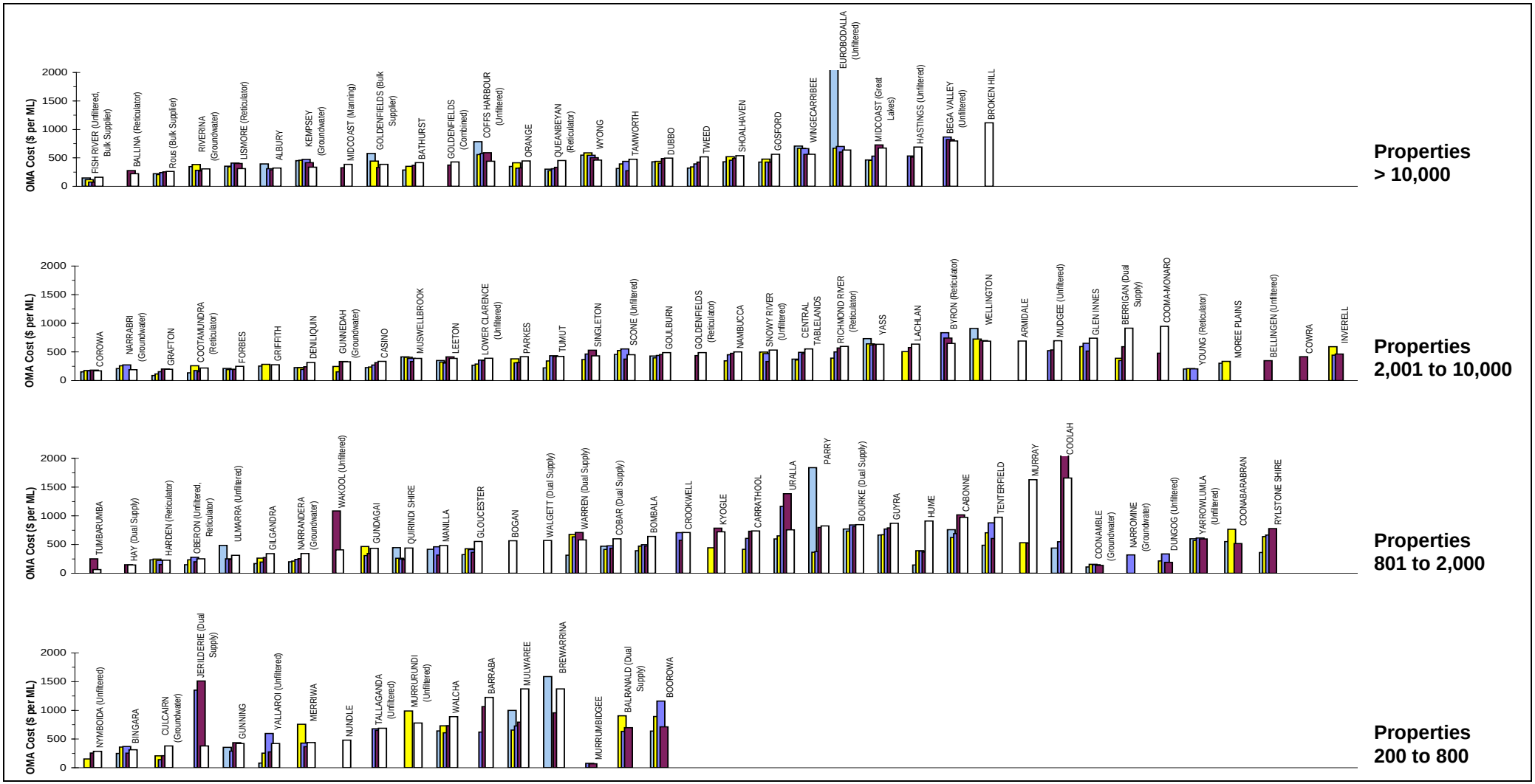


Parameter:

$$\frac{\text{(Management Expenses (W1) + Total Operations Expenses (W2) - Purchase of Water (W2o)) x 100}}{\text{Length of Distribution Trunk Mains (Q17a) + Length of Reticulation (Q17b) + Length of Headwork Trunk Mains (Q17c)}}$$

Notes:

1. This figure shows the 1998/99 ranked values of the water supply operating cost (OMA - operation, maintenance and administration) per 100 km of main for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the operating costs for the 37 councils shown ***range*** from about ***$130 to $1270*** per 100 km of main. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median operating cost per 100 km of main is $580,000 (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.



Parameter: $\frac{\text{Management Expenses (W1) + Total Operations Expenses (W2) - Purchase of Water (W2o)}}{\text{Total Potable Water Consumption (Q18i)}}$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows the 1998/99 ranked values of the water supply operating cost (OMA - operation, maintenance and administration) per ML for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the operating costs for the 37 councils shown ***range*** from about ***$170 to $948*** per ML. Results for the previous 4 years are also shown (Jan 1999$).
2. The Statewide median operating cost is $480 per ML (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.

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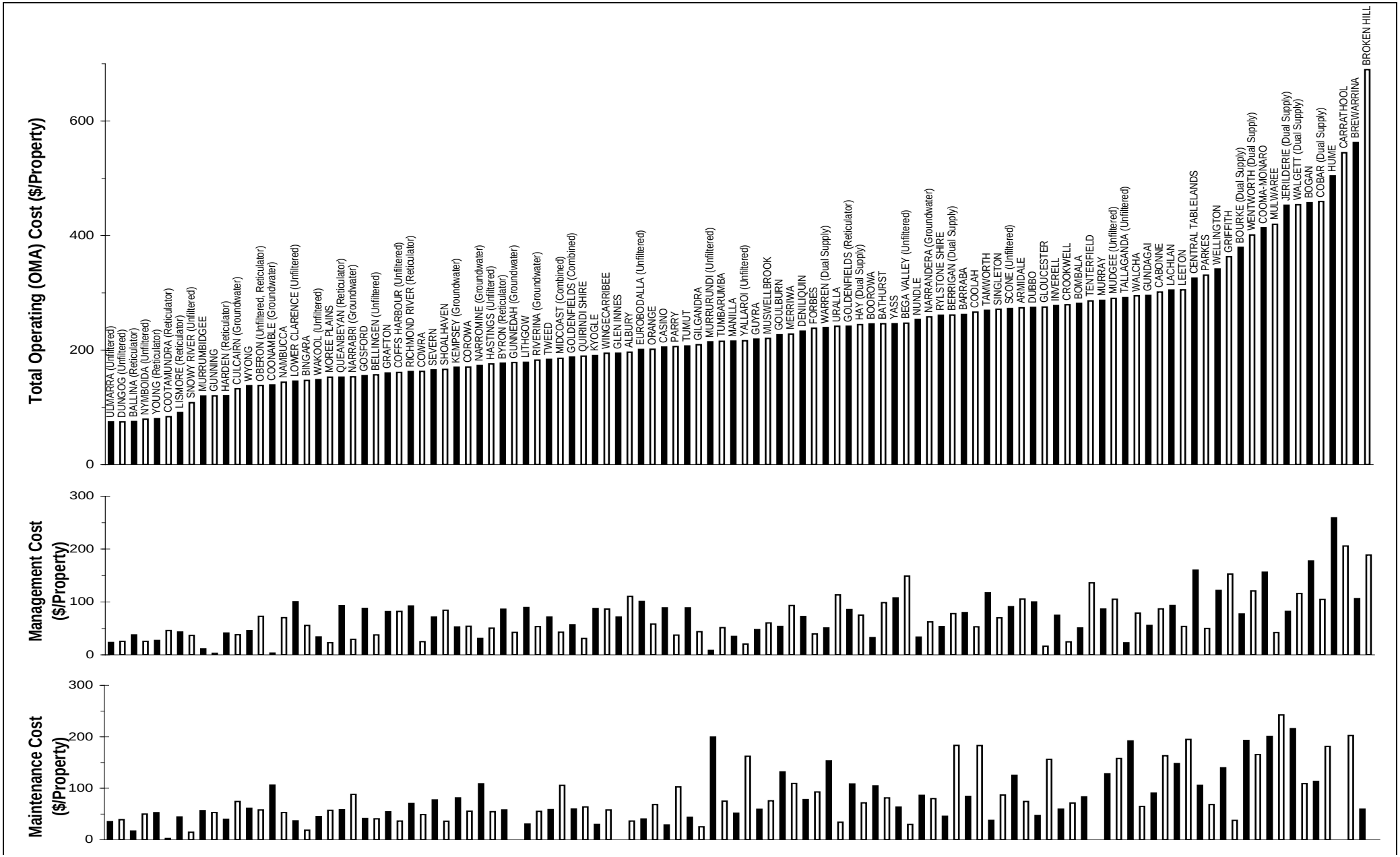
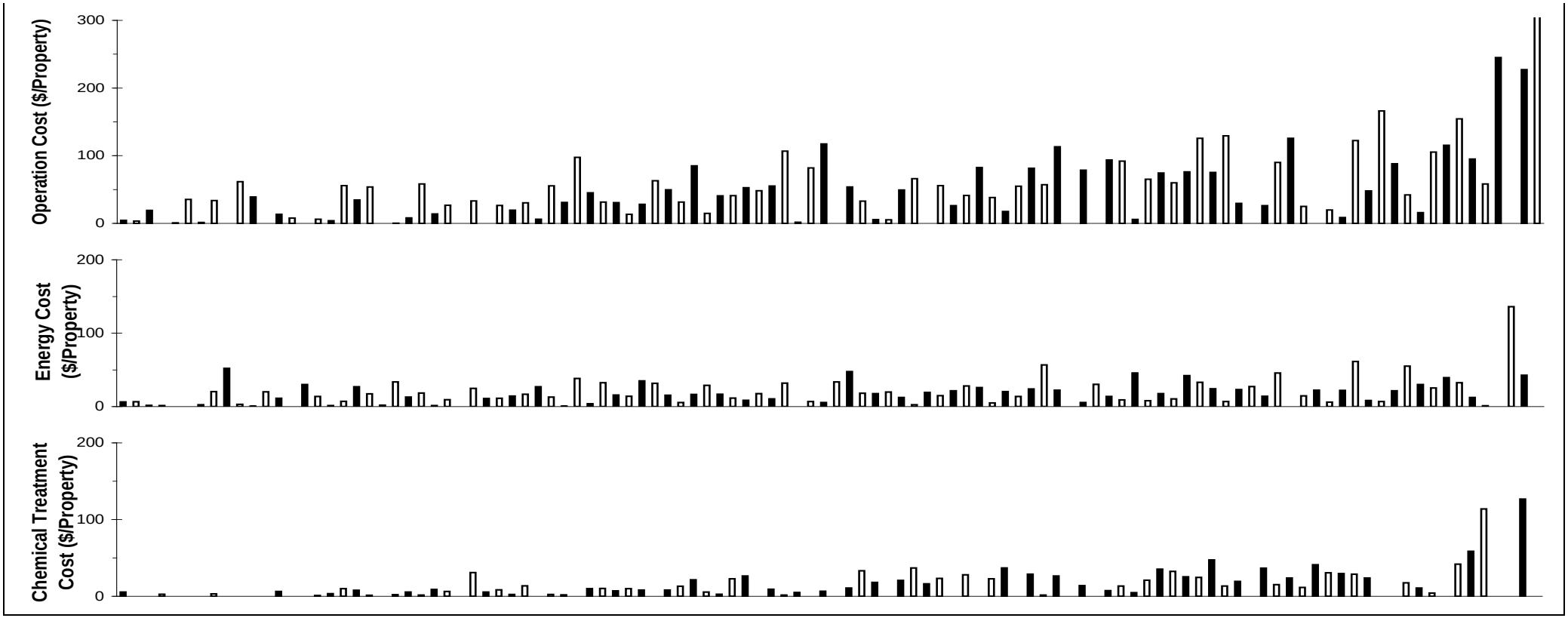

Total Operating (OMA) Cost ($/Property)
0
200
400
600
Management Cost ($/Property)
0
100
200
300
Maintenance Cost ($/Property)
0
100
200
300
ULMARRA (Unfiltered)
DUNGOG (Unfiltered)
BALLINA (Reticulator)
NYMBOIDA (Unfiltered)
YOUNG (Reticulator)
COOTAMUNDRA (Reticulator)
LISMORE (Reticulator)
SNOWY RIVER (Unfiltered)
MURRUMBIDGEE
GUNNING
HARDEN (Reticulator)
CULCAIRN (Groundwater)
WYONG
OBERON (Unfiltered, Reticulator)
COONAMBLE (Groundwater)
NAMBUCCA
LOWER CLARENCE (Unfiltered)
BINGARA
WAKOOL (Unfiltered)
MOREE PLAINS
QUEANBEYAN (Reticulator)
NARRABRI (Groundwater)
GOSFORD
BELLINGEN (Unfiltered)
GRAFTON
COFFS HARBOUR (Unfiltered)
RICHMOND RIVER (Reticulator)
COWRA
SEVERN
SHOALHAVEN
KEMPSEY (Groundwater)
COROWA
NARROMINE (Groundwater)
HASTINGS (Unfiltered)
BYRON (Reticulator)
GUNNEDAH (Groundwater)
LITHGOW
RIVERINA (Groundwater)
TWEED
MIDCOAST (Combined)
GOLDENFIELDS (Combined)
QUIRINDI SHIRE
KYOGLE
WINGECARRIBEE
GLEN INNES
ALBURY
EUROBODALLA (Unfiltered)
ORANGE
CASINO
PARRY
TUMUT
GILGANDRA
MURRURUNDI (Unfiltered)
TUMBARUMBA
MANILLA
YALLAROI (Unfiltered)
GUYRA
MUSWELLBROOK
GOULBURN
MERRIWA
DENILIQUIN
FORBES
WARREN (Dual Supply)
URALLA
GOLDENFIELDS (Reticulator)
HAY (Dual Supply)
BOOROWA
BATHURST
YASS
BEGA VALLEY (Unfiltered)
NUNDLE
NARRANDERA (Groundwater)
RYLSTONE SHIRE
BERRIGAN (Dual Supply)
BARRABA
COOLAH
TAMWORTH
SINGLETON
SCONE (Unfiltered)
ARMIDALE
DUBBO
GLOUCESTER
INVERELL
CROOKWELL
BOMBALA
TENTERFIELD
MURRAY
MUDGEE (Unfiltered)
TALLAGANDA (Unfiltered)
WALCHA
GUNDAGAI
CABONNE
LACHLAN
LEETON
CENTRAL TABLELANDS
PARKES
WELLINGTON
GRIFFITH
BOURKE (Dual Supply)
WENTWORTH (Dual Supply)
COOMA-MONARO
MULWAREE
JERILDERIE (Dual Supply)
WALGETT (Dual Supply)
BOGAN
COBAR (Dual Supply)
HUME
CARRATHOOL
BREWARRINA
BROKEN HILL



Parameter: $\frac{\text{Total Operation and Maintenance Expenses (W1 + W2) – Purchase of Water (W2o)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Management Expenses (W1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Dams \& Weir Maintenance (W2b) + Mains Maintenance (W2d) + Reservoir Maintenance (W2f) + Pumping Station Maintenance (W2i) + Treatment Maintenance (W2l) Other Maintenance (W2n)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Dams \& Weir Operation (W2a) + Mains Operation (W2c) + Reservoir Operation (W2e) + Pumping Station Operation (W2g) + Treatment Operation (W2j) + Other Operation (W2m)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

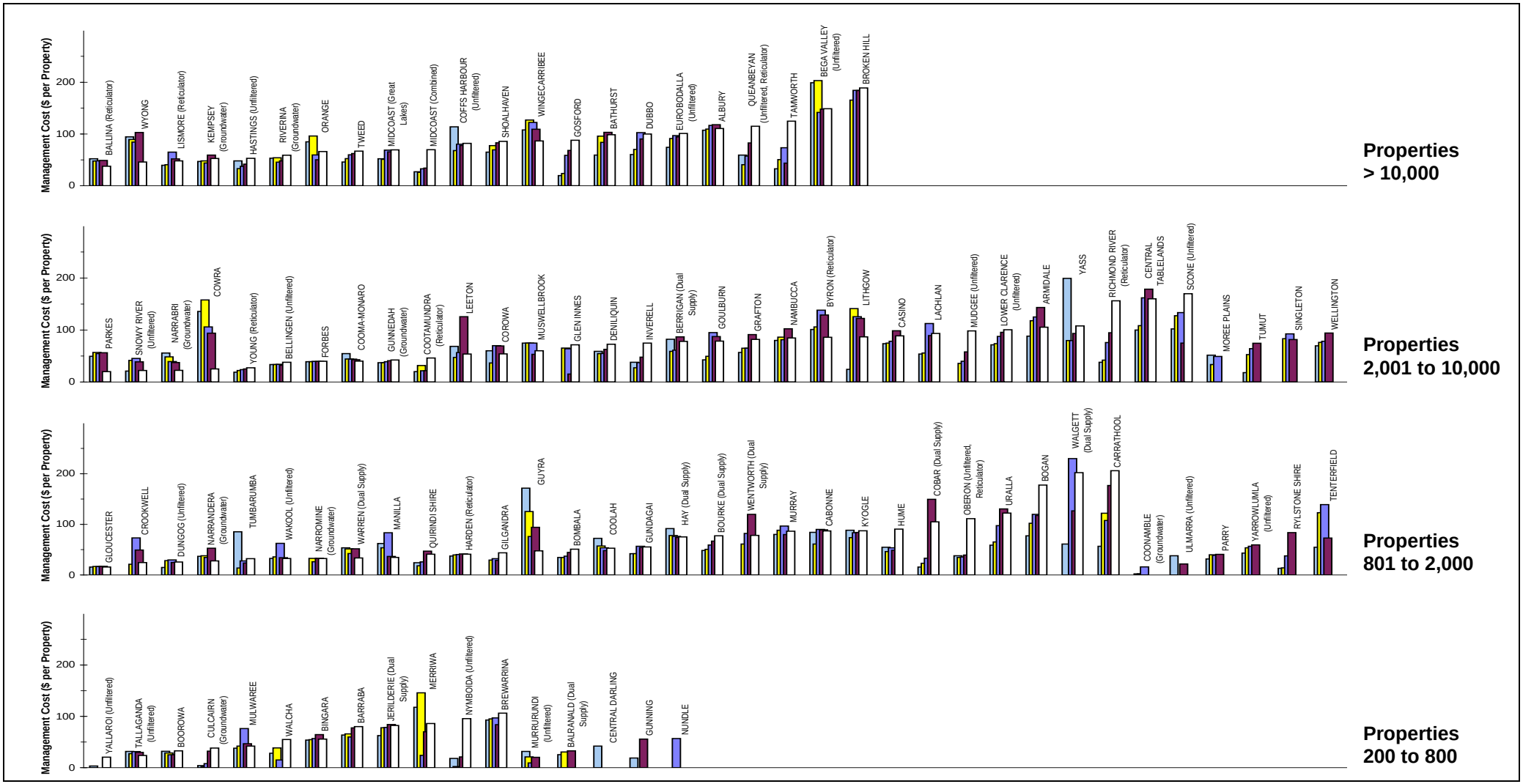
Parameter $\frac{\text{Pump Station Energy Expenses (W2h)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Chemical Treatment Expenses (W2k)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Notes:

1. The Statewide median operating cost (OMA – operation, maintenance and administration) is $185 per connected property (refer to Table 1 – percentage of connected property basis).
2. For general notes see page 33.

57 Management Cost per property



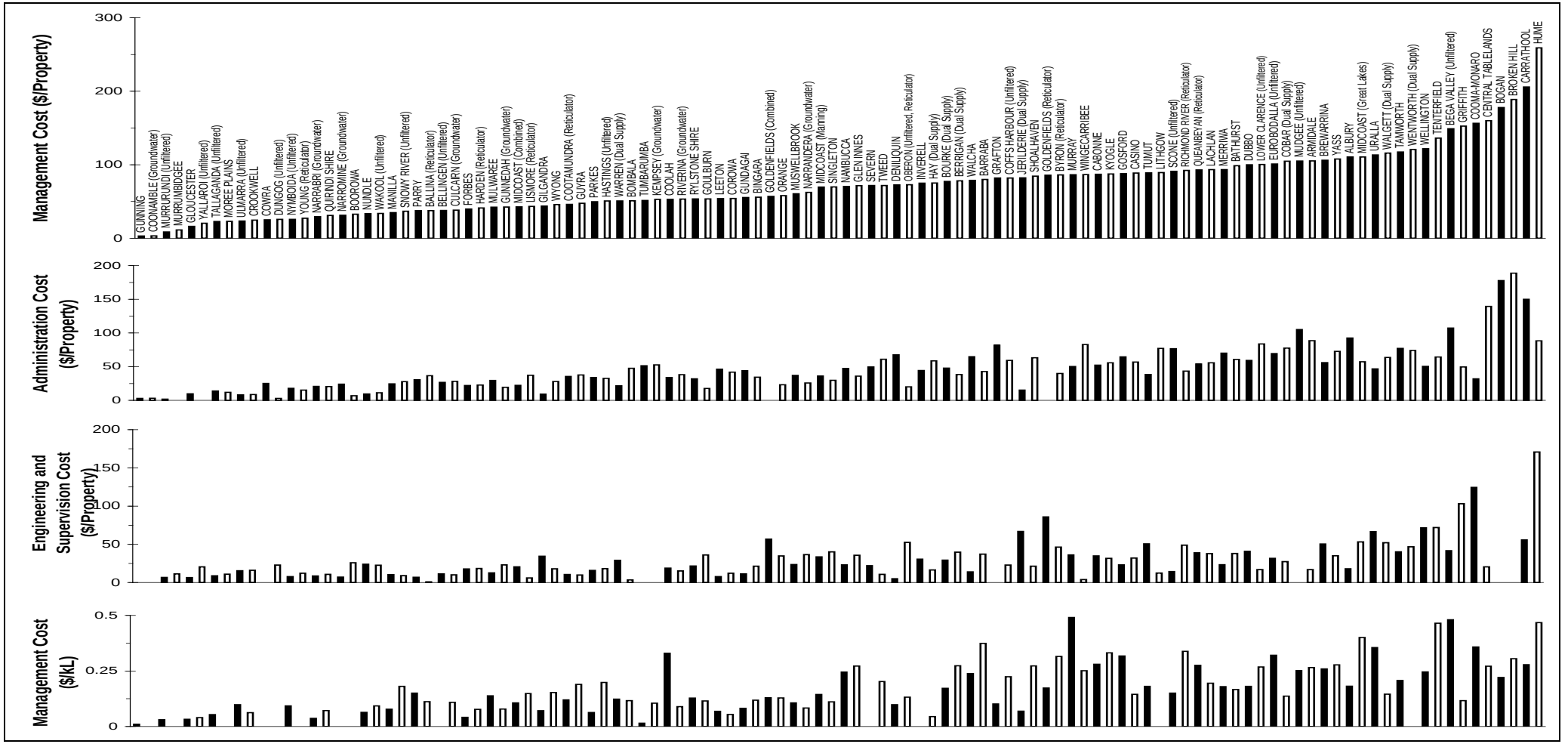
Parameter:

$$\frac{\text{Administration Cost (W1a) + Engineering Cost (W1b)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows the 1998/99 ranked values of the management cost per property for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the management costs for the 36 councils shown ***range*** from about ***$20 to $170*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median management cost is $80 per connected property (refer to Table 1 – percentage of connected properties basis).
3. For general notes see page 33.



Parameter: $\frac{\text{Management Expenses (W1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

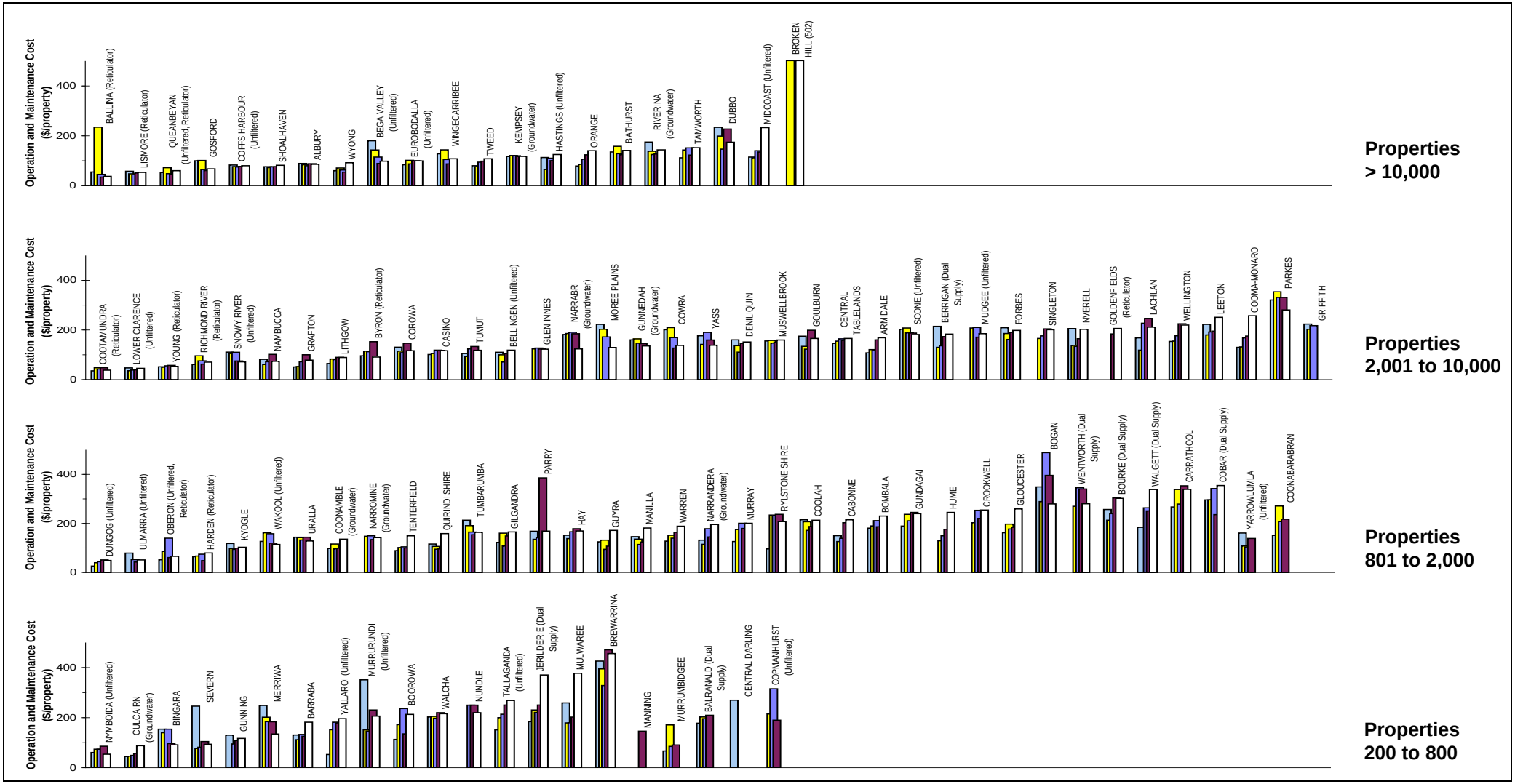
Parameter: $\frac{\text{Administration Expenses (W1a)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Engineering and Supervision Expenses (W1b)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Management Expenses (W1)}}{\text{Total Water Consumption (Q18i) x 10}}$

Notes:

1. The Statewide median management cost is $80 per connected property (refer to Table 1 – percentage of connected properties basis).
2. For general notes see page 33.



Parameter: Total Operation and Maintenance Cost (W2) – Purchase of Water (W2o)

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 water supply operation and maintenance cost for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the water supply operation and maintenance costs for the 37 councils shown ***range*** from about ***$38 to $280*** per property. Results for the previous 4 years are also shown in Jan 1999$.
2. For general notes see page 33.

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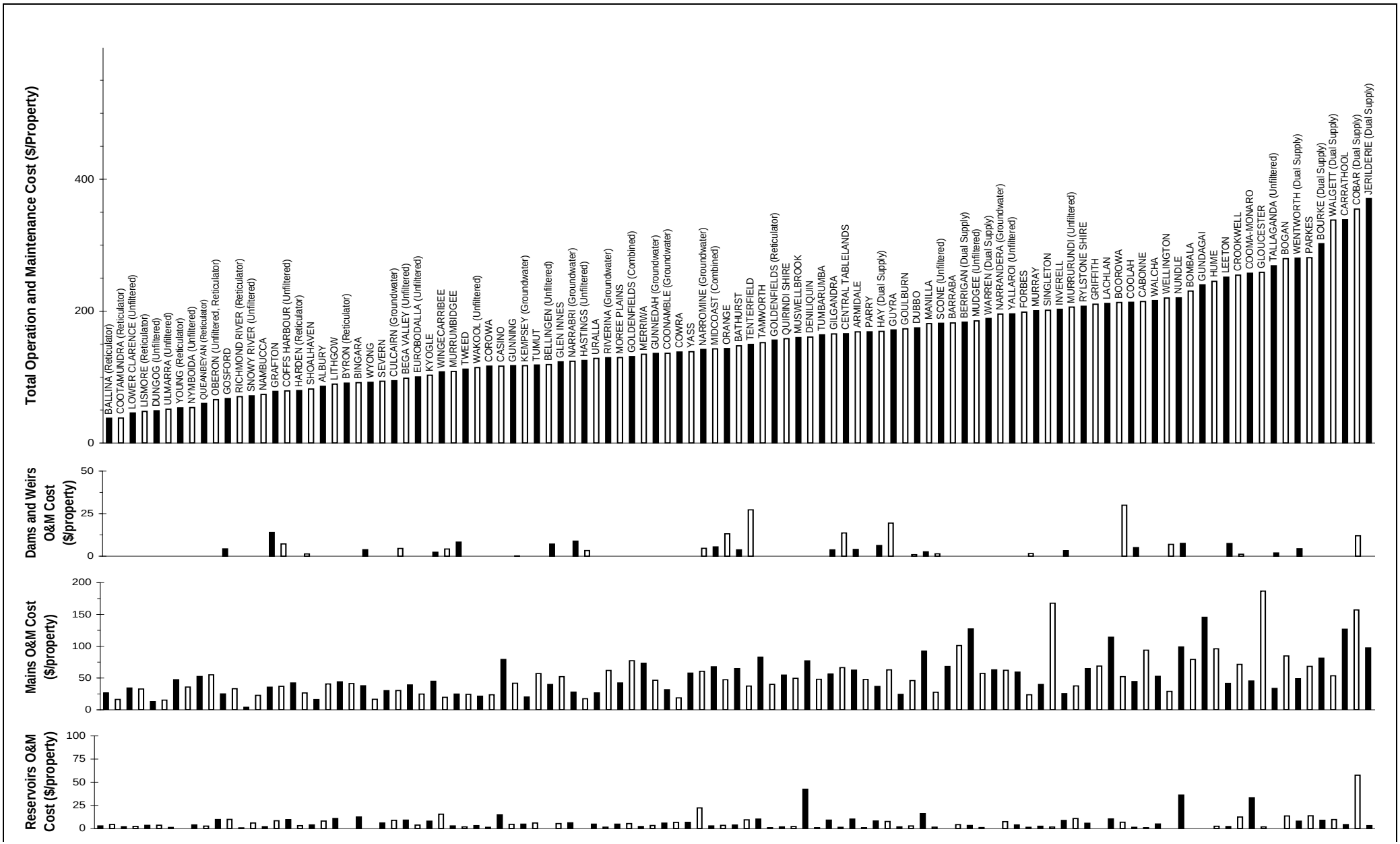
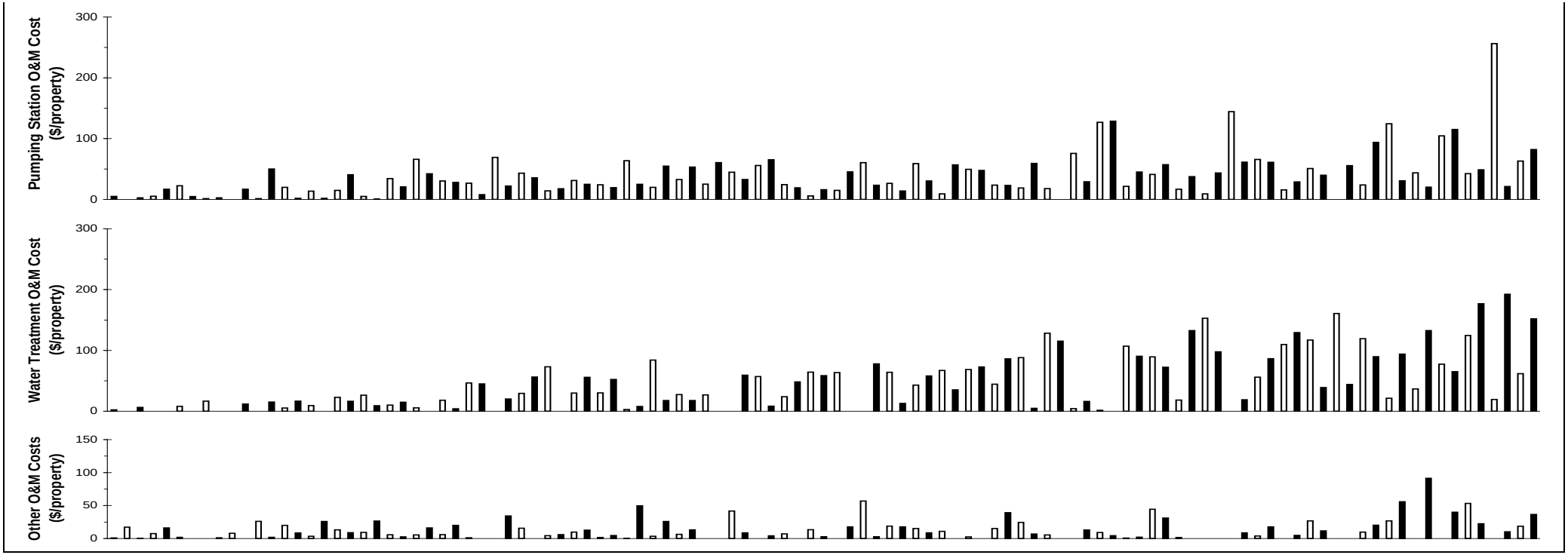

Total Operation and Maintenance Cost ($/Property)
0
200
400
Dams and Weirs O&M Cost ($/property)
0
25
50
Mains O&M Cost ($/property)
0
50
100
150
200
Reservoirs O&M Cost ($/property)
0
25
50
75
100
BALLINA (Reticulator)
COOTAMUNDRA (Reticulator)
LOWER CLARENCE (Unfiltered)
LISMORE (Reticulator)
DUNGOG (Unfiltered)
ULMARRA (Unfiltered)
YOUNG (Reticulator)
NYMBOIDA (Unfiltered)
QUEANBEYAN (Reticulator)
OBERON (Unfiltered, Reticulator)
GOSFORD
RICHMOND RIVER (Reticulator)
SNOWY RIVER (Unfiltered)
NAMBUCCA
GRAFTON
COFFS HARBOUR (Unfiltered)
HARDEN (Reticulator)
SHOALHAVEN
ALBURY
LITHGOW
BYRON (Reticulator)
BINGARA
WYONG
SEVERN
CULCAIRN (Groundwater)
BEGA VALLEY (Unfiltered)
EUROBODALLA (Unfiltered)
KYOGLE
WINGECARRIBEE
MURRUMBIDGEE
TWEED
WAKOOL (Unfiltered)
COROWA
CASINO
GUNNING
KEMPSEY (Groundwater)
TUMUT
BELLINGEN (Unfiltered)
GLEN INNES
NARRABRI (Groundwater)
HASTINGS (Unfiltered)
URALLA
RIVERINA (Groundwater)
MOREE PLAINS
GOLDENFIELDS (Combined)
MERRIWA
GUNNEDAH (Groundwater)
COONAMBLE (Groundwater)
COWRA
YASS
NARROMINE (Groundwater)
MIDCOAST (Combined)
ORANGE
BATHURST
TENTERFIELD
TAMWORTH
GOLDENFIELDS (Reticulator)
QUIRINDI SHIRE
MUSWELLBROOK
DENILIQUIN
TUMBARUMBA
GILGANDRA
CENTRAL TABLELANDS
ARMIDALE
PARRY
HAY (Dual Supply)
GUYRA
GOULBURN
DUBBO
MANILLA
SCONE (Unfiltered)
BARRABA
BERRIGAN (Dual Supply)
MUDGEE (Unfiltered)
WARREN (Dual Supply)
NARRANDERA (Groundwater)
YALLAROI (Unfiltered)
FORBES
MURRAY
SINGLETON
INVERELL
MURRURUNDI (Unfiltered)
RYLSTONE SHIRE
GRIFFITH
LACHLAN
BOOROWA
COOLAH
CABONNE
WALCHA
WELLINGTON
NUNDLE
BOMBALA
GUNDAGAI
HUME
LEETON
CROOKWELL
COOMA-MONARO
GLOUCESTER
TALLAGANDA (Unfiltered)
BOGAN
WENTWORTH (Dual Supply)
PARKES
BOURKE (Dual Supply)
WALGETT (Dual Supply)
CARRATHOOL
COBAR (Dual Supply)
JERILDERIE (Dual Supply)



Parameter: $\frac{\text{Total Operation and Maintenance Expenses (W2) – Purchase of Water (W2o)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Operation and Maintenance Expenses of Dams \& Weirs (W2a + W2b)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Operation and Maintenance Expenses of Mains (W2c + W2d)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Operation and Maintenance Expenses of Reservoirs (W2e + W2f)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

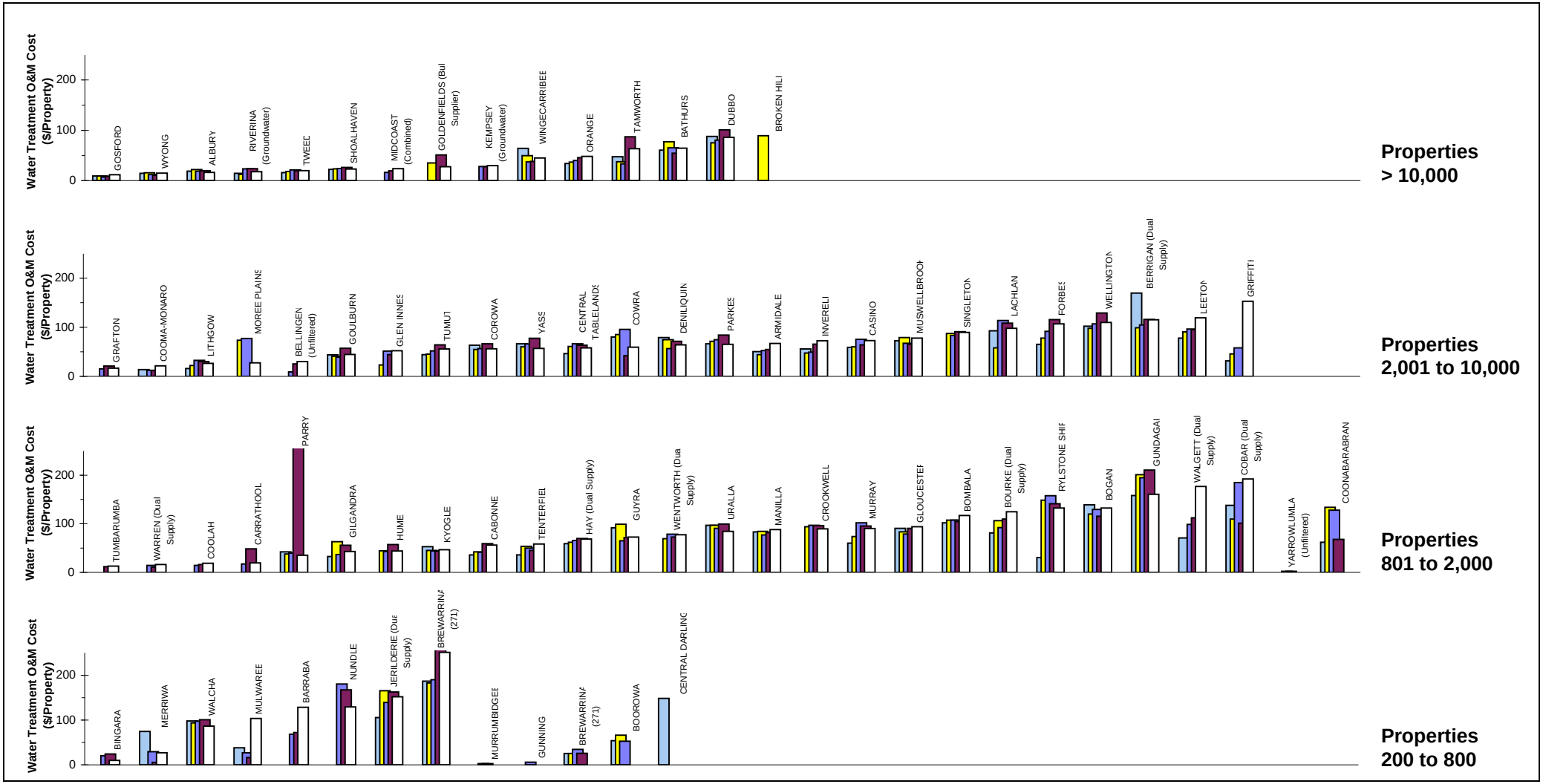
Parameter: $\frac{\text{Operation and Maintenance Expenses of Water Pumping Stations (W2g + W2i) + Energy Expenses (W2h)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Operation and Maintenance Expenses of Water Treatment (W2j + W2l) + Chemical Expenses (W2k)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Other Operation and Maintenance Expenses (W2m + W2n)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Notes:

1. For general notes see page 33.



Parameter:

$$\frac{\text{Treatment Operation Expenses (W2j) + Treatment Chemical Cost (W2k) + Treatment Maintenance Expenses (W2l)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

Notes:

1. This figure shows ranked values of the 1998/99 water treatment operation and maintenance cost for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the treatment operation and maintenance cost for the 25 councils shown ***range*** from about ***$17 to $153*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. Only councils with a water treatment works involving at least filtration and disinfection have been considered.
3. The Statewide median water treatment operation and maintenance cost is $20 per connected property (refer to Table 1 – percentage of connected properties basis).
4. For general notes see page 33.

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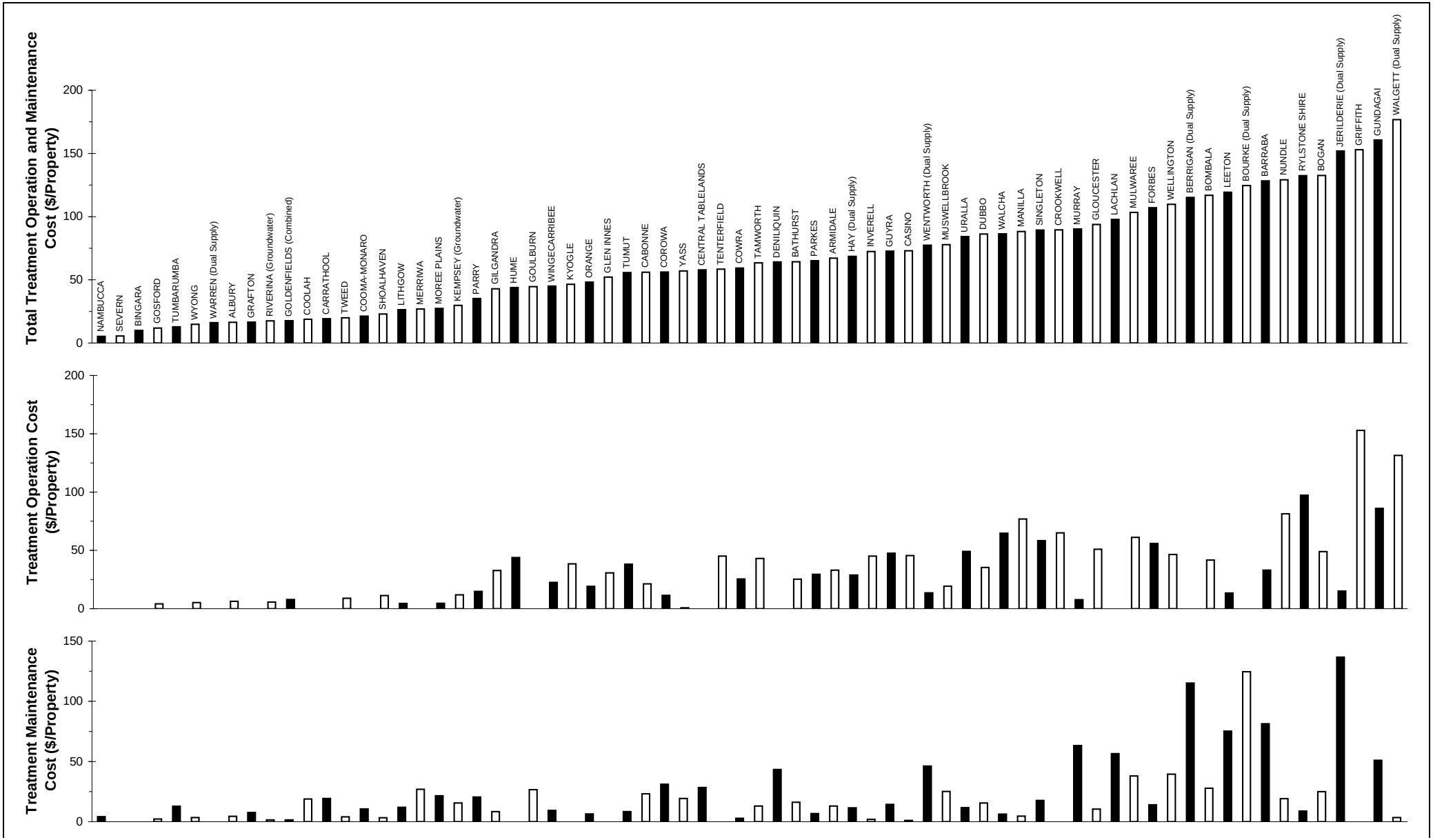
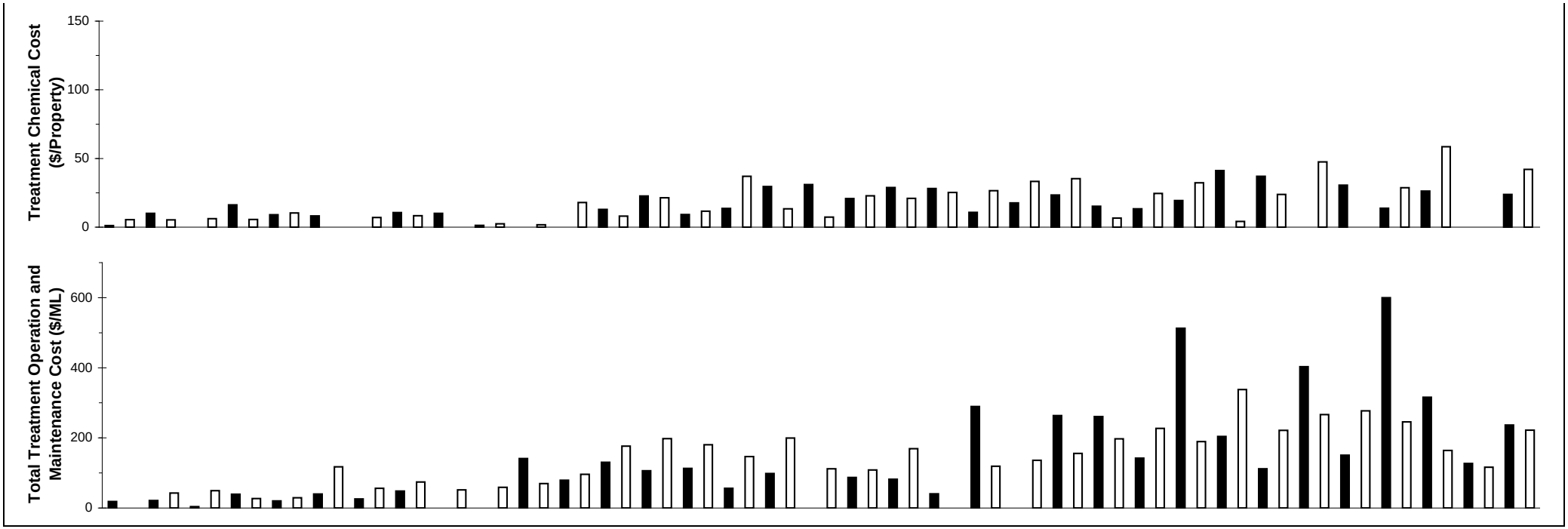

Total Treatment Operation and Maintenance Cost ($/Property)
Treatment Operation Cost ($/Property)
Treatment Maintenance Cost ($/Property)
NAMBUCCA
SEVERN
BINGARA
GOSFORD
TUMBARUMBA
WYONG
WARREN (Dual Supply)
ALBURY
GRAFTON
RIVERINA (Groundwater)
GOLDENFIELDS (Combined)
COOLAH
CARRATHOOL
TWEED
COOMA-MONARO
SHOALHAVEN
LITHGOW
MERRIWA
MOREE PLAINS
KEMPSEY (Groundwater)
PARRY
GILGANDRA
HUME
GOULBURN
WINGECARRIBEE
KYOGLE
ORANGE
GLEN INNES
TUMUT
CABONNE
COROWA
YASS
CENTRAL TABLELANDS
TENTERFIELD
COWRA
TAMWORTH
DENILIQUIN
BATHURST
PARKES
ARMIDALE
HAY (Dual Supply)
INVERELL
GUYRA
CASINO
WENTWORTH (Dual Supply)
MUSWELLBROOK
URALLA
DUBBO
WALCHA
MANILLA
SINGLETON
CROOKWELL
MURRAY
GLOUCESTER
LACHLAN
MULWAREE
FORBES
WELLINGTON
BERRIGAN (Dual Supply)
BOMBALA
LEETON
BOURKE (Dual Supply)
BARRABA
NUNDLE
RYLSTONE SHIRE
BOGAN
JERILDERIE (Dual Supply)
GRIFFITH
GUNDAGAI
WALGETT (Dual Supply)



Parameter: $\frac{\text{Total Treatment Operation and Maintenance Expenses (W2j + W2k + W2l)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Operation Expenses (W2j)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

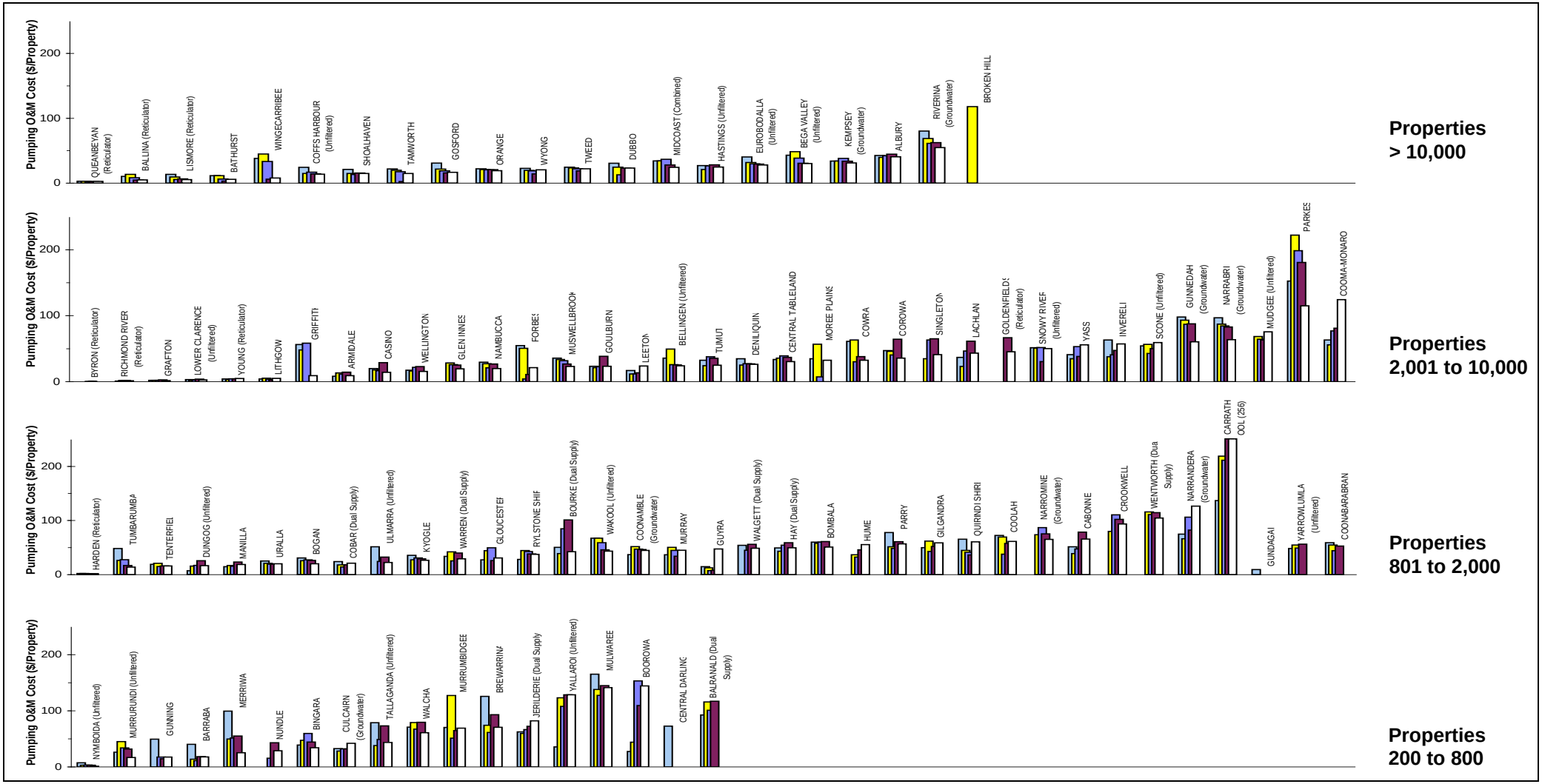
Parameter: $\frac{\text{Treatment Maintenance Expenses (W2k)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Chemical Expenses (W2l)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Total Treatment Operation and Maintenance Expenses (W2j + W2k + W2l)}}{\text{Total Potable Water Consumption (Q18i) x 10}}$

Notes:
1. For general notes see page 33.

63 Pumping Operation and Maintenance Cost

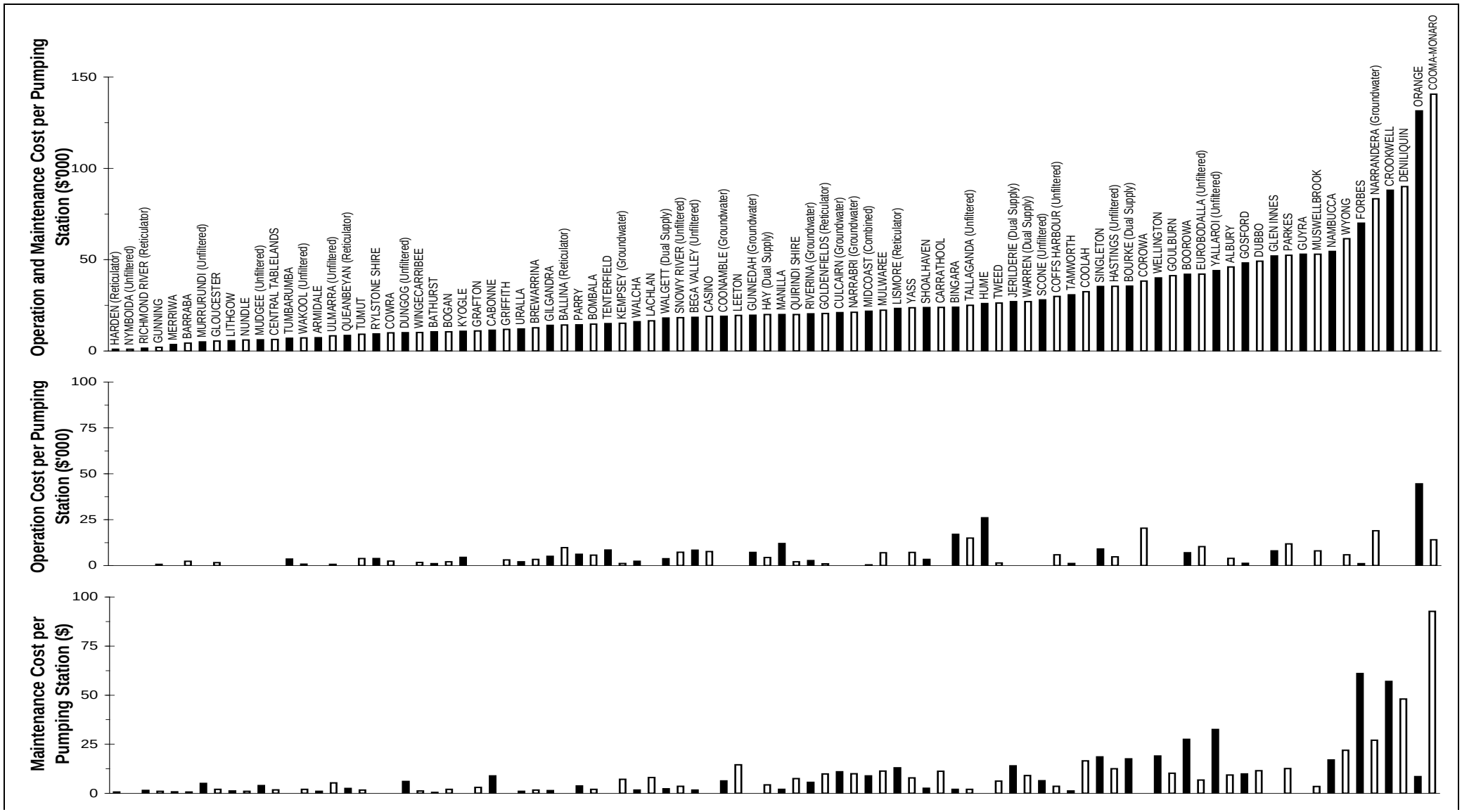


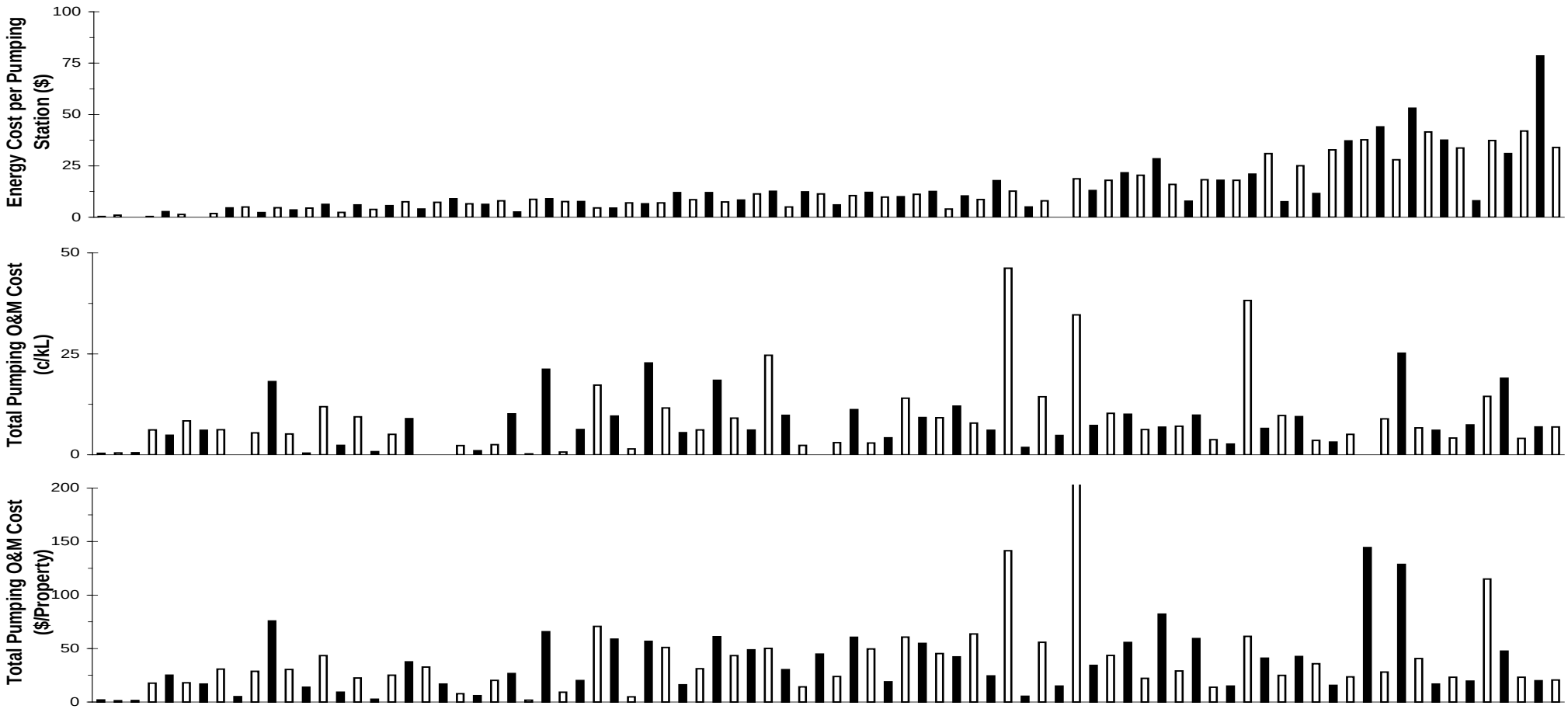
Parameter: Pumping Stations Operation Expenses (W2g) + Pumping Stations Energy Cost (W2h) + Pumping Stations Maintenance Costs (W2i)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 water pumping operation and maintenance cost for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the water pumping operation and maintenance costs for the 35 councils shown ***range*** from about ***$0.4 to $124*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median water pumping operation and maintenance cost (including energy costs) is $20 per connected property (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.


Operation and Maintenance Cost per Pumping Station ($'000)
Operation Cost per Pumping Station ($'000)
Maintenance Cost per Pumping Station ($)
HARDEN (Reticulator)
NYMBOIDA (Unfiltered)
RICHMOND RIVER (Reticulator)
GUNNING
MERRIWA
BARRABA
MURRURUNDI (Unfiltered)
GLOUCESTER
LITHGOW
NUNDLE
MUDGEE (Unfiltered)
CENTRAL TABLELANDS
TUMBARUMBA
WAKOOL (Unfiltered)
ARMIDALE
ULMARRA (Unfiltered)
QUEANBEYAN (Reticulator)
TUMUT
RYLSTONE SHIRE
COWRA
DUNGOG (Unfiltered)
WINGECARRIBEE
BATHURST
BOGAN
KYOGLE
GRAFTON
CABONNE
GRIFFITH
URALLA
BREWARRINA
GILGANDRA
BALLINA (Reticulator)
PARRY
BOMBALA
TENTERFIELD
KEMPSEY (Groundwater)
WALCHA
LACHLAN
WALGETT (Dual Supply)
SNOWY RIVER (Unfiltered)
BEGA VALLEY (Unfiltered)
CASINO
COONAMBLE (Groundwater)
LEETON
GUNNEDAH (Groundwater)
HAY (Dual Supply)
MANILLA
QUIRINDI SHIRE
RIVERINA (Groundwater)
GOLDENFIELDS (Reticulator)
CULCAIRN (Groundwater)
NARRABRI (Groundwater)
MIDCOAST (Combined)
MULWAREE
LISMORE (Reticulator)
YASS
SHOALHAVEN
CARRATHOOL
BINGARA
TALLAGANDA (Unfiltered)
HUME
TWEED
JERILDERIE (Dual Supply)
WARREN (Dual Supply)
SCONE (Unfiltered)
COFFS HARBOUR (Unfiltered)
TAMWORTH
COOLAH
SINGLETON
HASTINGS (Unfiltered)
BOURKE (Dual Supply)
COROWA
WELLINGTON
GOULBURN
BOOROWA
EUROBODALLA (Unfiltered)
YALLAROI (Unfiltered)
ALBURY
GOSFORD
DUBBO
GLEN INNES
PARKES
GUYRA
MUSWELLBROOK
NAMBUCCA
WYONG
FORBES
NARRANDERA (Groundwater)
CROOKWELL
DENILIQUIN
ORANGE
COOMA-MONARO



Parameter: $\frac{\text{Total Pumping Station Operation and Maintenance Expenses (W2g + W2h + W2i)}}{\text{Number of Pumping Stations (Q12a)}}$

Parameter: $\frac{\text{Pumping Station Operation Expenses (W2j)}}{\text{Number of Pumping Stations (Q12a)}}$

Parameter: $\frac{\text{Pumping Station Maintenance Expenses (W2k)}}{\text{Number of Pumping Stations (Q12a)}}$

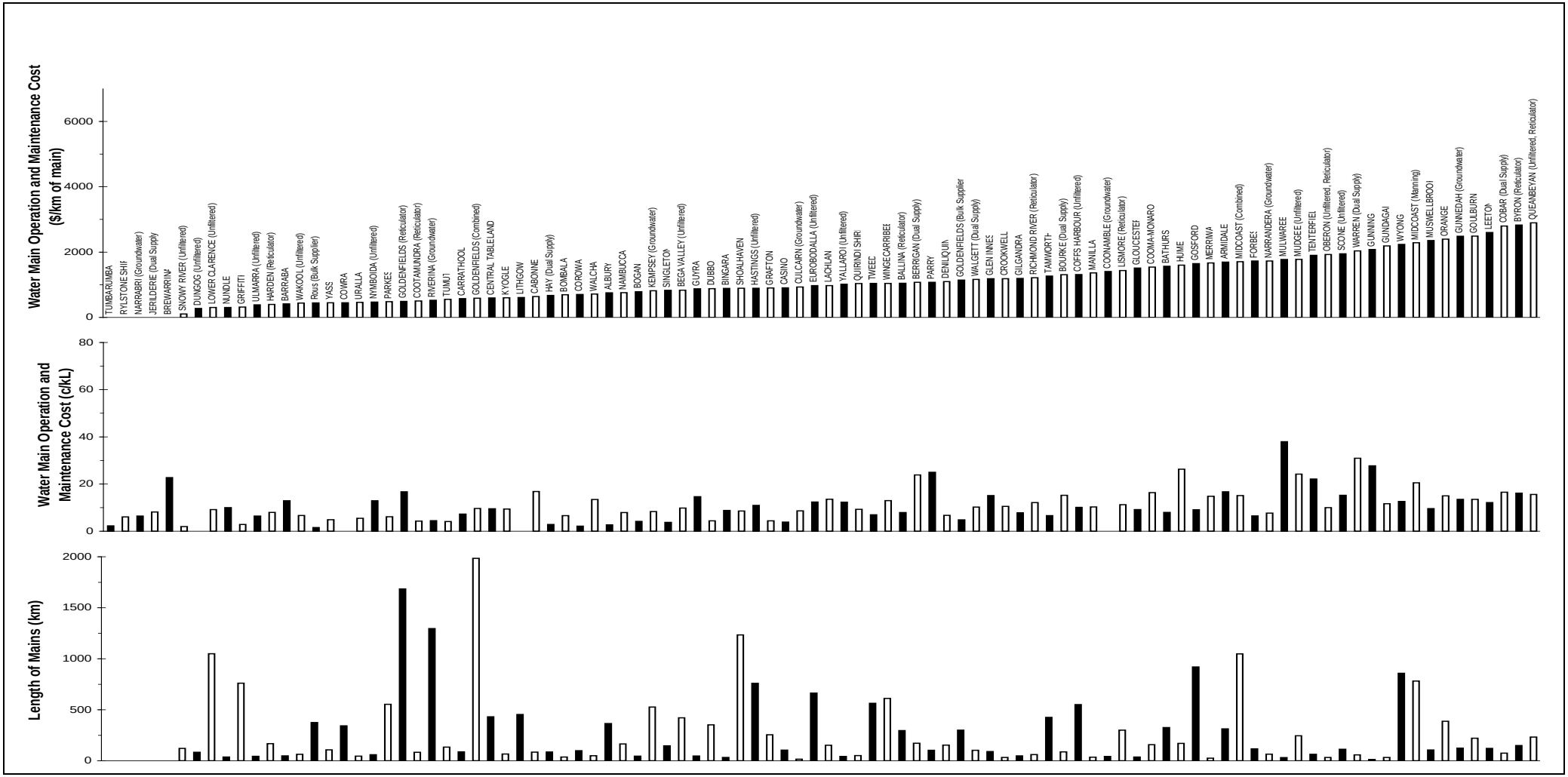
Parameter: ~~$\frac{\text{Pumping Station Energy Expenses (W2l)}}{\text{Number of Pumping Stations (Q12a)}}$~~

Parameter: $\frac{\text{Total Pumping Station Operation and Maintenance Expenses (W2g + W2h + W2i)}}{\text{Total Water Consumption (Q18i) x 10}}$

Parameter: ~~$\frac{\text{Total Pumping Station Operation and Maintenance Expenses (W2g + W2h + W2i)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$~~

Notes:

1. For general notes see page 33.



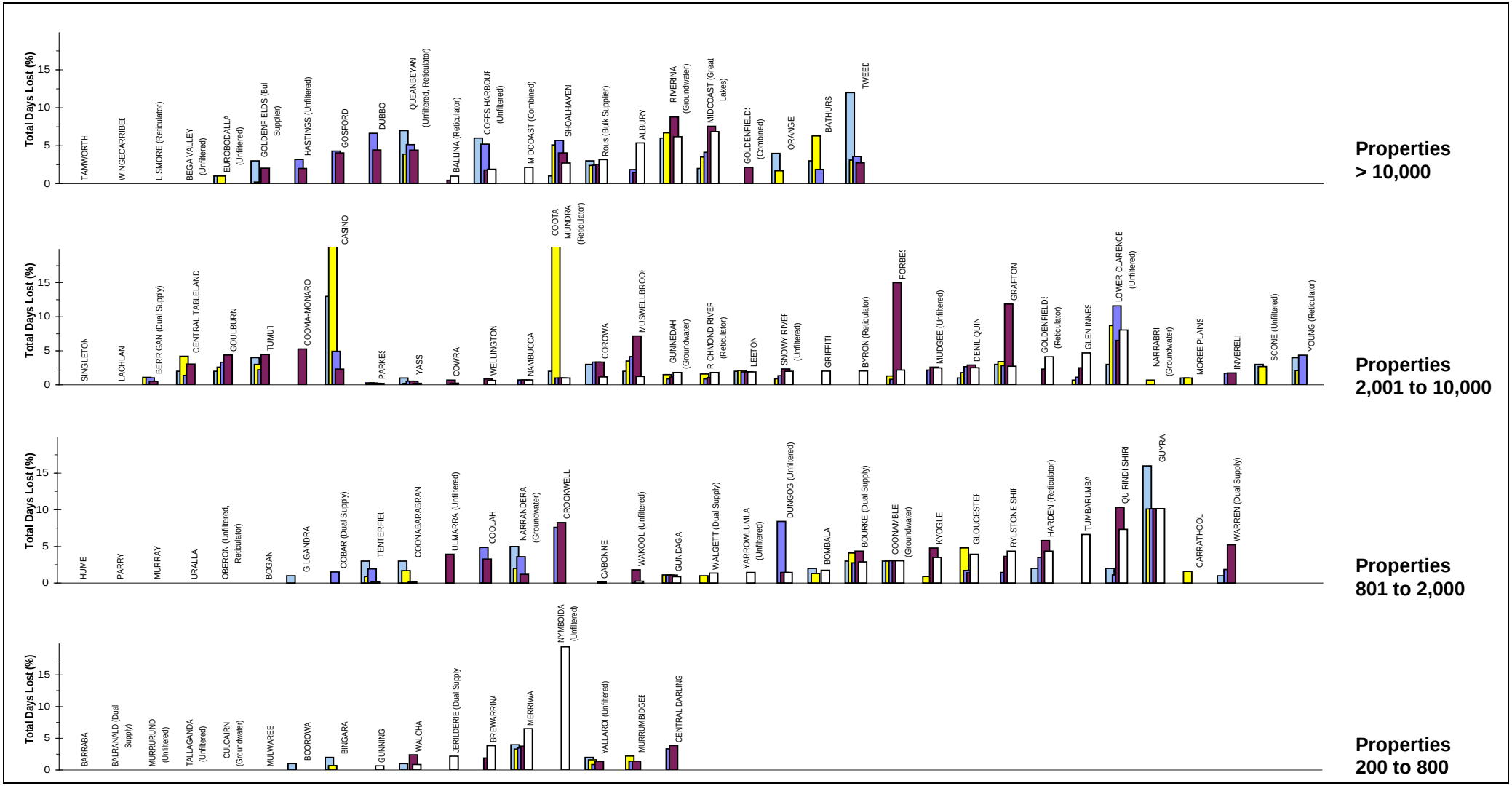
Parameter: $\frac{\text{Total Mains Operation and Maintenance Expenses (W2c + W2d)}}{\text{Total Length of Mains (Q17a + Q17b + Q17c)}}$

Parameter: $\frac{\text{Total Mains Operation and Maintenance Expenses (W2c + W2d)}}{\text{Total Potable Water Consumption (Q18i) x 10}}$

Parameter: Total Length of Mains (Q17a + Q17b + Q17c)

Notes:

1. The Statewide median water main operation and maintenance cost is $35 per connected property (refer Table 1 – percentage of connected properties basis).
2. For general notes see page 33.

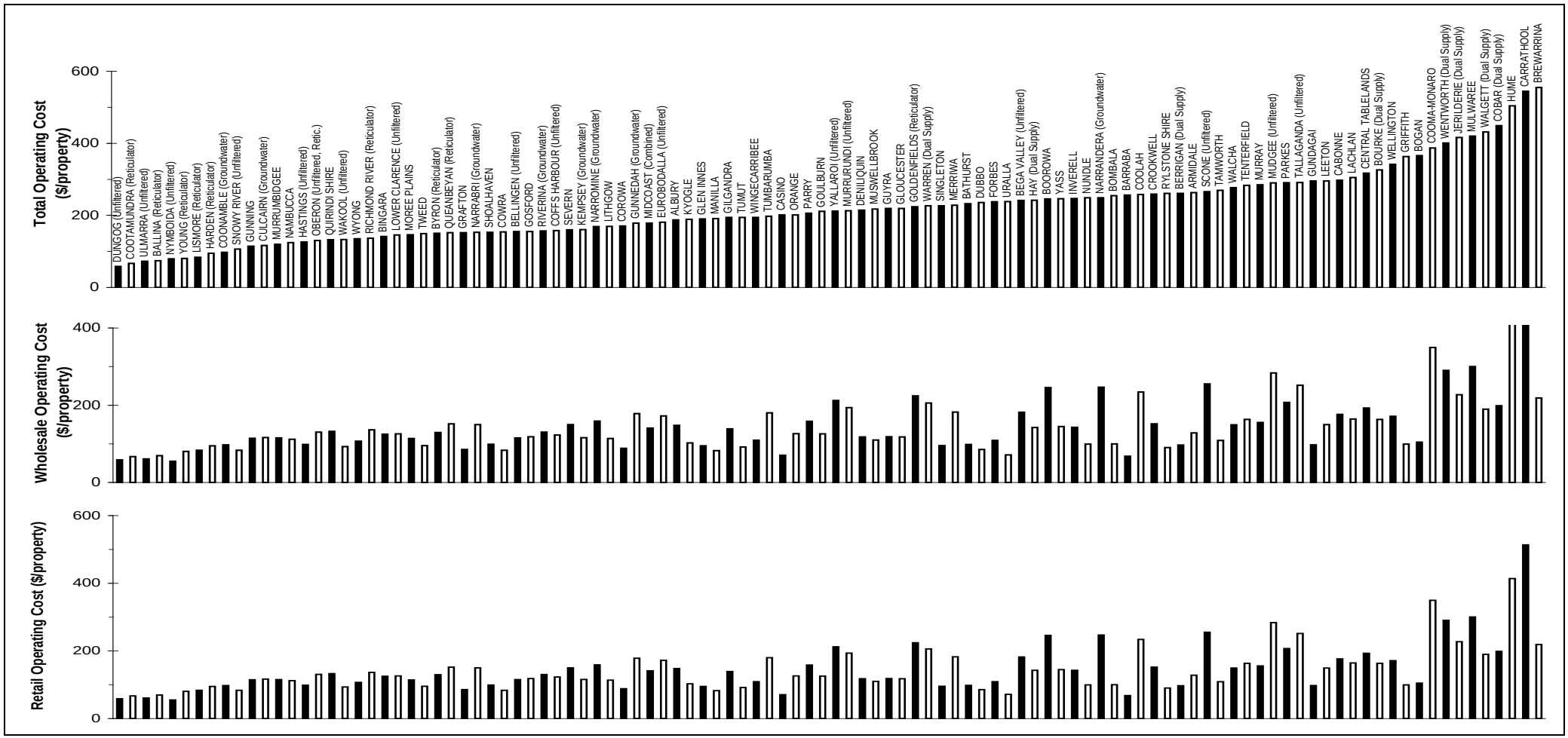


Parameter: Total Number of Days Lost for All Reasons in Year (Q36) x 100 / Equivalent full time employees (Q35) x available number of working days in year (ie. 230)

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 total days lost for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the total lost for the 34 councils shown ***range*** from about nil ***to 8%***. Results for the previous 4 years are also shown.
2. The Statewide median days lost is 0% (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.



Parameter 1: $$\frac{\text{Operation and Maintenance Expenses (W2) + Management Expenses (W1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

Parameter 2: $$\frac{\text{Parameter 1 x Headworks Component (Q24a)}}{100}$$

Parameter 3: $$\frac{\text{Parameter 1 x Distribution of Reticulation Component (Q24b)}}{100}$$

Notes:

1. The Statewide median (total) operating cost (OMA – operation, maintenance and administration) is $185 per connected property (refer to Table 1 – percentage of connected properties basis).
2. For general notes see page 33.

6. 1998/99 SEWERAGE FIGURES

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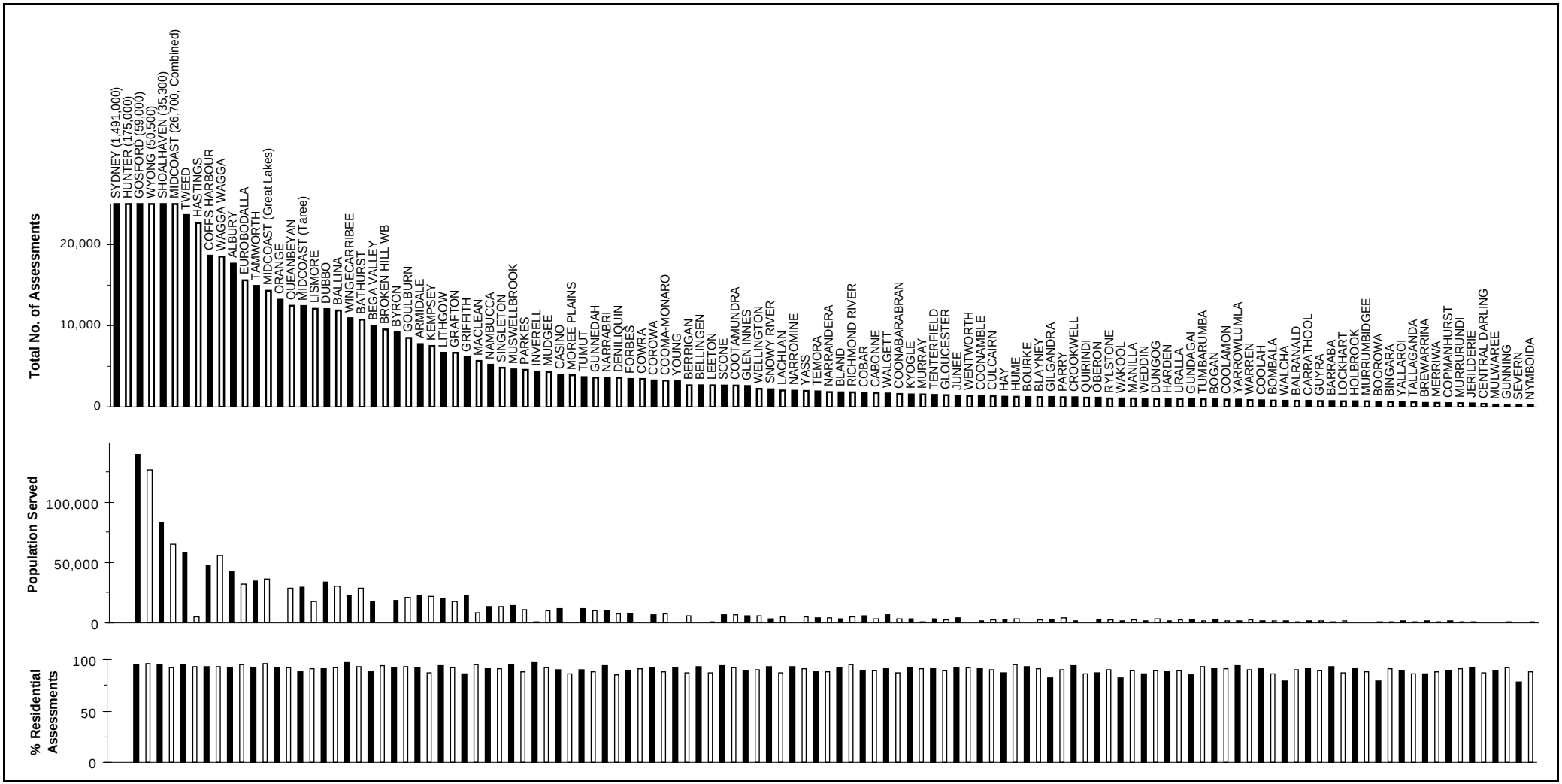


Parameter: No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)

Parameter: AVERAGE Population Served (Q1a)

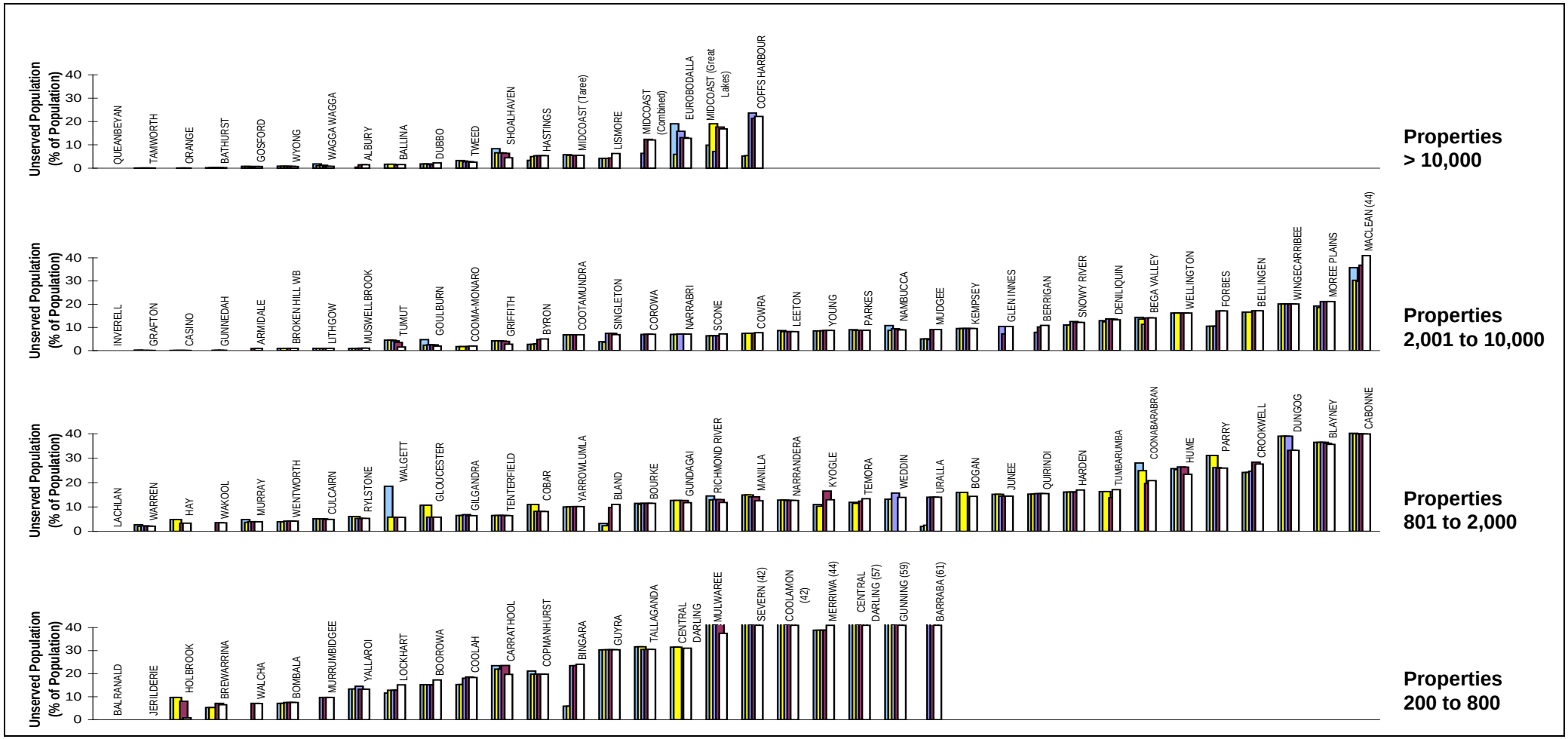
Parameter:

$$\frac{\text{No. of Residential Assessments (Q4a)}}{\text{No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)}}$$

Notes:

1. For general notes see page 33.

69 Urban Population without Sewerage



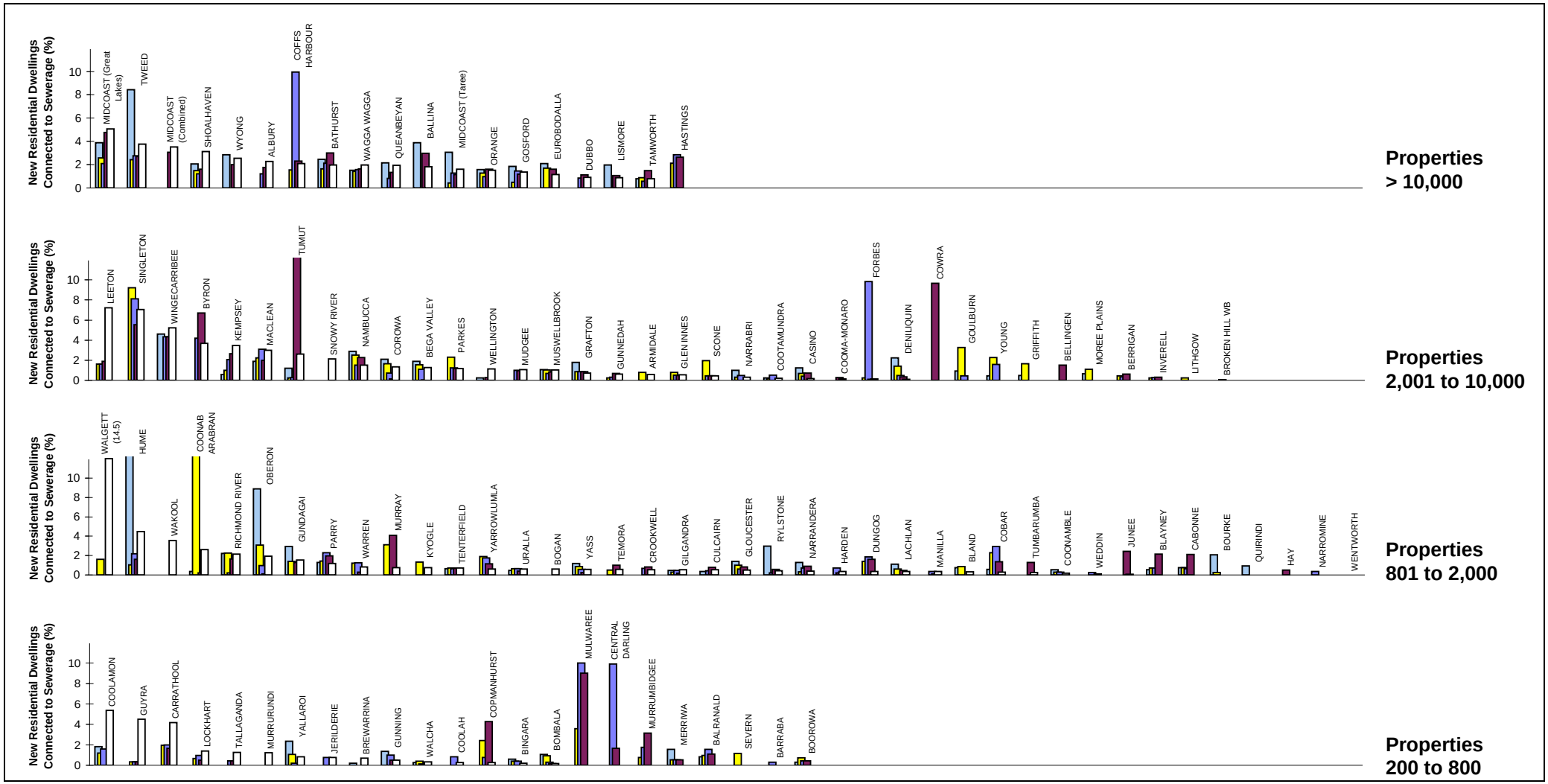
Parameter: $\frac{\text{Unserved Urban Population (Q6b)}}{\text{Population Served (Q1a) + Unserved Urban Population (Q6b)}}$

Notes:

1. This figure shows 1998/99 ranked values of the percentage of urban population without a reticulated sewerage service for each council in 4 groups based on the number of connected properties served for the each council. ***Each white bar represents one Council***. As an example, for the property range from 2001 to 10,000, the percentage of urban population without a sewerage service for the 36 councils shown ***ranges*** from about ***0 to 44***. Results for the previous four years are also shown.
2. The Statewide median urban population without a reticulated sewerage service was 2.3% based on 110 reporting councils.
3. Of the 110 reporting councils, 34 councils had an urban population of at least 1000 without a sewerage service.
4. Of the 110 reporting councils, the percentage of urban population without a reticulated sewerage service for the median council was 10%. 80% of councils had fewer than 20% of their urban population without a reticulated sewerage service. The total reported urban population in non-metropolitan NSW without a reticulated sewerage service is 120,000.
5. 3% of councils did not report on this item and should do so in future.

70 New Residential Dwellings Connected

Sewerage



Parameter:

$$\frac{\text{No. of New Residential Dwellings Connected in Year (Q5)}}{\text{No. of Residential Assessments (Q4a) x No. of Connected Residential Properties per Assessment}}$$

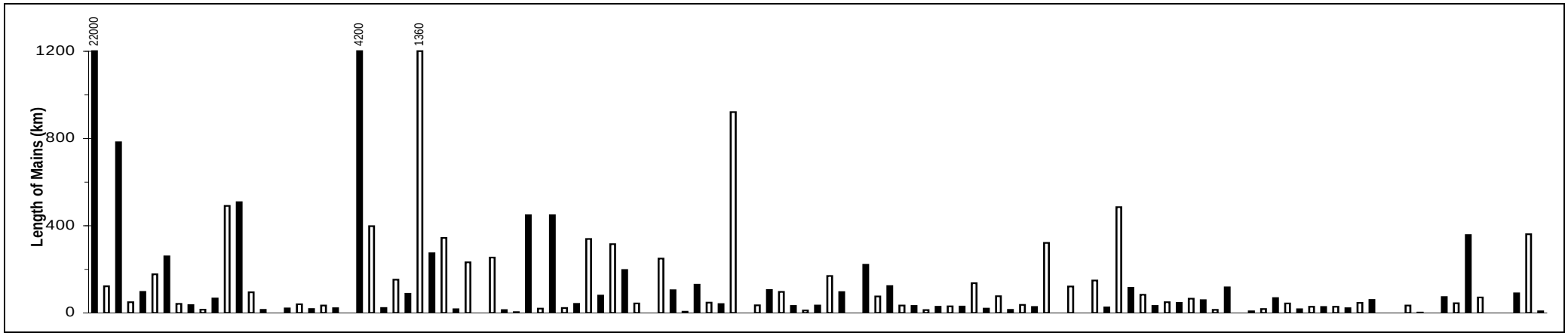
1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 number of new residential dwellings connected to sewerage for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the total number of new residential dwellings connected for the 36 councils shown ***range*** from about ***7.2% to 0.1%***. Results for the previous 4 years are also shown.
2. The Statewide median new residential dwellings connected to sewerage is 1.6% of the existing number of connected residential properties (refer to Table 2 - percentage of properties basis).
3. For general notes see page 33.

71 Properties Served per km of Main - 1998/99

Parameter: (No. of Residential Assessments (Q4a) + No. of Non-Residential Properties (Q4b)) x No. of Connected Properties per Assessment
Length of Reticulation/Gravity Mains (Q10a) + Length of Rising Mains (Q10b)

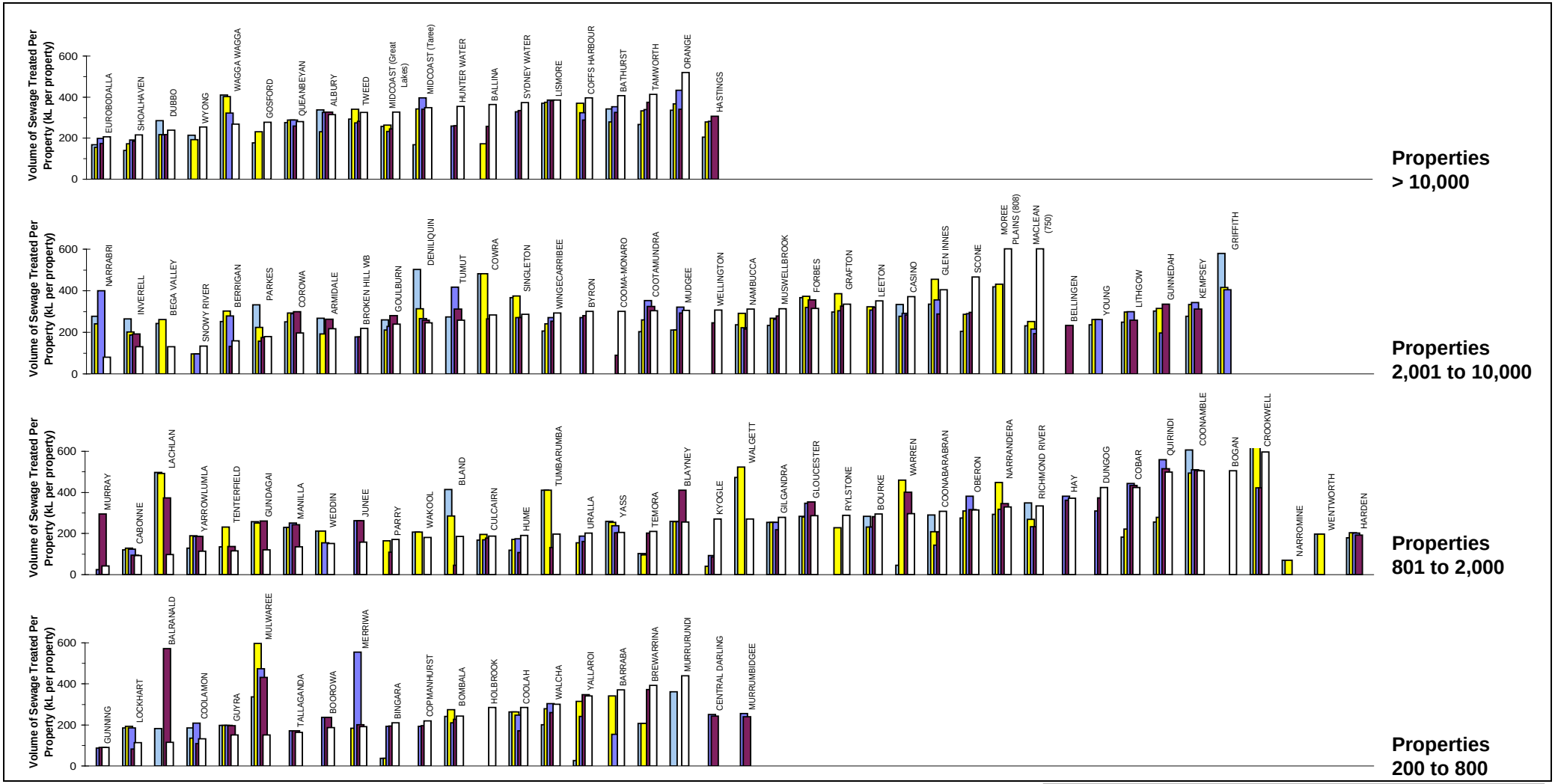


Parameter: Length of Reticulation/Gravity Mains (Q10a) + Length of Rising Mains (Q10b)

Notes:

1. For general notes see page 33.

72 Volume Treated per property



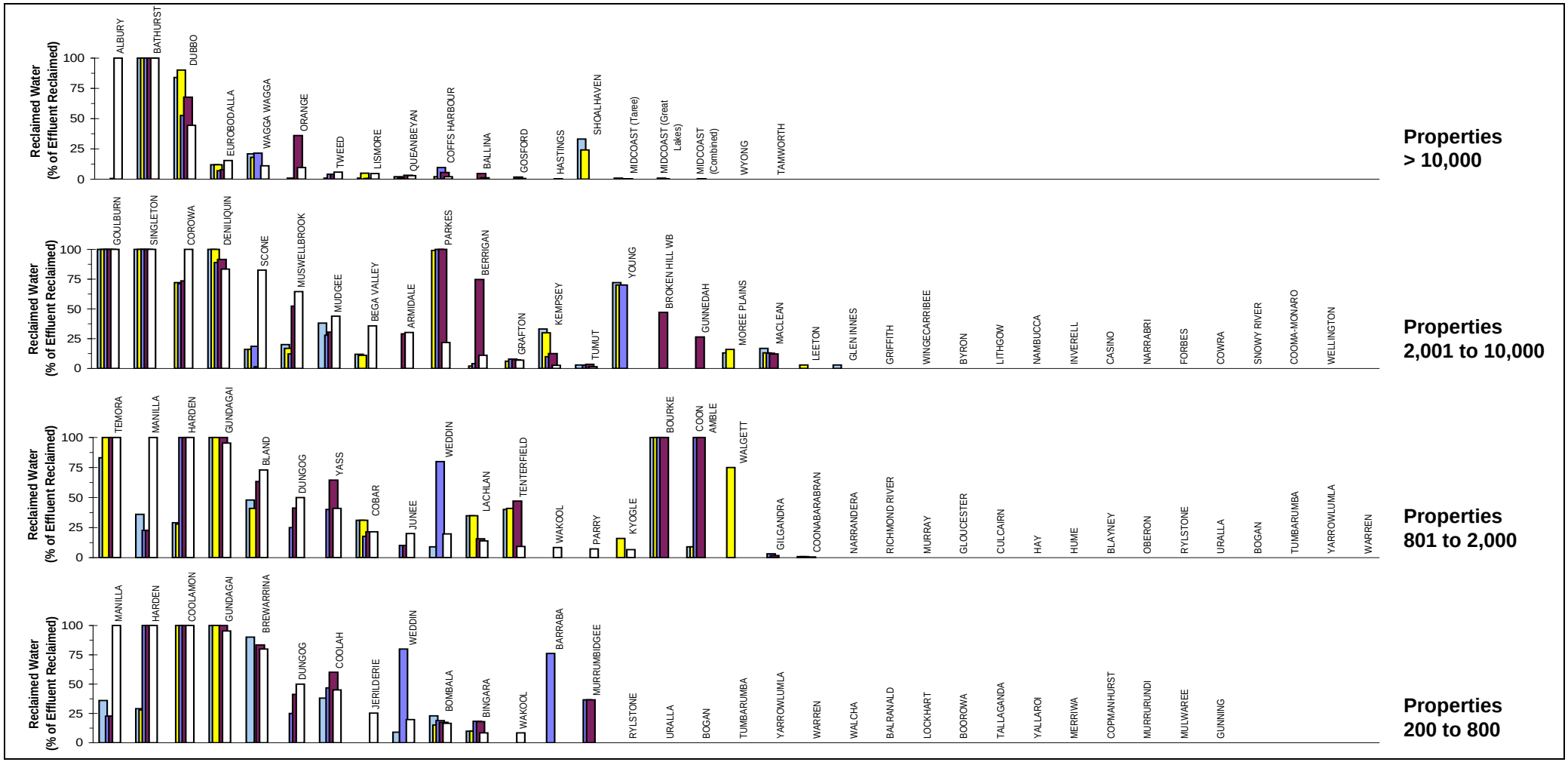
Parameter: Volume of Sewage Receiving Secondary Treatment (Q38c)

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. This figure shows ranked values of the volume of sewage treated per connected property in 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the volume of sewage treated for the 36 councils shown ***ranges*** from about ***80 kL/a to 600 kL/a***. Results for the previous 4 years are also shown.
2. The Statewide median volume of sewage treated per connected property is 280kL/a (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

73 Reclaimed Water (% of Effluent Reclaimed)



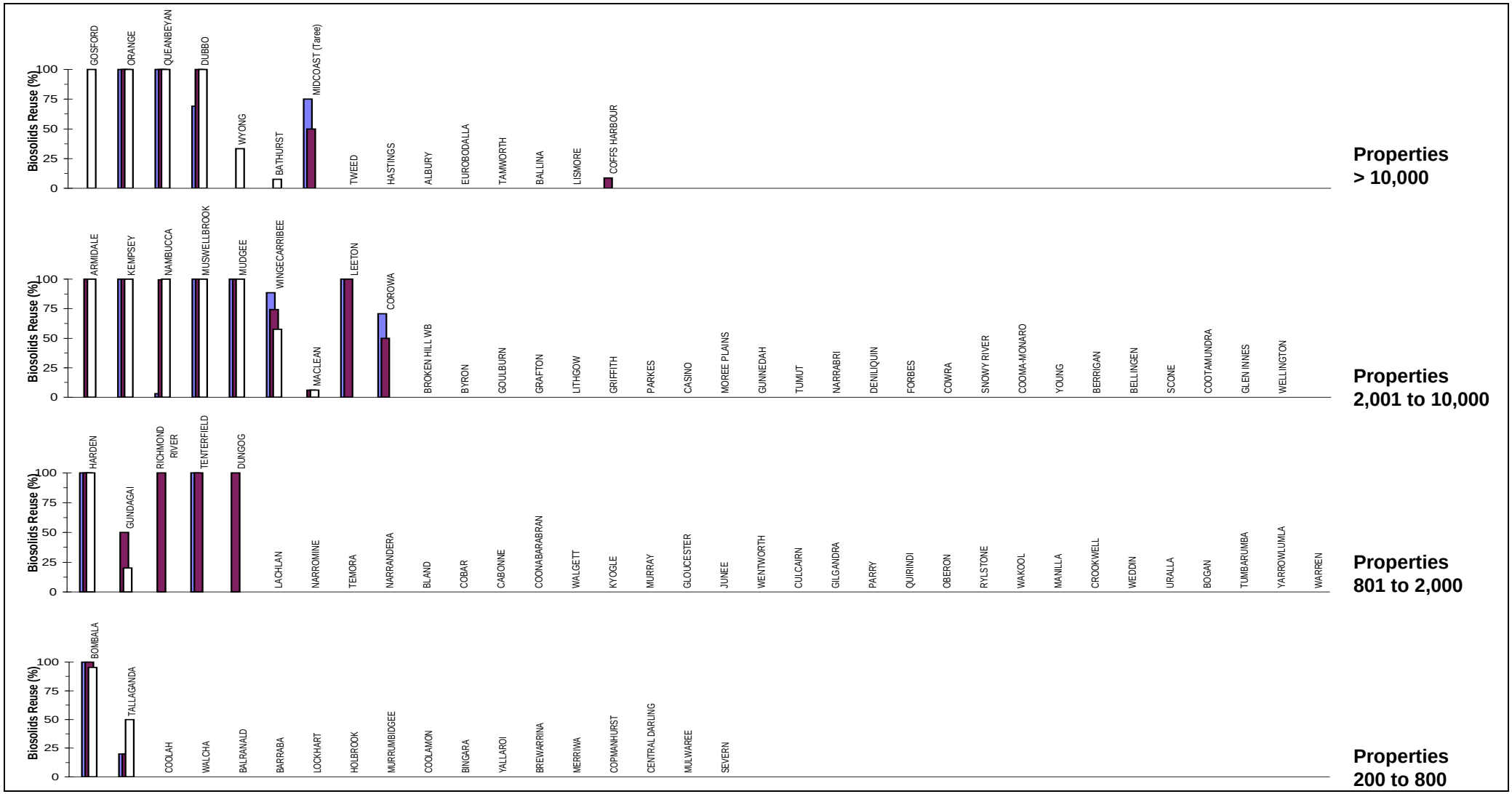
Parameter: Volume Recycled (Q39) x 100 / Volume of Sewage Receiving Secondary Treatment (Q38c)

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the reclaimed water in 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the reclaimed water for 14 of the 34 councils shown ***range*** from ***100% to 0%***; 20 of the councils indicated no use of reclaimed water. Results for the previous 4 years are also shown.
2. The Statewide median reuse of reclaimed water is 0.6% (refer to Table 2 - percentage of connected properties basis).
3. Reuse of reclaimed water is carried out by about 49% of councils.
4. Statewide some 14% of the effluent from sewage treatment works is reclaimed.
5. 8 councils reclaimed 100% of their sewage effluent and a further 8 councils reclaimed over 50% of their effluent in 1998/99.
6. For general notes see page 33.

74 Biosolids Reuse - 1998/99



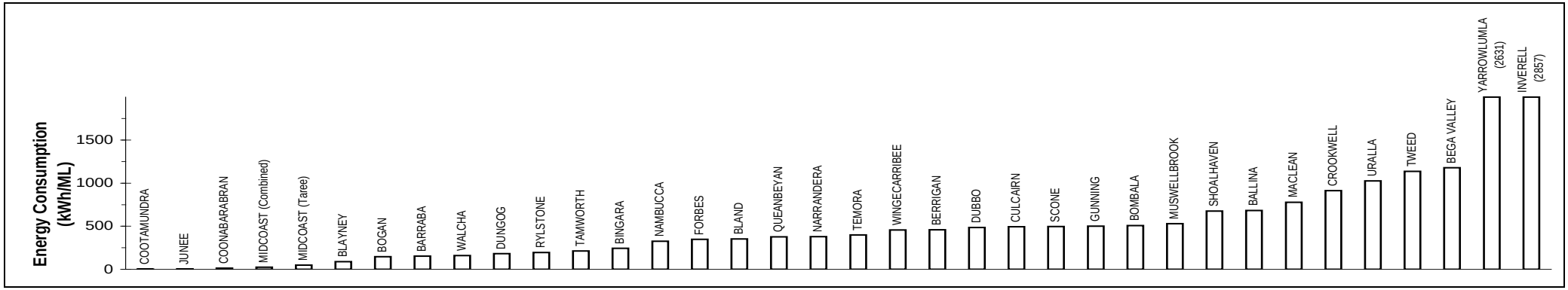
Parameter: Percentage of Biosolids Reused (Q40b)

Notes:

1. This figure shows ranked values of the percentage of Biosolids Reused in 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,0000, the percentage of biosolids reused for the 33 councils shown ***ranges*** from about ***100 % to nil***. Results for the previous 2 years are also shown.
2. The Statewide median percentage of biosolids reused is nil (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

75 Energy Consumption per ML – 1998/99

Sewerage



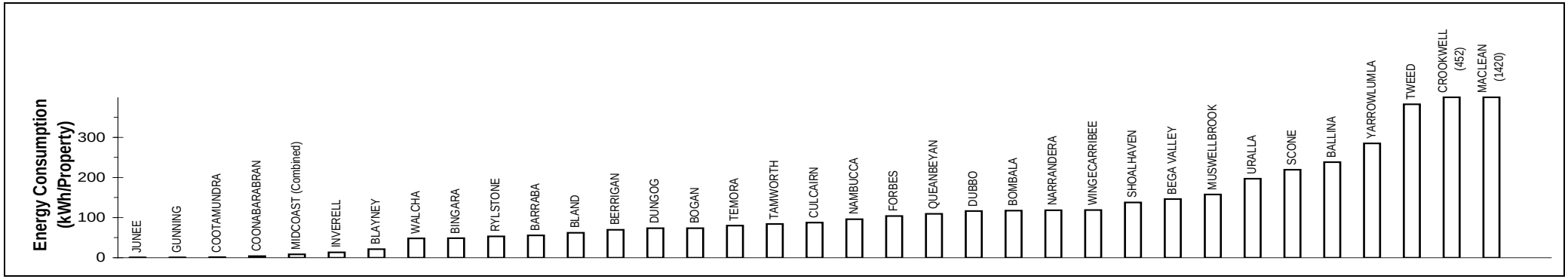
Parameter: $\frac{\text{Total Energy Usage (Q25)}}{\text{Volume of Sewage Receiving Secondary Treatment (Q38c)}}$

Notes:

1. This figure shows ranked values of the energy usage per ML of sewage treated in 1998/99 for each council. ***Each white bar represents one council***. The energy usage for the 36 councils shown ***range*** from about ***3 to 2860 kWh per ML***. Only 30% of councils provided a response to this item and all councils should report in future.
2. The Statewide median energy usage is 490 kWh/ML (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

Sewerage

76 Energy Consumption per property – 1998/99



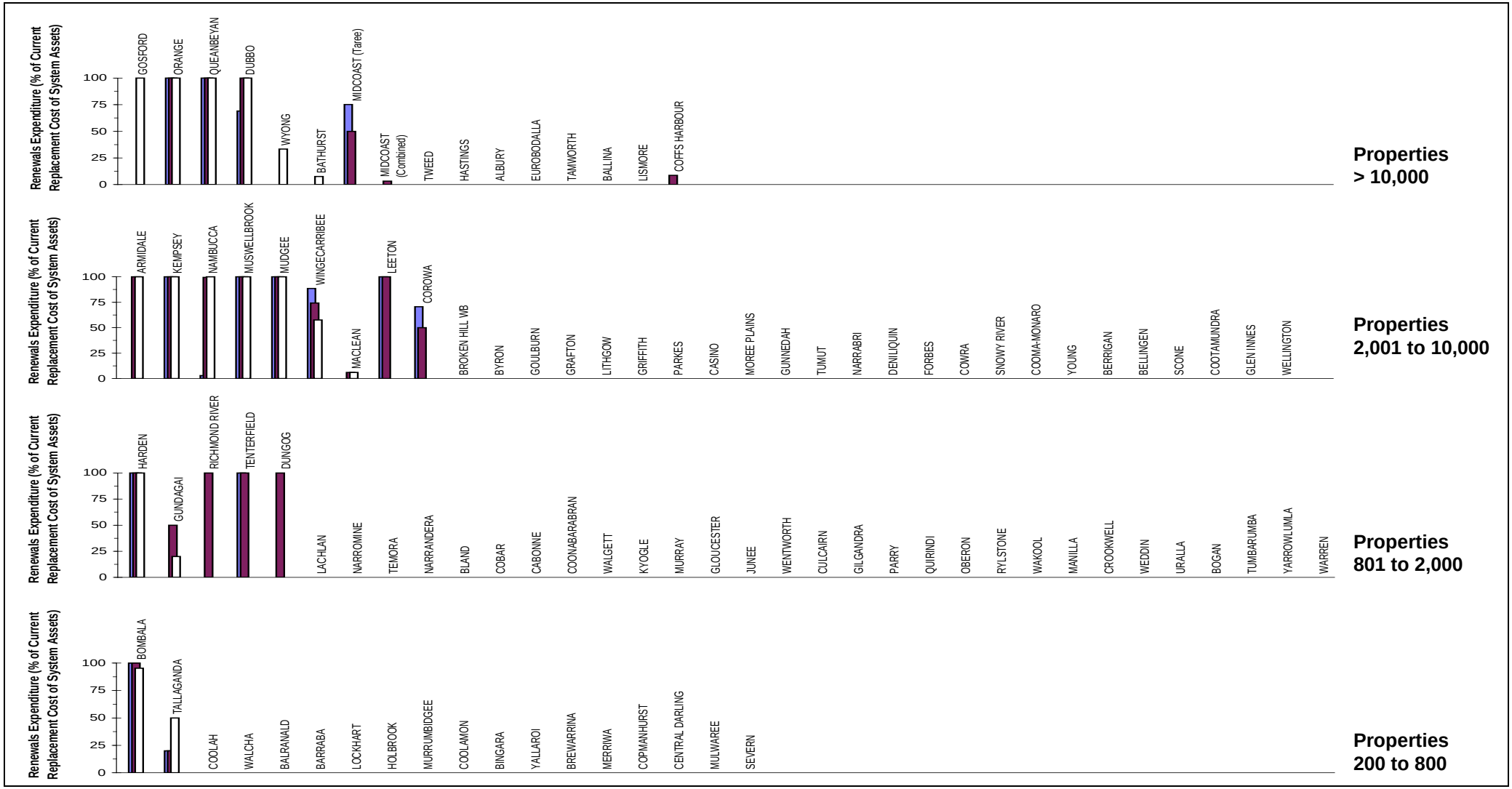
Parameter: $\frac{\text{Total Energy Usage (Q25)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Notes:

1. This figure shows ranked values of the energy usage per property in 1998/99 for each council. ***Each white bar represents one council***. The energy usage for the 35 councils shown ***ranges*** from about *0.4* ***to 1,420 kWh per connected property***. Only 29% of councils provided a response to this item and all councils should report thereon in future.
2. The Statewide median energy usage is 120 kWh per connected property (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

77 Renewals Expenditure – 1998/99

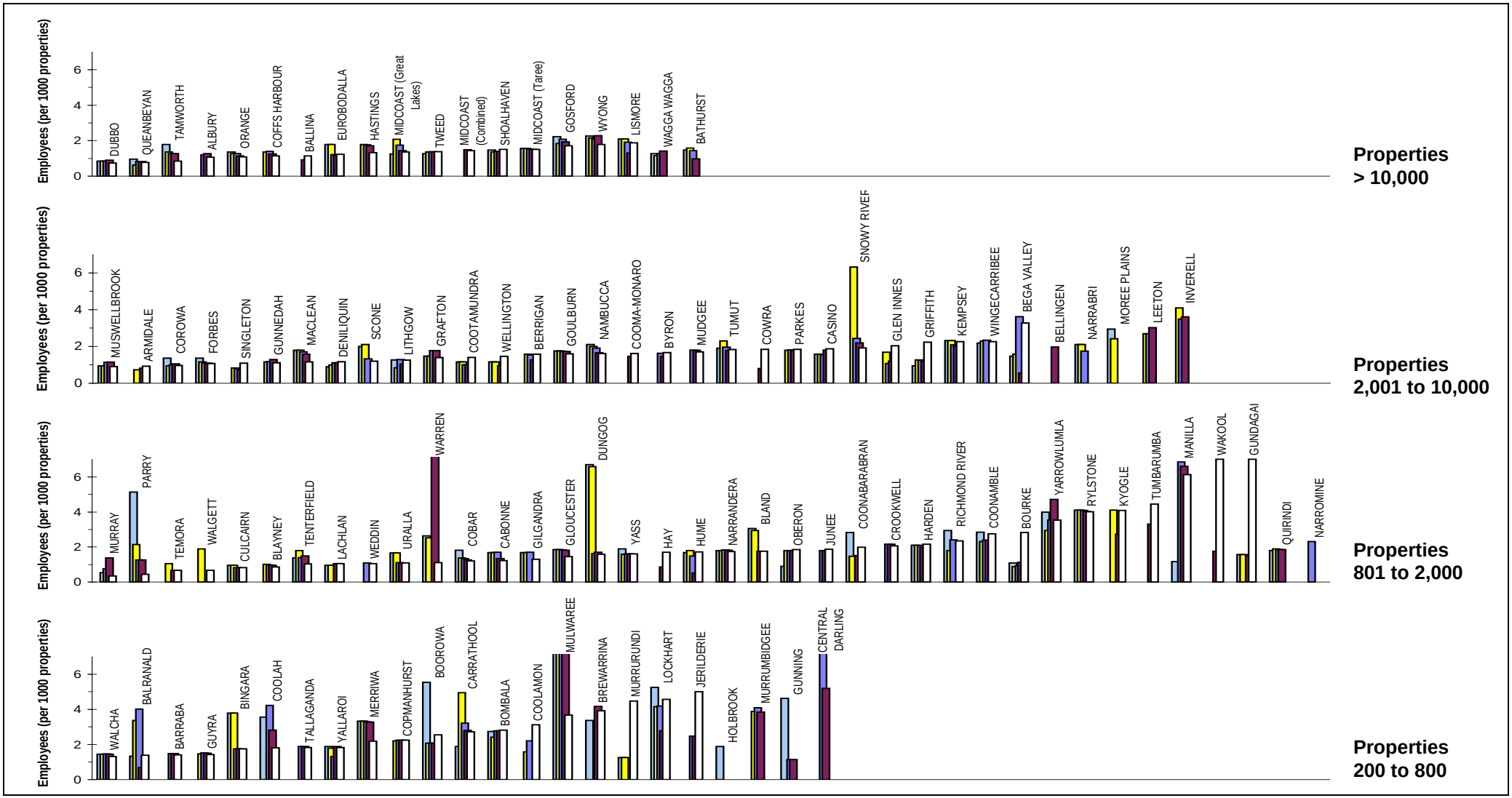
Sewerage



Parameter: $\frac{\text{Asset Renewals (S17c)}}{\text{Current Replacement Cost of System Assets (S43)}}$

Notes:

1. This figure shows ranked values of the renewals expenditure as a percentage of current replacement cost of system assets in 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the renewals expenditure for the 30 councils shown ***range*** from about ***1.8% to nil***. Results for the previous 2 years are also shown in Jan 1999$.
2. The Statewide median renewals expenditure is nil (refer to Table 2 - percentage of connected properties basis).
3. Only 18 councils reported renewals expenditure in 1998/99. Councils should ensure that such expenditure is reported in Special Schedule No. 5 of their annual financial statements.
4. For general notes see page 33.



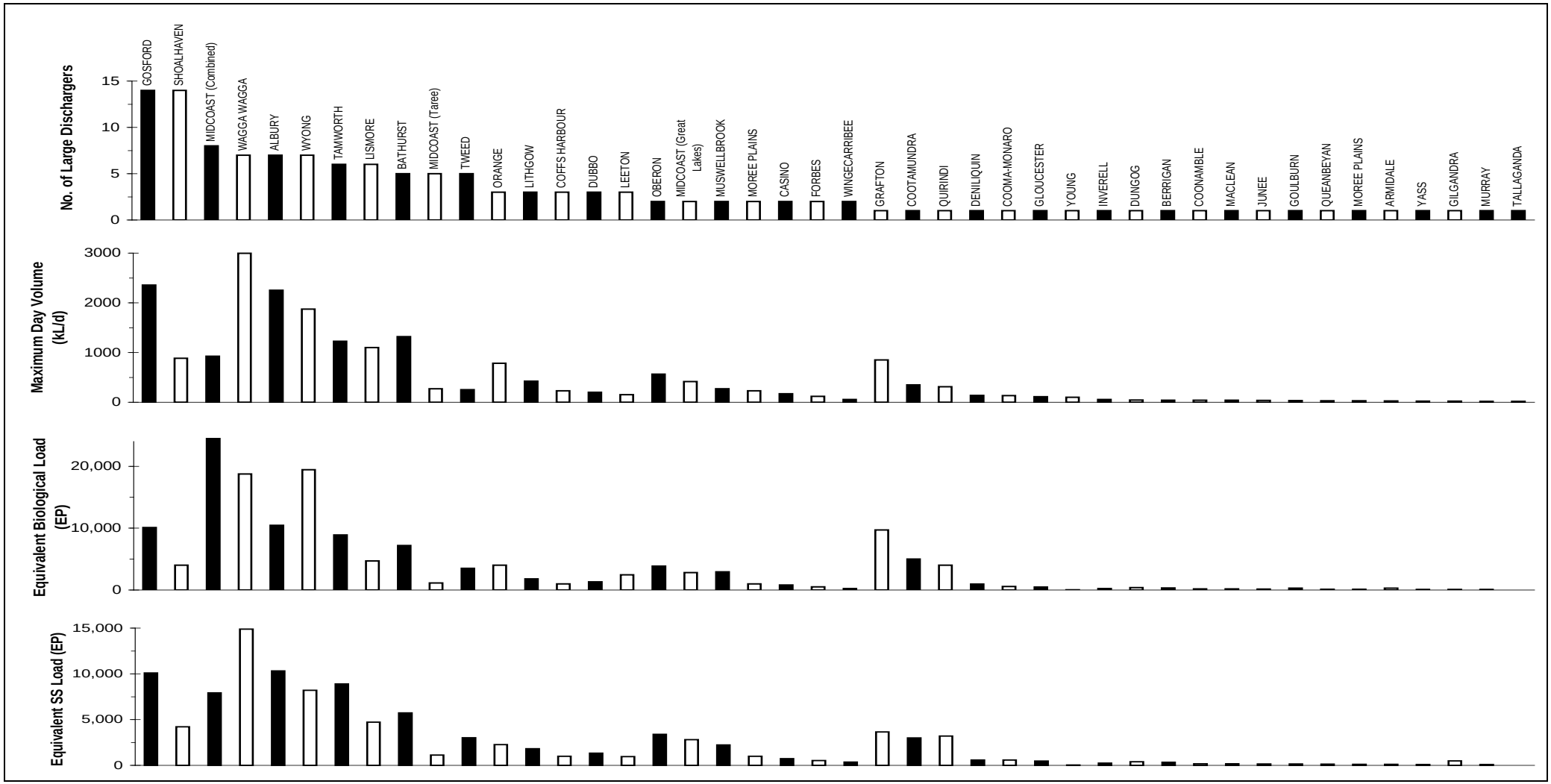
Parameter:

$$\frac{\text{Equivalent Full-time Employees (Q26) x 1000}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

Notes:

1. This figure shows ranked values of the sewerage employees in 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewerage employees for the 29 councils shown ***range*** from about ***0.9 to 3.3*** per 1000 connected properties. Results for the previous 4 years are also shown.
2. The Statewide median number of sewerage employees is 1.5 per 1000 connected properties (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

79 Trade Waste - 1998/99



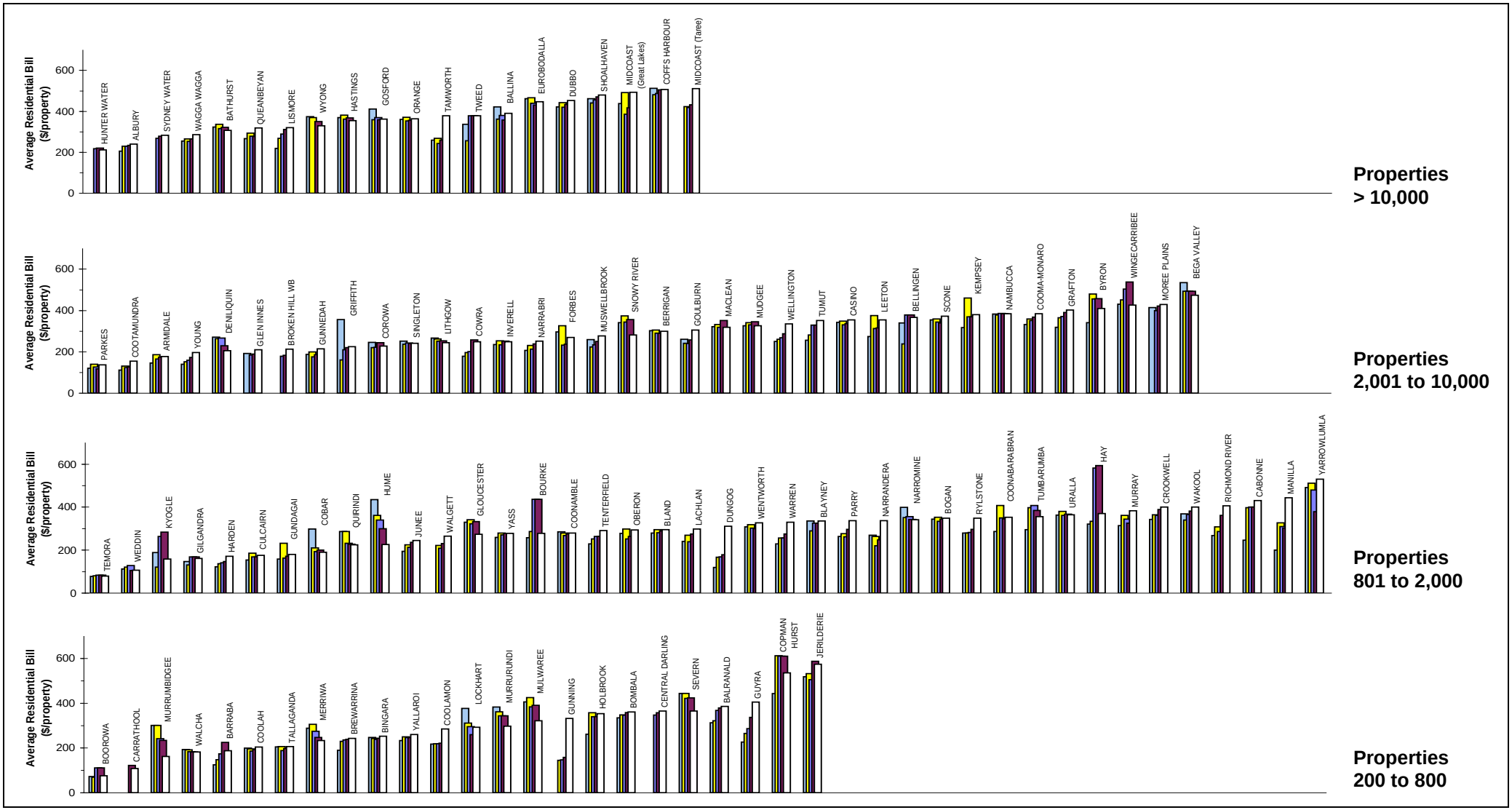
Parameters: Number of Large Dischargers
Maximum Day Volume
Equivalent Biological Load
Equivalent Suspended Solids Load

Notes:

1. Only large trade waste dischargers (over 20 kL/d) and their associated discharge volumes, equivalent biological load and suspended solids load are shown.
2. The 44 councils shown have 135 large dischargers. In total, 81 NSW councils have over 3000 dischargers of trade waste.
3. For general notes see page 33.

80 Average Residential Bill

Sewerage



Parameter: Residential Rates and Service Availability Charges (S6a)

(No. of Residential Assessments (Q4a)) x No. of Connected Properties per Residential Assessment

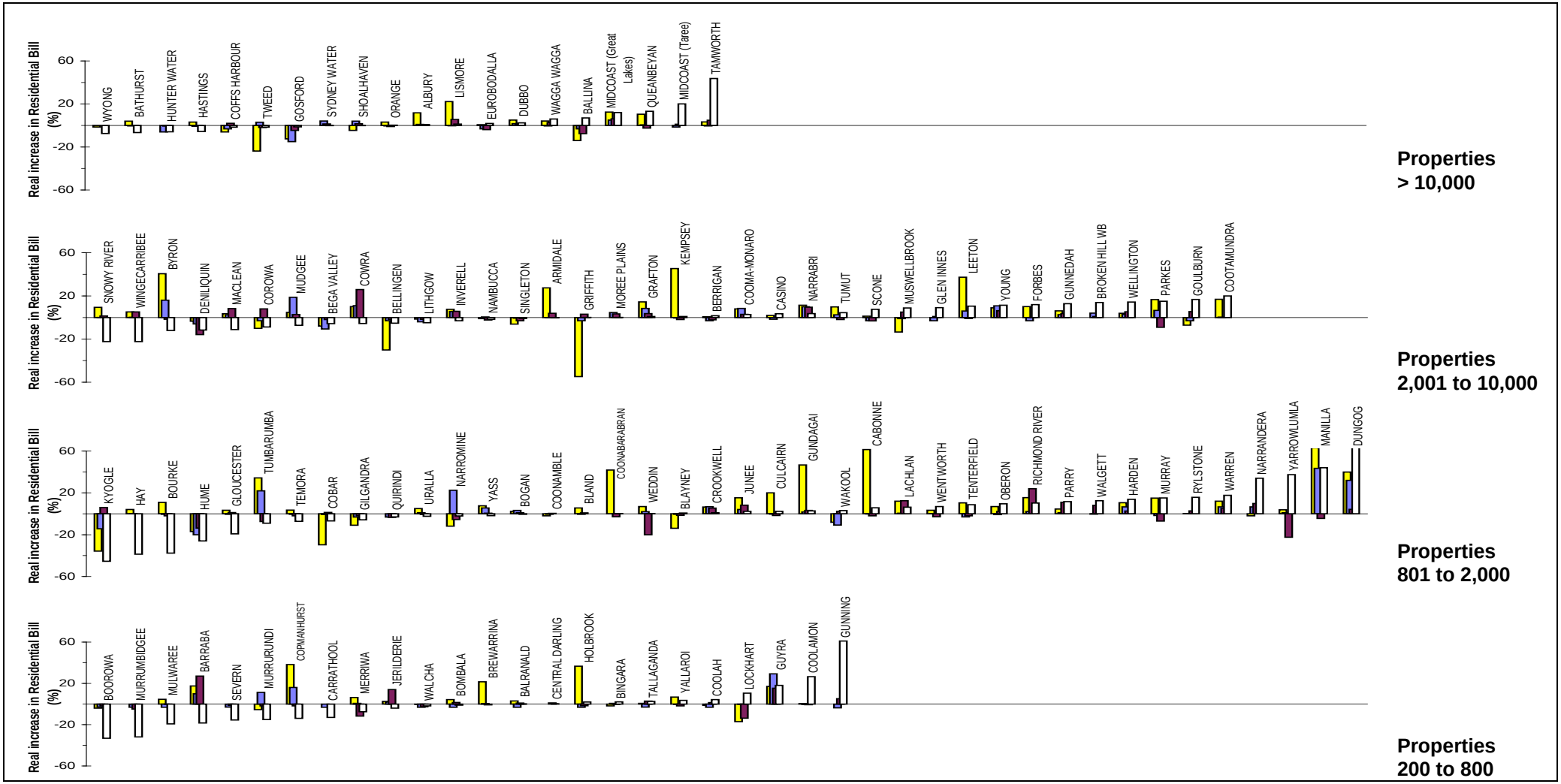
1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 average residential bill for sewerage for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council.*** As an example, for the property range from 2,001 to 10,000, the sewerage bills for the 36 councils shown ***range*** from about ***$137 to $473*** per connected property. Results for the previous 3 years are also shown.
2. The 1998/99 Statewide median average residential bill for sewerage is $360 per connected property (refer to Table 2 – percentage of connected properties basis).
3. For general notes see page 33.

81 Real Increase over Previous Year's Average Residential Bill

Sewerage

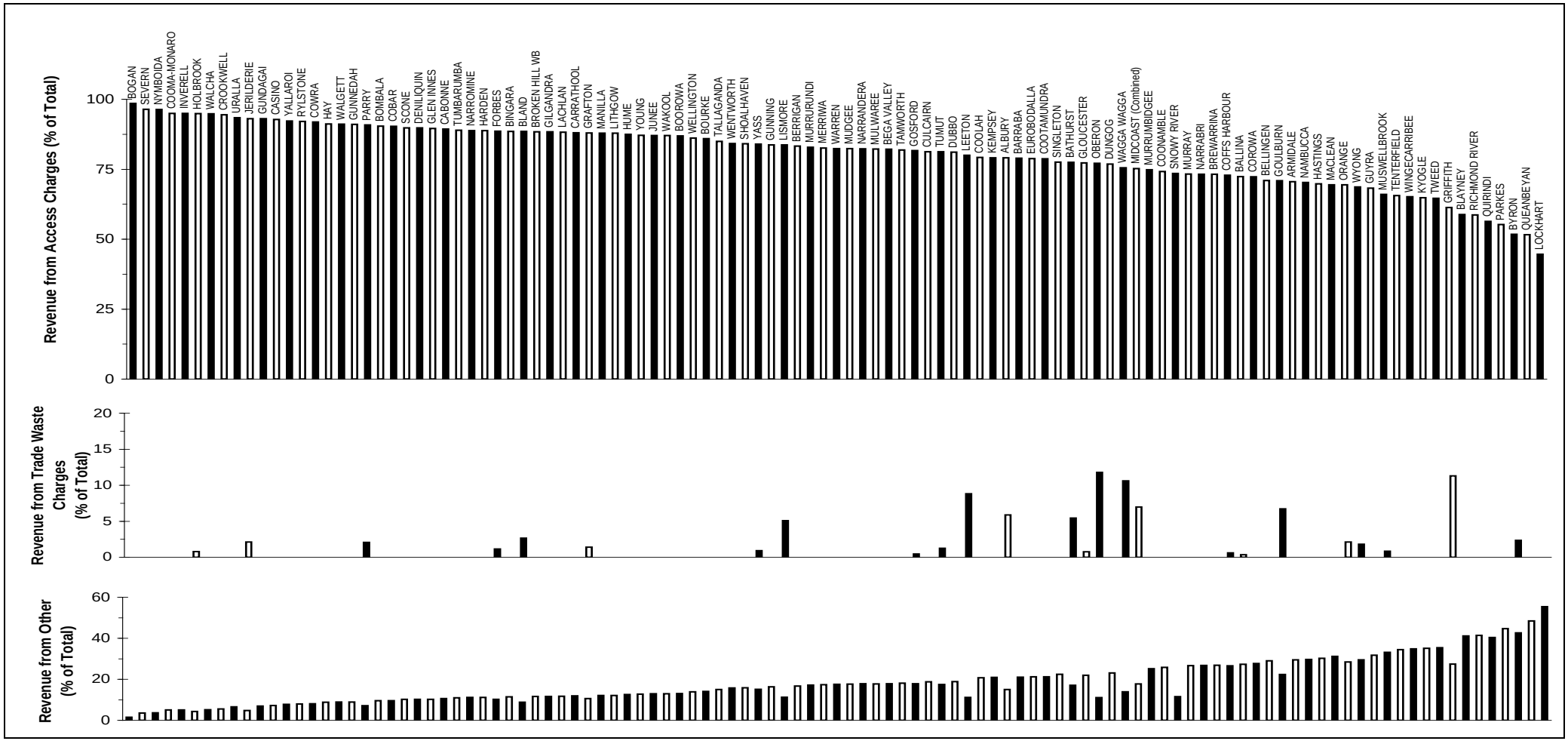


Parameter: $\frac{\text{Average Sewerage Bill for Residential Customers (1998/99)}}{\text{Average Sewerage Bill for Residential Customers (1997/98) x (1 + CPI increase)}}$

1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 real increase over the previous year's average residential bill for each council in 4 groups based on the number of connected properties served. Each white bar represents one council. As an example, for the property range from 2,001 to 10,000, the real increases over the previous year's average residential bill for the 36 councils shown ***range*** from about *-20% to 22%*. Results for the previous 3 years are also shown.
2. The 1998/99 Statewide median increase over the previous year's average residential bill is 0% per property (refer to Table 2 – percentage of connected properties basis).
3. For general notes see page 33.



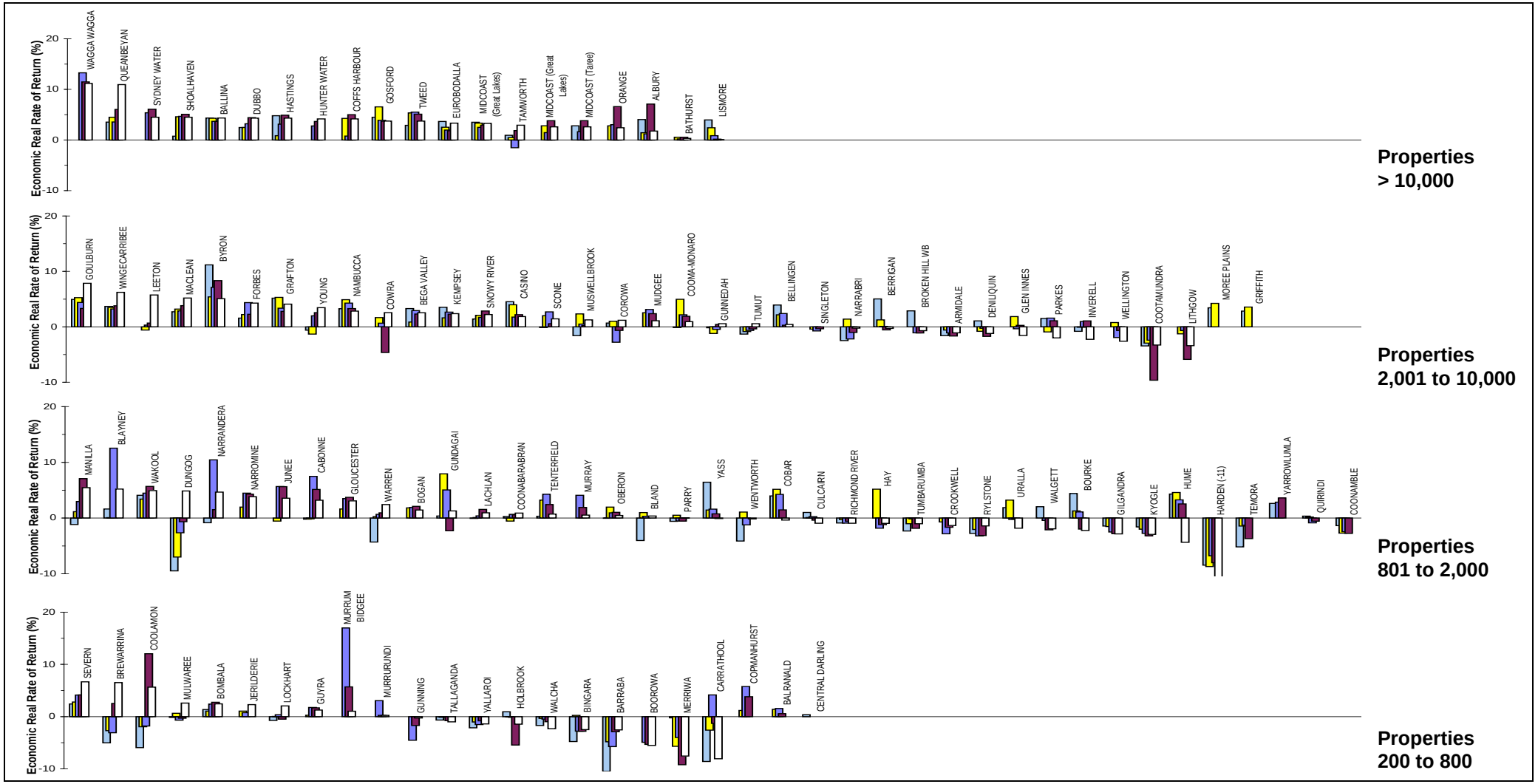
Parameter: Rates and Services Availability Charges (S6)
Total Revenue (S14)

Parameter: Trade Wastes Charges (S7)
Total Revenue (S14)

Parameter: Other Sales and Charges (S8) + Extra Charges (S9) + Interest on Investments (S10) + Other Revenue (S11) + Other Grants (S12b) + Contributions (S13)
Total Revenue (S14)

Notes:
1. See general notes on page 33.

83 Economic Real Rate of Return



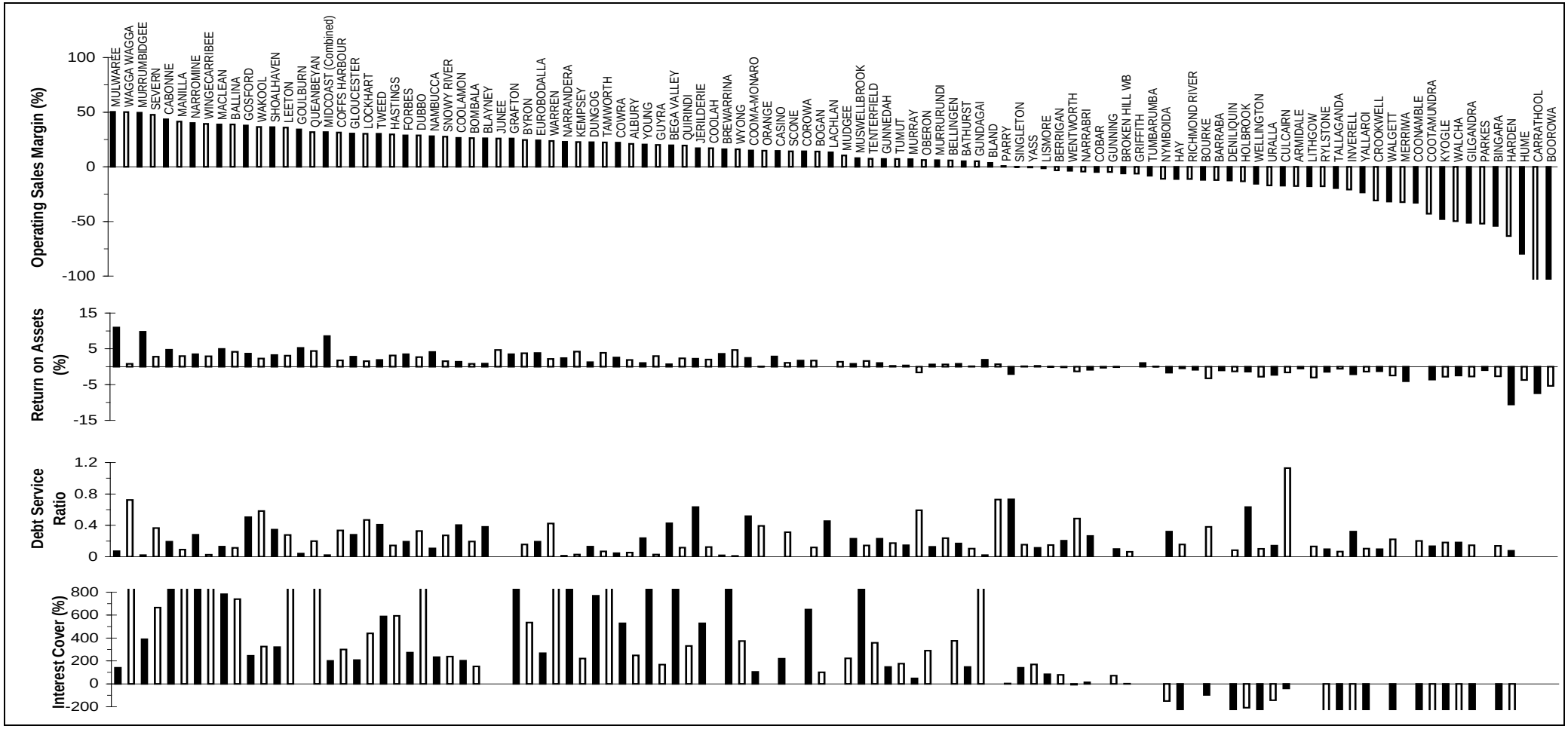
Parameter: (Total Revenue (S14) - Grants for Acquisition of Assets (S12a) - Total Expenses (S5) + Interest Expense (S4a) - Interest Income (S10)) x 100
Written Down Replacement Cost of Property, Plant & Equipment (Q31b)

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows1998/99 ranked values of the sewerage economic real rate of return for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the real rates of return for the 36 councils shown ***range*** from about ***7.9% to –3.4%***. Results for the previous 4 years are also shown.
2. The Statewide median sewerage economic real rate of return is 3.3% (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

84 Operating Sales Margin, Return on Assets, Debt Service Ratio and Interest Cover - 1998/99



Parameter: $\frac{\text{Total Revenue (S14) - Grants for Capital Works (S12a) - Total Expenses (S5)}}{\text{Total Equity (S42)}}$

Parameter: $\frac{\text{Total Revenue (S14) - Grants for Capital Works (S12a) - Developer Provided Assets (S13b) - Total Expense (S5) + Interest Expenses (S4a)}}{\text{Total Revenue (S14) - Grants for Capital Works (S12a) - Developer Provided Assets (S13b) - Interest on Investments (S10)}}$

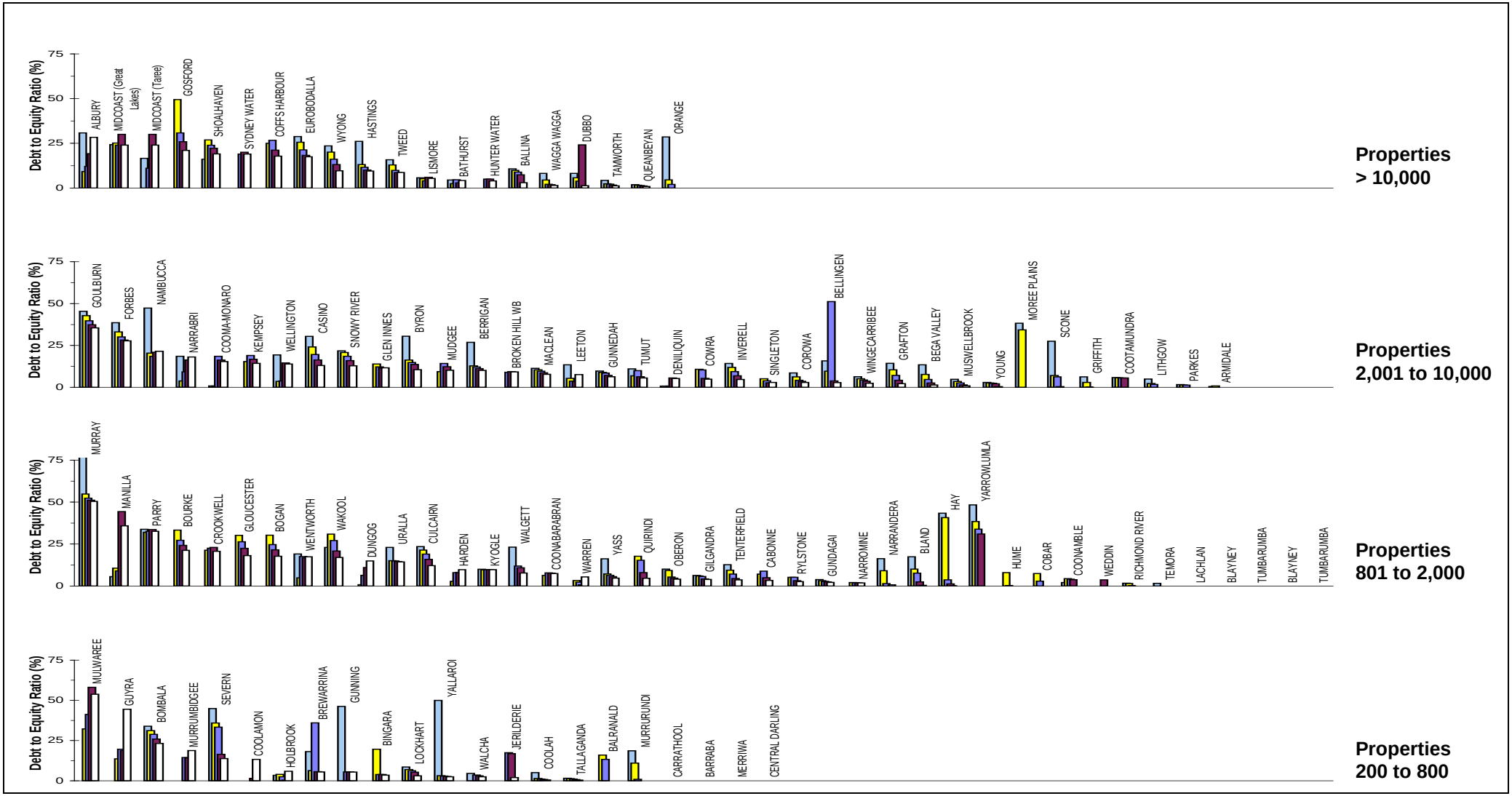
Parameter: $\frac{\text{Payment of Debts (S18) + Interest Expense (S4a)}}{\text{Total Revenue (S14) - Grants for Capital Works (S12a) - Developer Provided Assets (S13b)}}$

Parameter: $\frac{\text{Total Revenue (S14) - Grants for Capital Works (S12a) - Total Expenses (S5) + Interest Expense (S4a)}}{\text{Interest Expense (S4a)}}$

Notes:

1. For general notes see page 33.

85 Debt to Equity



Parameter: Bank Overdraft (S34) + Borrowing (S36) / Total Equity (S42)

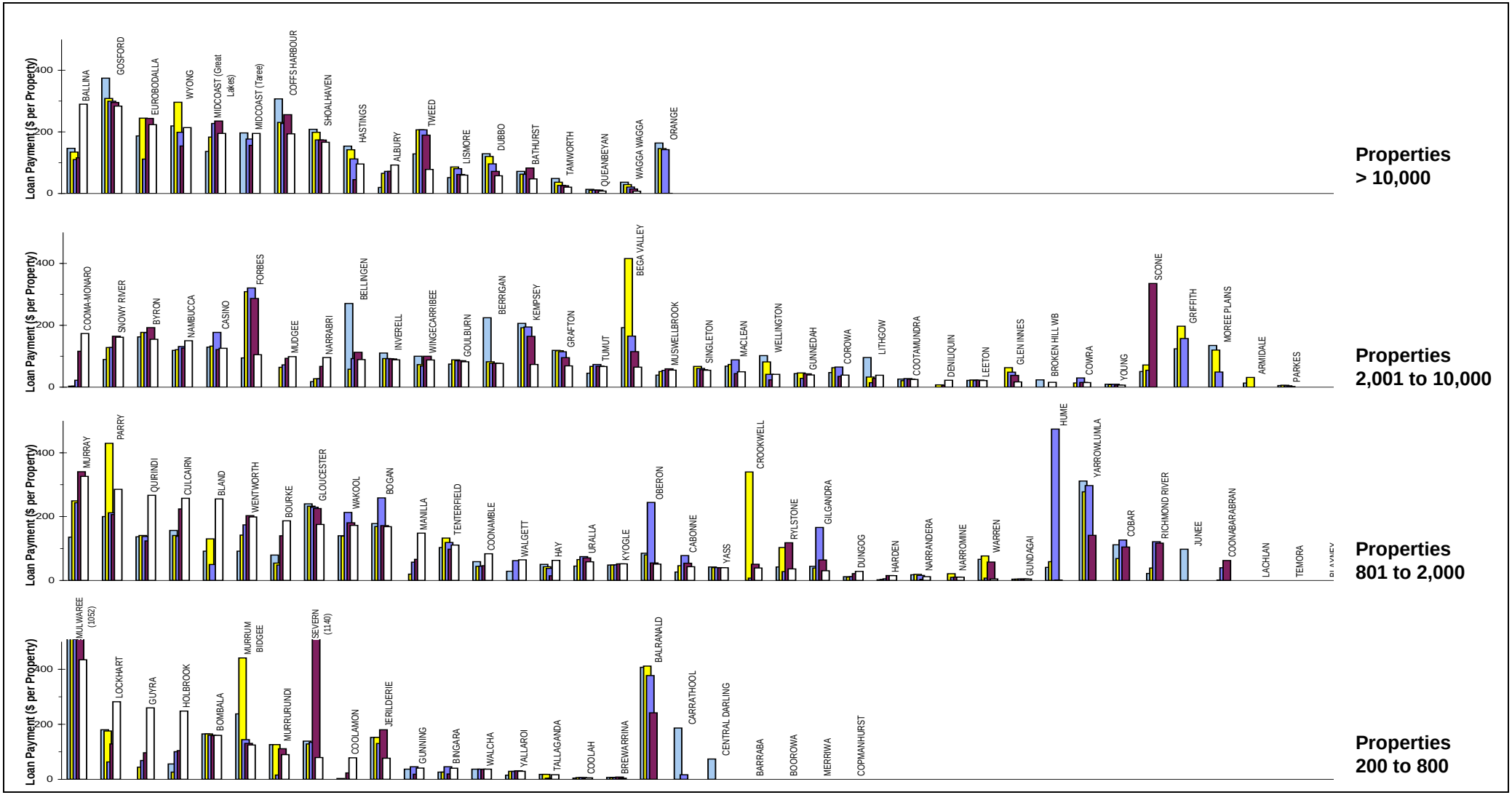
1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows 1998/99 ranked values of the debt to equity for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the debt to equity for the 36 councils shown ***range*** from about ***35% to nil.*** Results for the previous 4 years are also shown.
2. The Statewide median debt to equity is 10% (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

86 Loan Payment

Sewerage



Parameter:

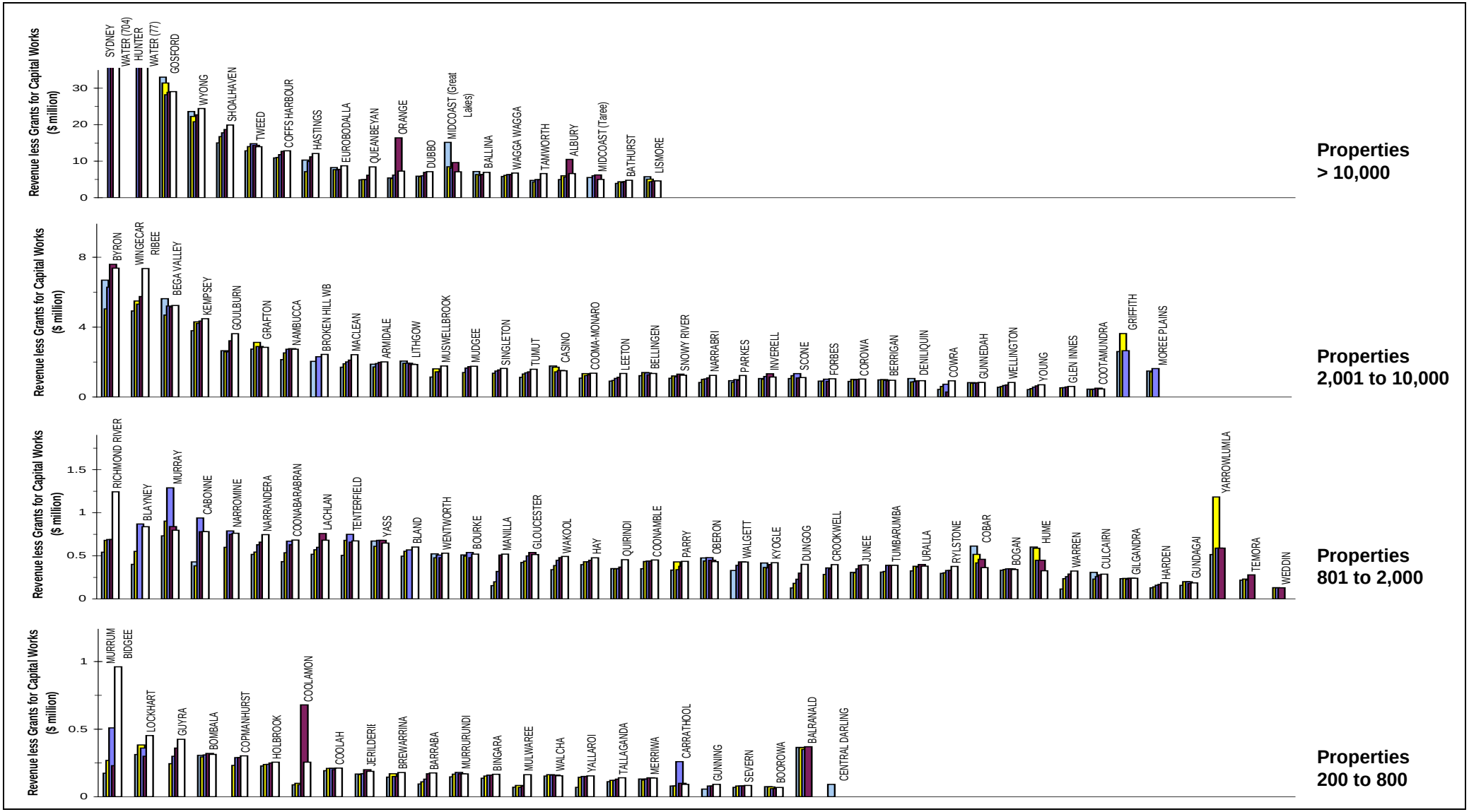
$$\frac{\text{Payment of Debts (S18) + Interest Expense (S4a)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows 1998/99 ranked values of the sewerage loan payment per property for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewerage loan payments for 36 councils shown ***range*** from about ***$nil to 173*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median sewerage loan payment is $80 per connected property (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

87 Revenue less Grants for Capital Works



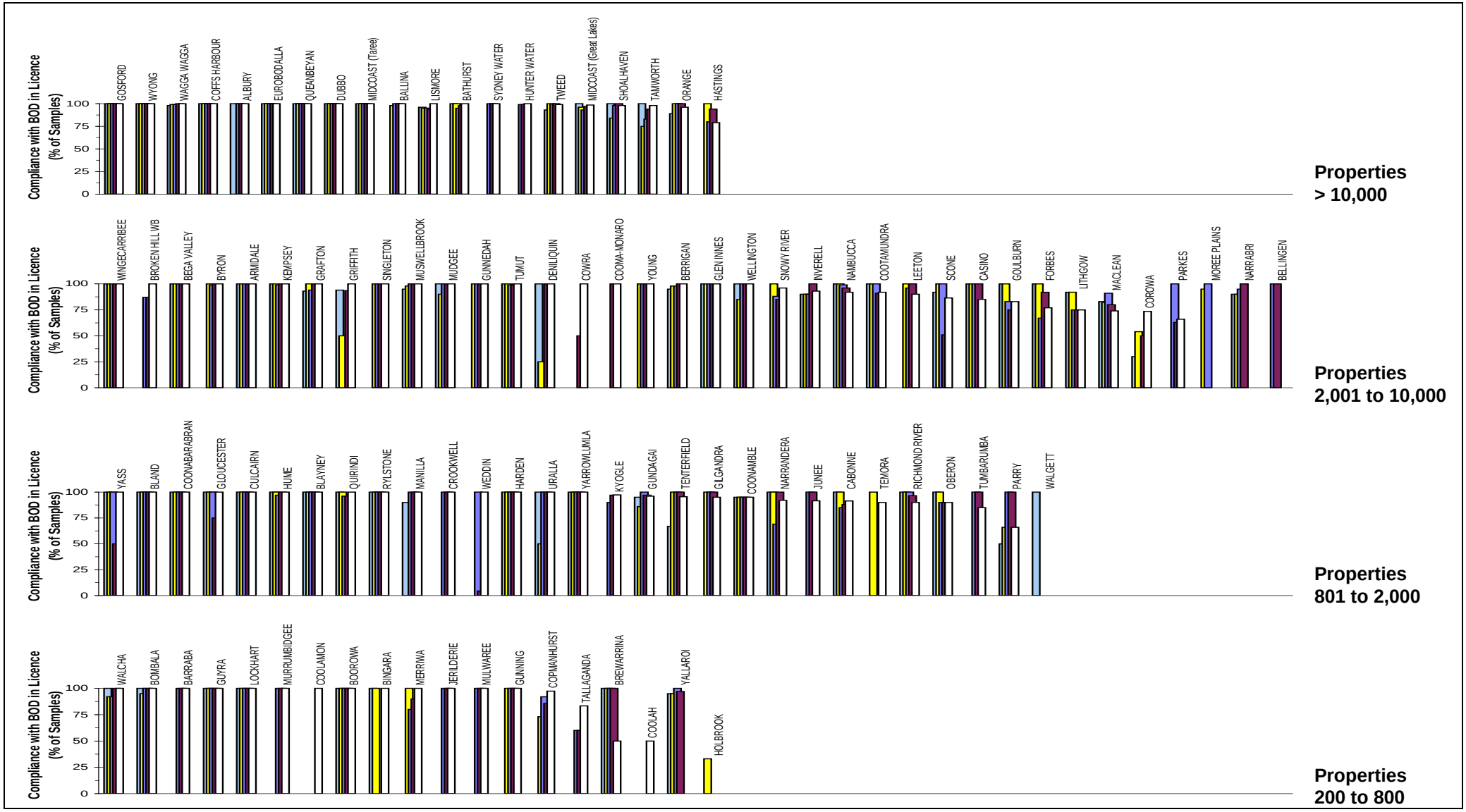
Parameter: Total Revenues (S14) - Grants for Acquisition of Assets (S12a).

1994/95 1995/96 1996/97 1997/98 1998/99

Note:

1. This figure shows 1998/99 ranked values of the sewerage revenue less grants for capital works for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the revenues less grants for capital works for the 36 councils shown ***range*** from about ***$7.4 M to $0.5***. Results for the previous 4 years are also shown in Jan 1999$.
2. For general notes see page 33.

88 Compliance with BOD in Licence

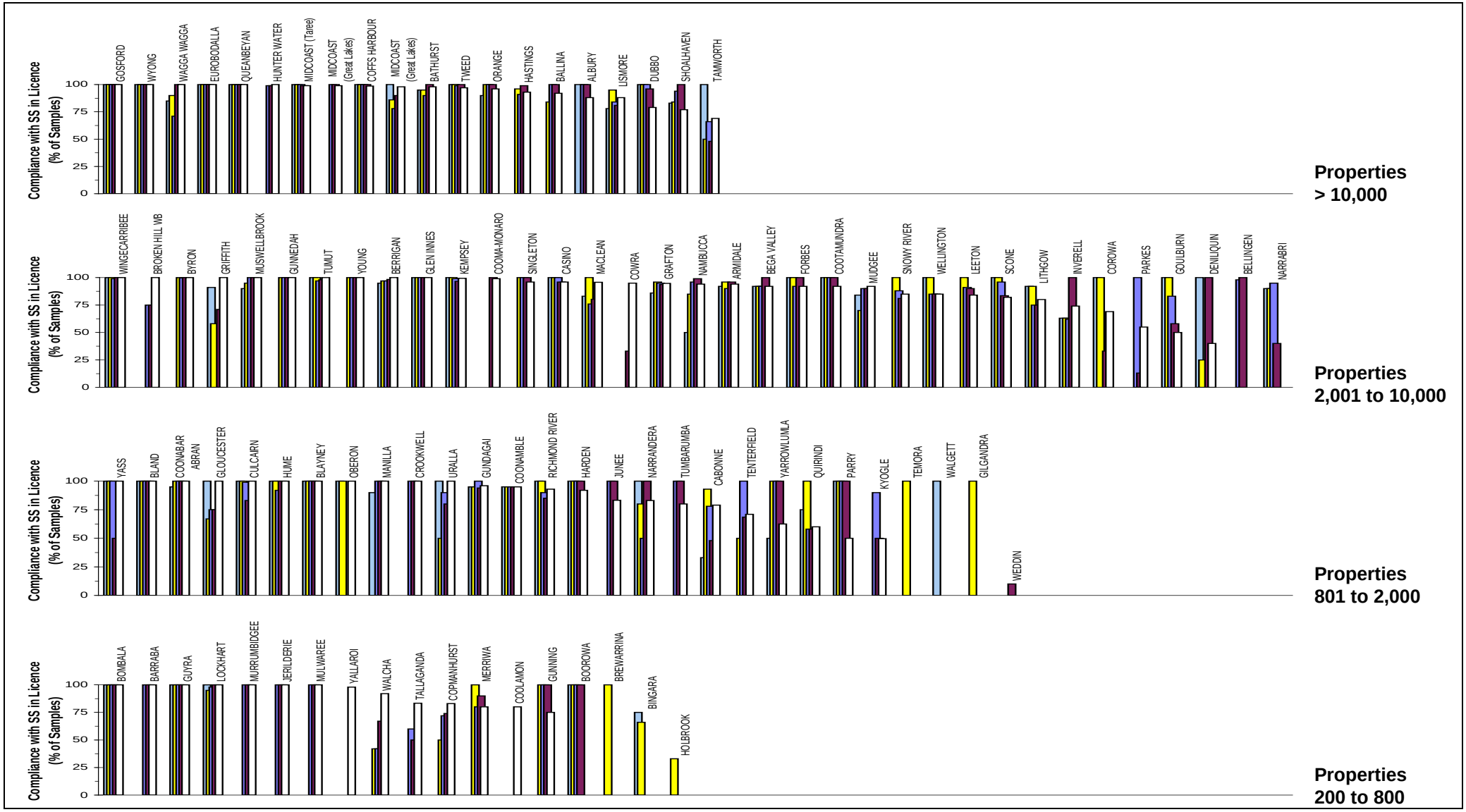


Parameter: Percentage of samples complying with 90 percentile EPA licence limits for Biochemcial Oxygen Demand (BOD) (Q48a).

Notes:

1. For general notes see page 33.

89 Compliance with SS in Licence

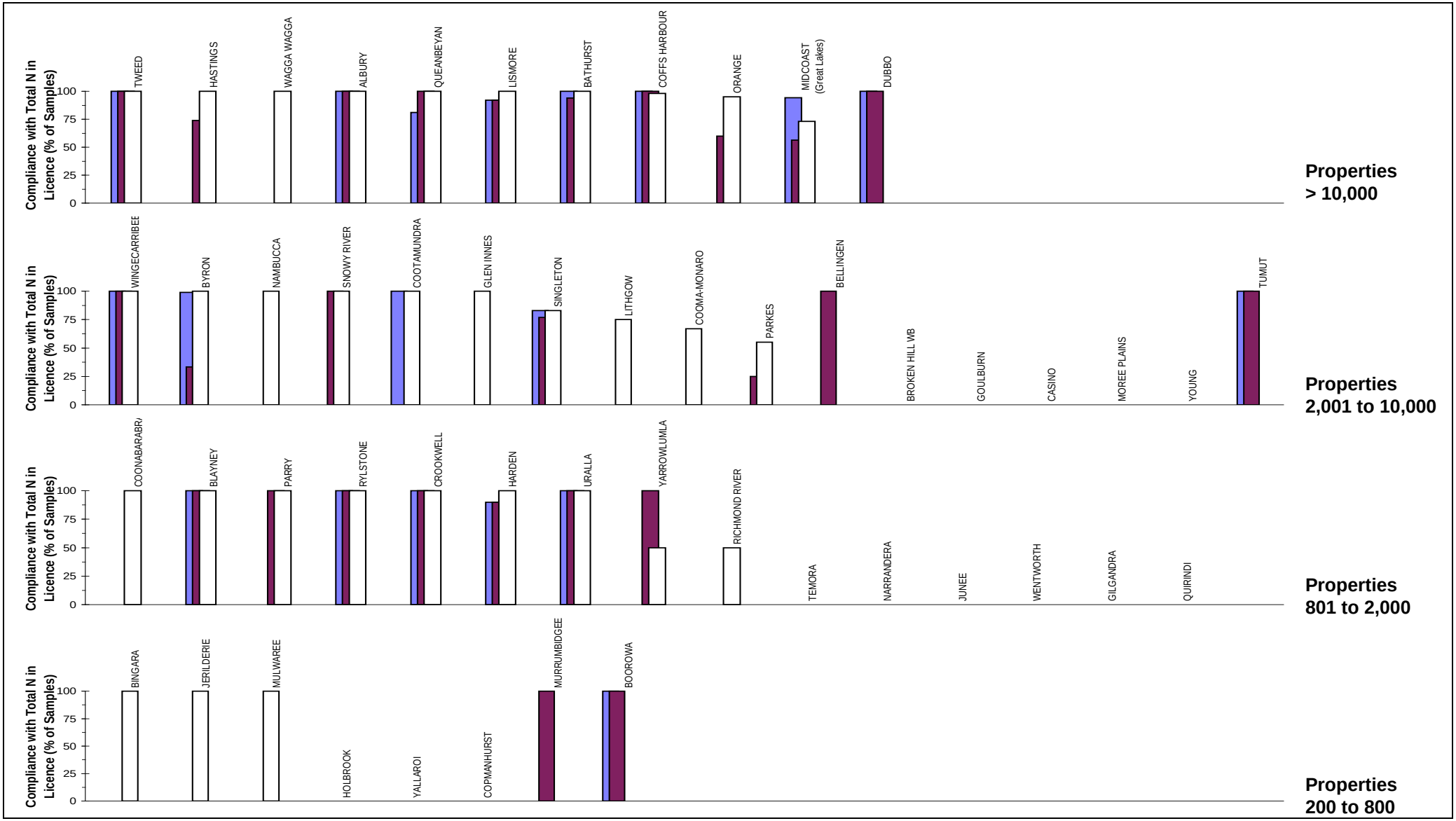


Parameter: Percentage of samples complying with 90 percentile EPA licence limits for Suspended Solids (SS) (Q48b).

Notes:

1. For general notes see page 33.

90 Compliance with total N in Licence



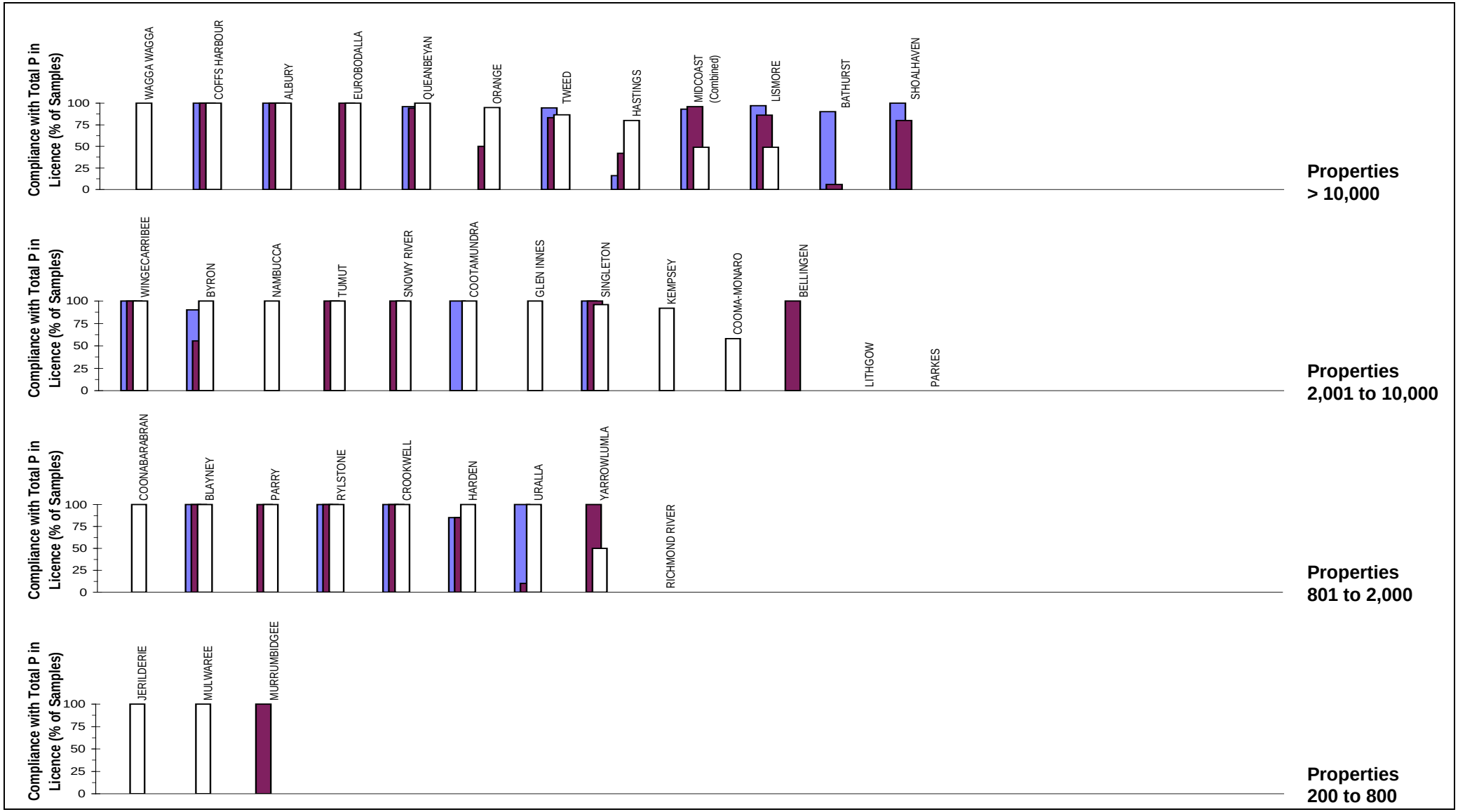
Parameter: Percentage of samples complying with 90 percentile EPA licence limits for Total Nitrogen (Q48c).

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. For general notes see page 33.

91 Compliance with total P in Licence

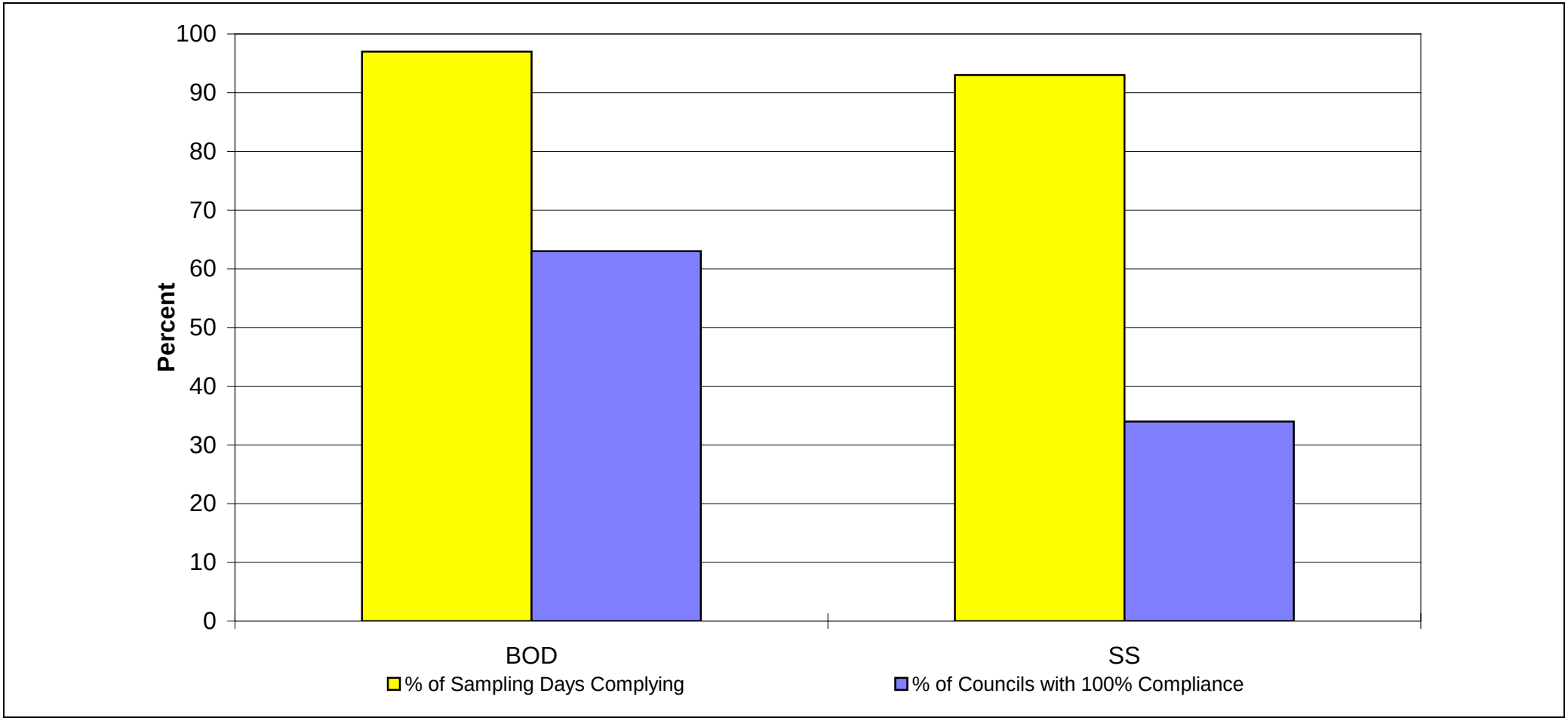


Parameter: Percentage of samples complying with 90 percentile EPA licence limits for Total Phosphorus (Q48f).

Notes:

1. For general notes see page 33.

92 Compliance with EPA Licence – 1998/99



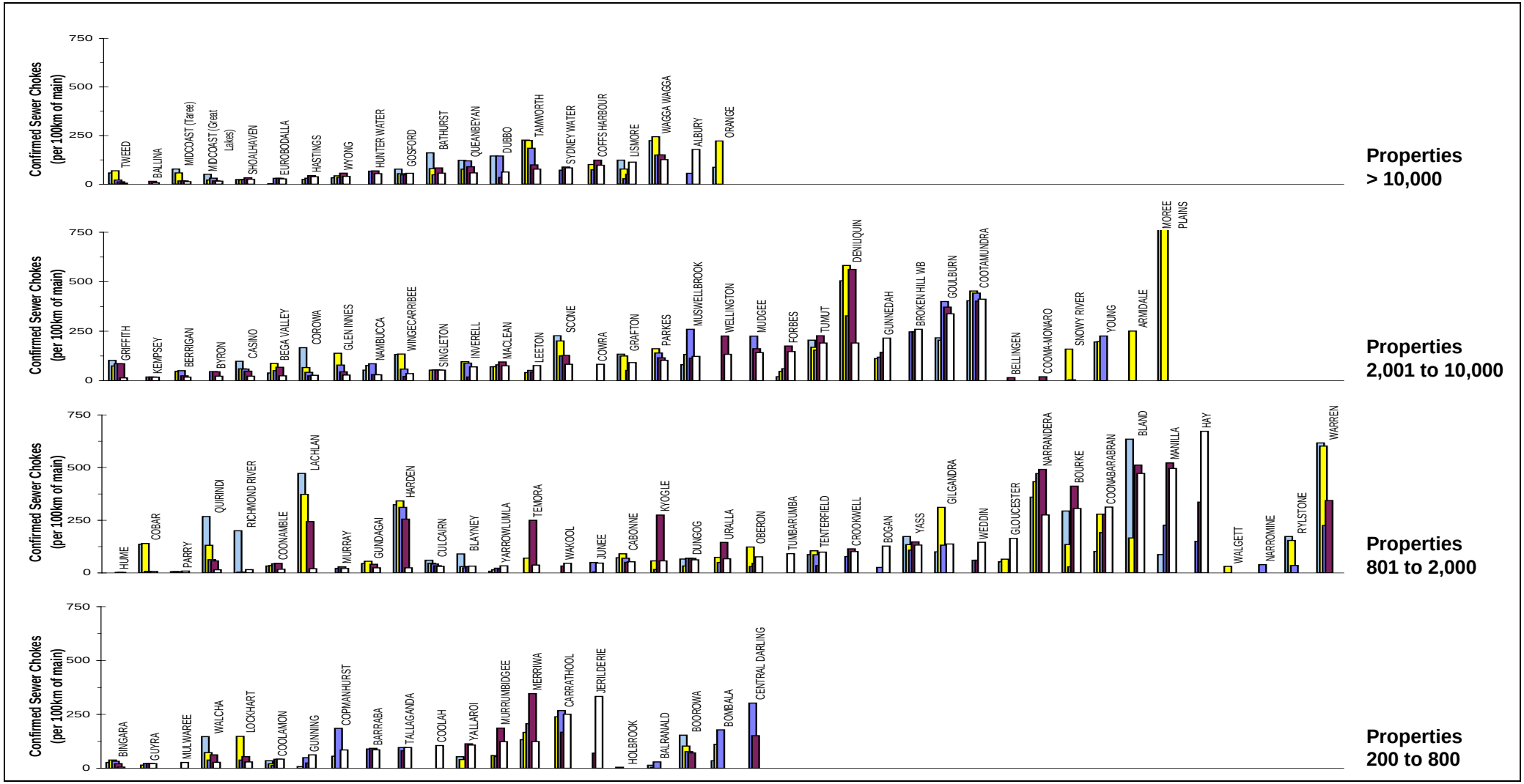
Comment:

1. 97% of the 6,100 sampling days for non-metropolitan NSW complied with the 90 percentile limit of their EPA licence in regard to BOD; 56% of councils complied with these limits.
2. 93% of the 5,800 sampling days for non-metropolitan NSW complied with the 90 percentile limit of their EPA licence in regard to SS; 29% of councils complied with these limits.
3. For councils with more than one sewage treatment works, the reported compliance has been pro-rated on the basis of the number of sampling days at each treatment works.
4. The major cause of non-compliance is due to the growth of algae in maturation ponds, being measured as BOD and SS. Most treatment works in non-metropolitan NSW have maturation ponds due to previous EPA preference for ponding over chlorination. Negotiations with the EPA to develop an appropriate licensing method when maturation ponds are used for disinfection have favoured an option to test for SS prior to the maturation ponds. For new installations and major augmentations, Ultra Violet (UV) disinfection is being used rather than maturation ponds to overcome this problem.
5. Typical numbers of sampling days reported for treatment works are:

< 4 000 ep	15
about 15 000 ep	40
>25 000 ep	>100

6. 7% of councils did not report on their BOD and SS compliance. All councils should carry out the necessary sampling of effluent quality and report thereon in future.

93 Confirmed Sewer Chokes



Parameter:

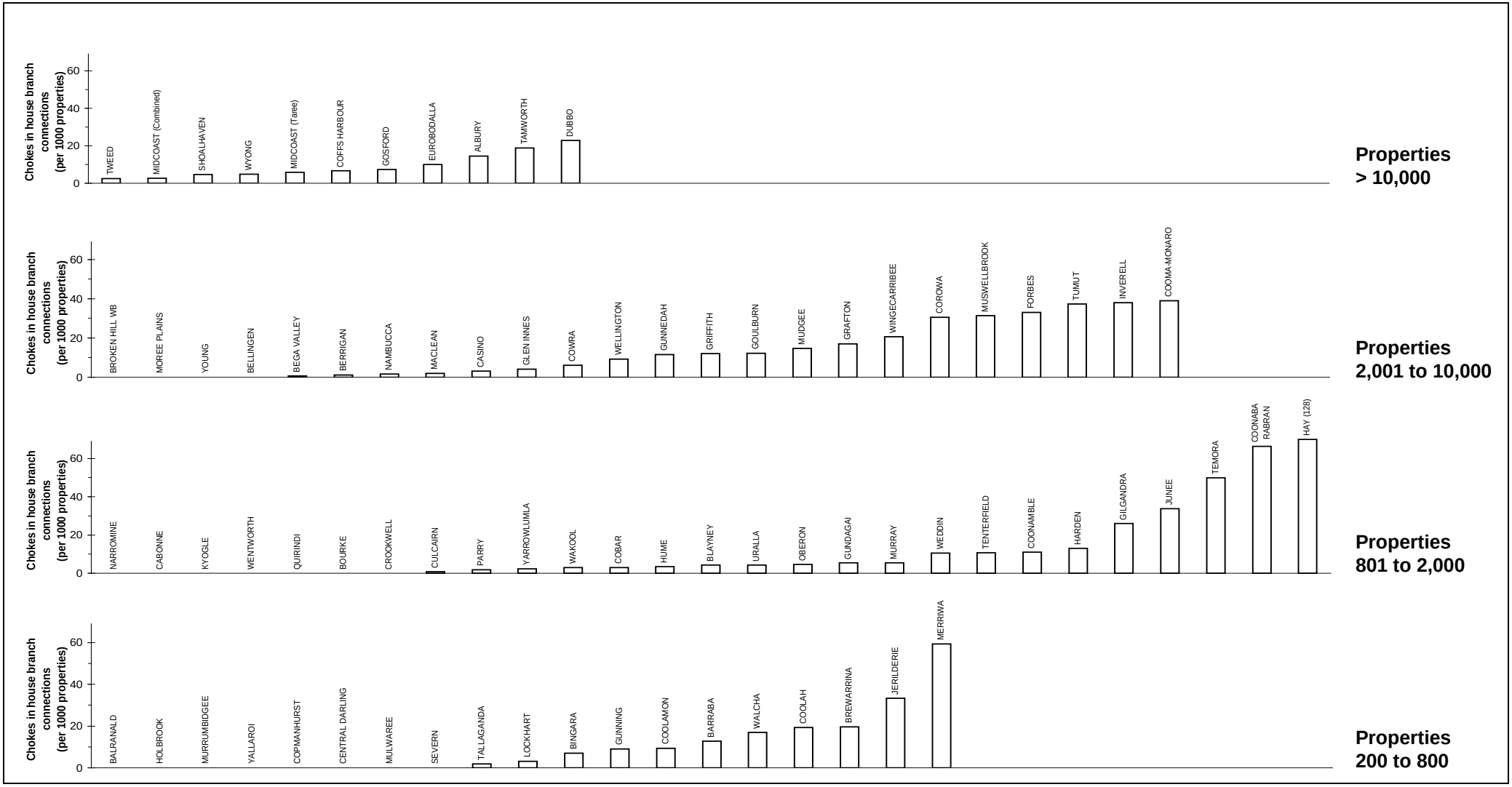
$$\frac{\text{Total No. of Confirmed Sewer Chokes (Q18)} \times 100}{\text{Length of Reticulation/Gravity Mains (Q10a) + Length of Rising Mains (Q10b)}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the confirmed sewer chokes for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the number of confirmed sewer chokes for the 34 councils shown ***ranges*** from about ***15 to 400*** chokes per 100 km of sewer mains. Results for the previous 4 years are also shown.
2. The Statewide median confirmed sewer chokes is 55 per 100 km of sewer main (refer to Table 2 - percentage of connected properties basis).
3. 19% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
4. For general notes see page 33.

94 Chokes in House Branch connections

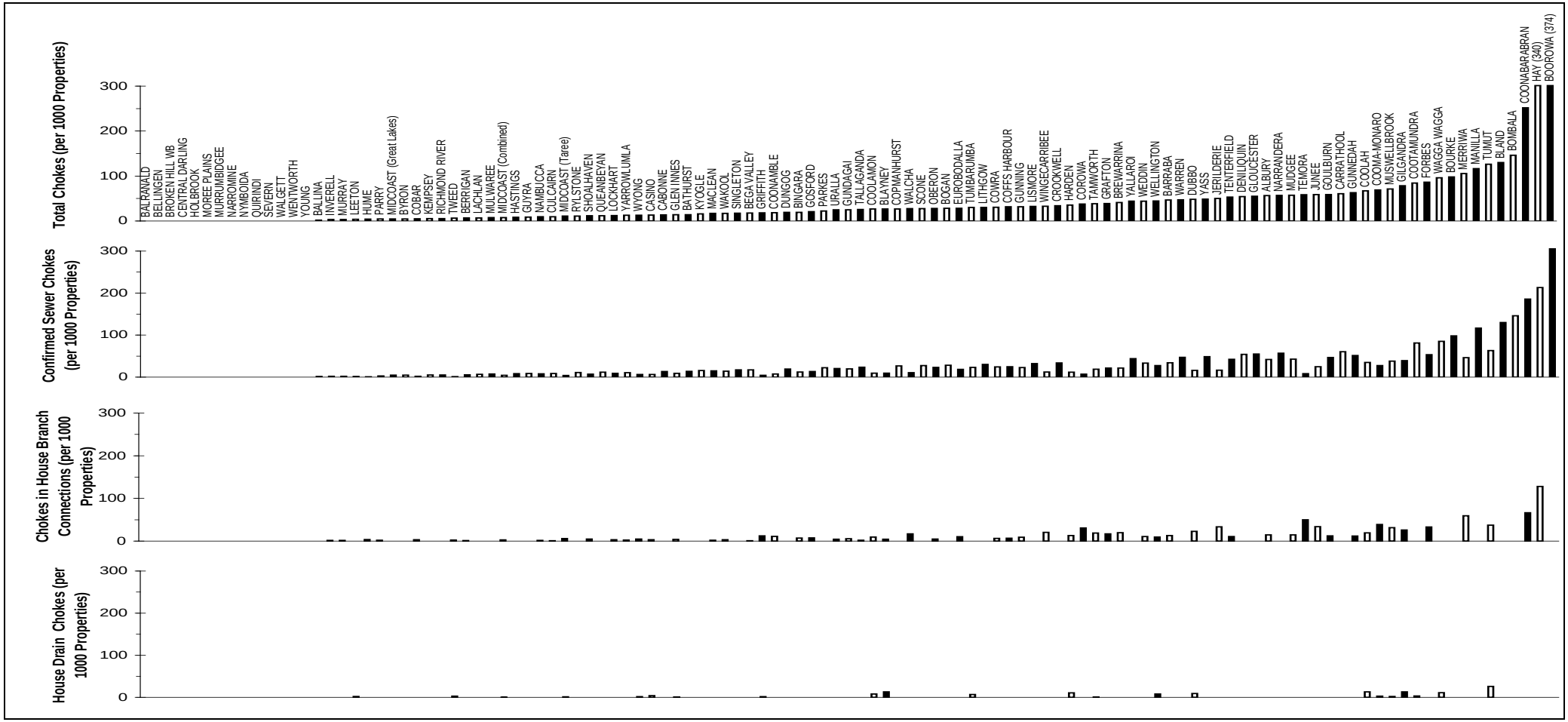


Parameter: $\frac{\text{No. of Chokes in House Branch Connections (Q22)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Notes:

1. This figure shows ranked values of the chokes in house branch connections per 1000 connected properties for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the number of confirmed sewer chokes for the 24 councils shown ***range*** from ***nil to 39*** chokes per 1000 connected properties.
2. Some 24% of reporting councils reported no house branch sewer chokes.
3. 32% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
4. For general notes see page 33.

95 Chokes in House Drains



Parameter: $\frac{\text{(No. of Confirmed Sewer Chokes (Q18) + No. of Chokes in House Branch Connections (Q22) + No. of Chokes in House Drains (Q23)) x 1000}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{No. of Confirmed Sewer Chokes (Q18) x 1000}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

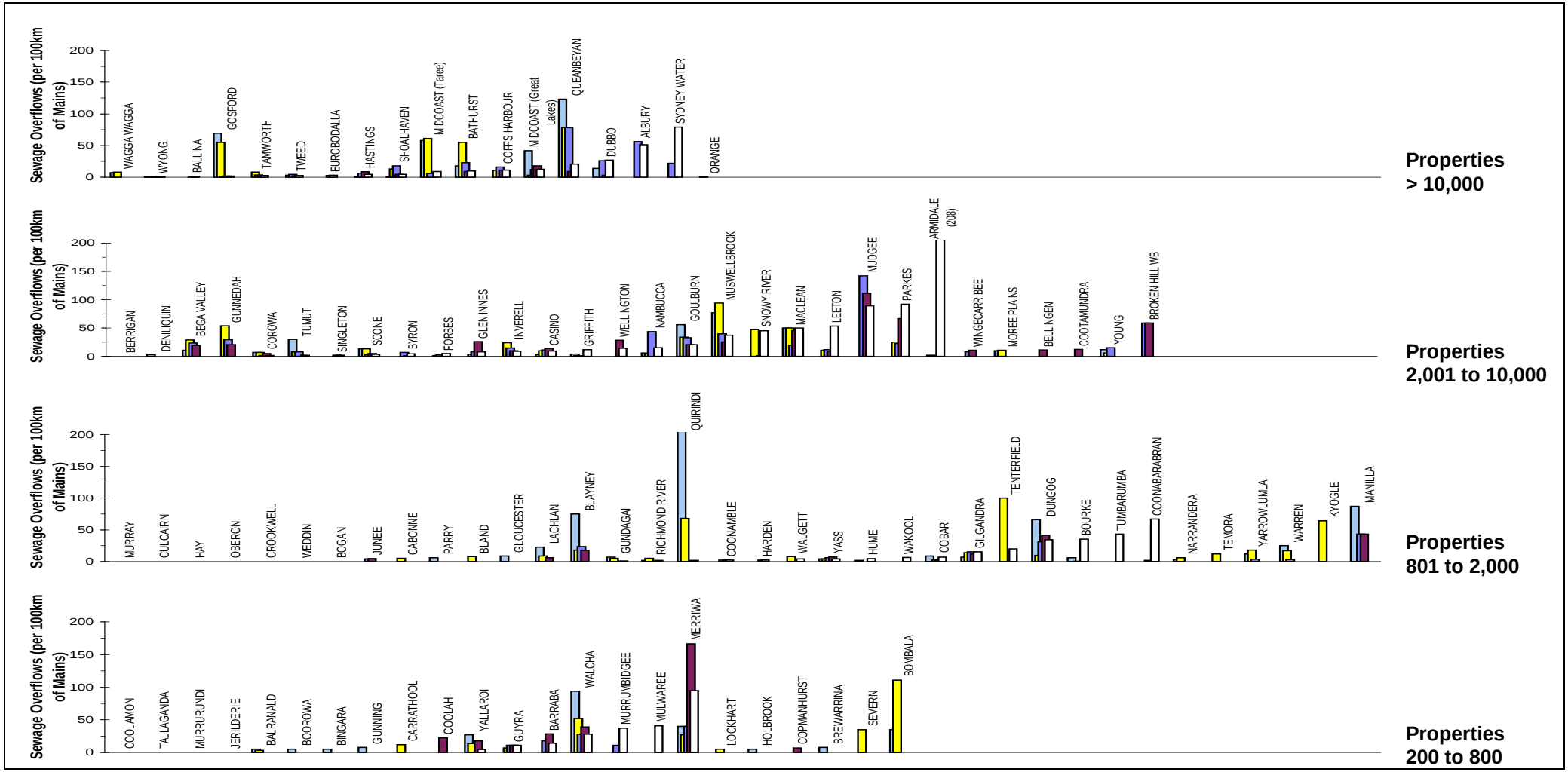
Parameter: $\frac{\text{No. of Chokes in House Branch Connections (Q22) x 1000}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{No. of Chokes in House Drains (Q23) x 1000}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Notes:

1. For general notes see page 33.

96 Sewage Overflows



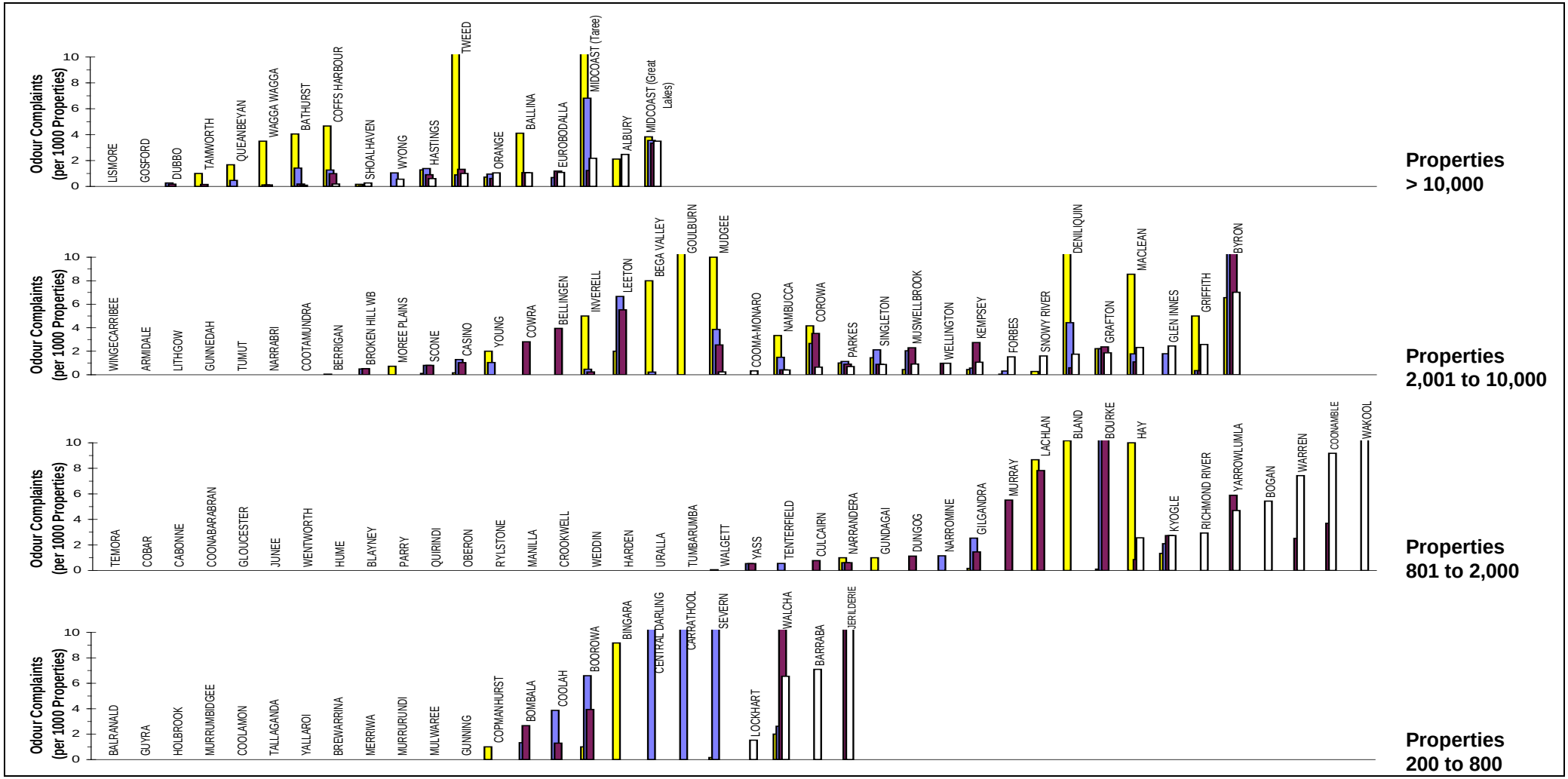
Parameter:

$$\frac{\text{Total No. of Sewage Overflows (Q14) x 100}}{\text{Length of Reticulation/Gravity Mains (Q10a) + Length of Rising Mains (Q10b)}}$$

Notes:

1. This figure shows ranked values of the confirmed sewage overflows for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the confirmed sewage overflows for the 30 councils shown ***range*** from ***nil to 208*** overflows per 100 km of sewer mains. Results for the previous 4 years are also shown.
2. The Statewide median confirmed sewage overflows is 3 per 100 km of sewer main (refer to Table 2 - percentage of connected properties basis).
3. Some 34% of councils reported no sewage overflows.
4. 27% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
5. For general notes see page 33.

97 Odour Complaints

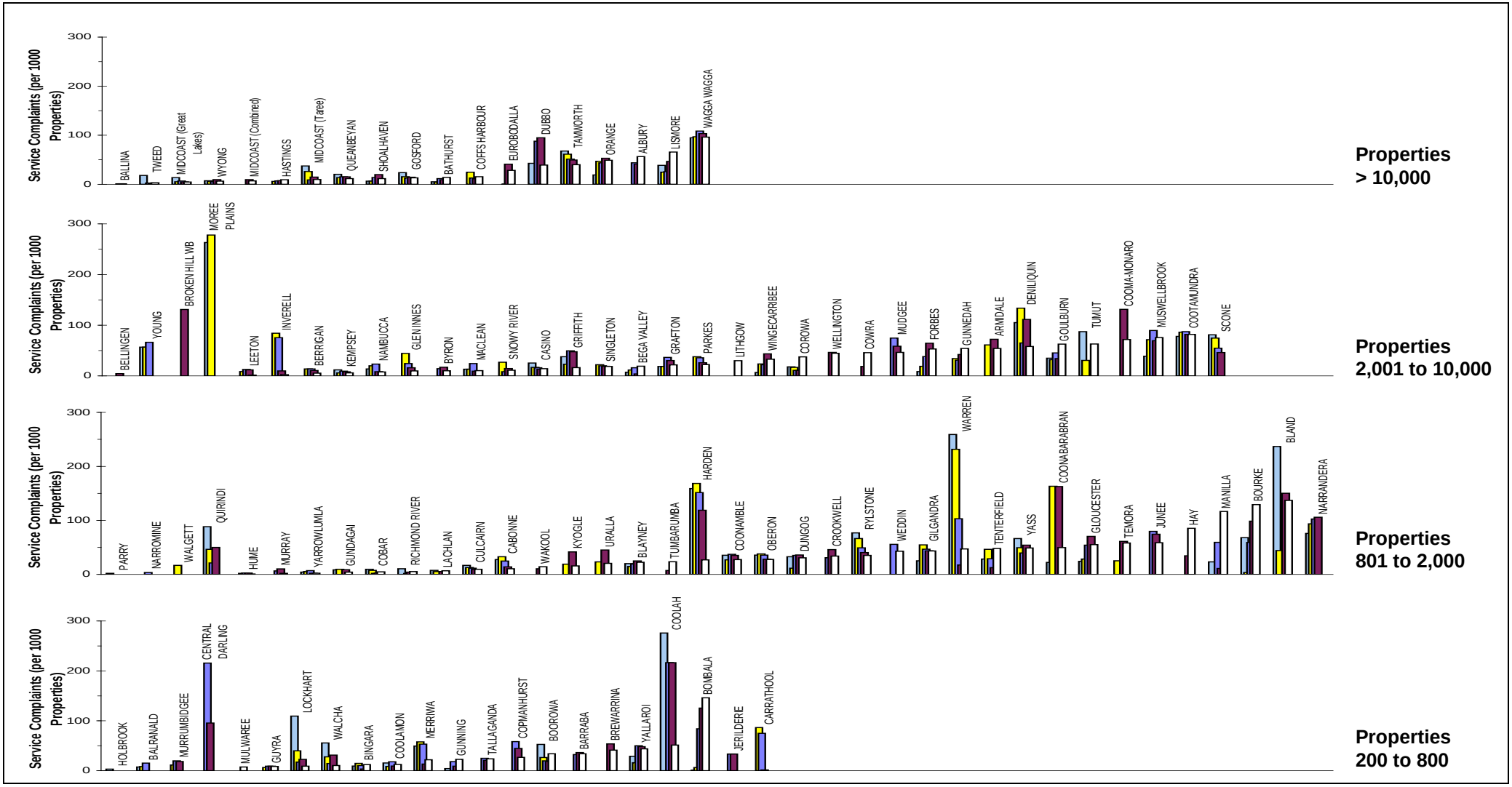


Parameter: (No. of Odour Complaints from treatment works (Q13a) + No. of Odour Complaints from pumping stations (Q13b)) x 100
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. This figure shows ranked values of the number of sewage odour complaints for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the number of odour complaints for the 36 councils shown ***range*** from ***0 to 7*** complaints per thousand connected properties. Results for the previous 4 years are also shown.
2. The Statewide median number of odour complaints is ***nil*** per 1000 properties (refer to Table 2 - percentage of connected properties basis).
3. Some 66% of reporting councils reported no odour complaints.
4. 1% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
5. For general notes see page 33.

98 Sewerage Service Complaints



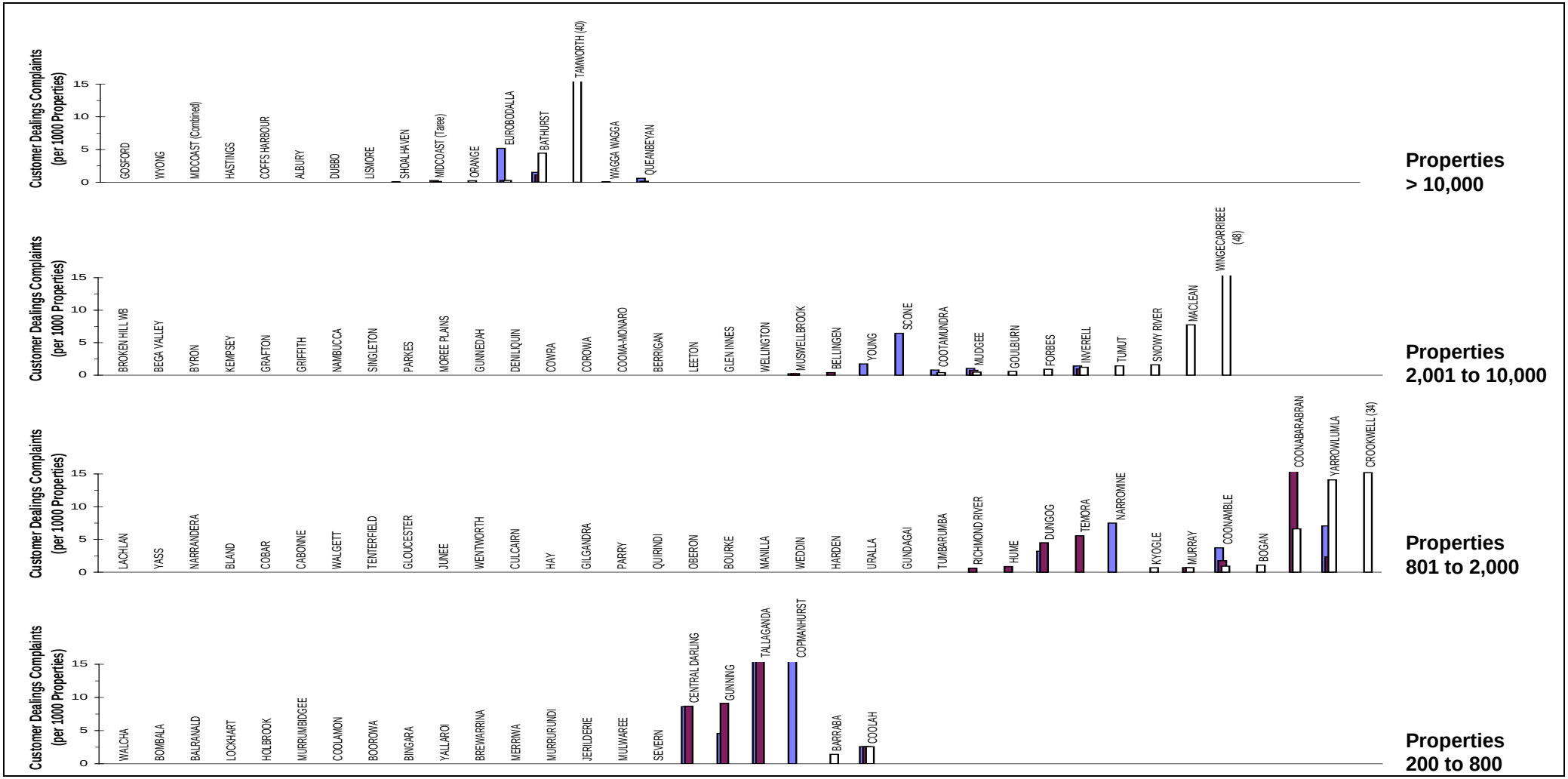
Parameter: $\frac{\text{No. of Service or Choke Complaints (Q15)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the number of sewerage service complaints for 1998/99 for each council in 4 groups based on the number of properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the number of service complaints for the 35 councils shown ***ranges*** from ***nil to 82*** complaints per thousand properties. Results for the previous 4 years are also shown.
2. The Statewide median number of sewerage service complaints is 13 per 1000 properties (refer to Table 2 - percentage of properties basis).
3. Some 18% of reporting councils reported no sewerage service complaints.
4. For general notes see page 33.

99 Customer Dealings Complaints



Parameter: No. of Customer Dealings Complaints (Q17)

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

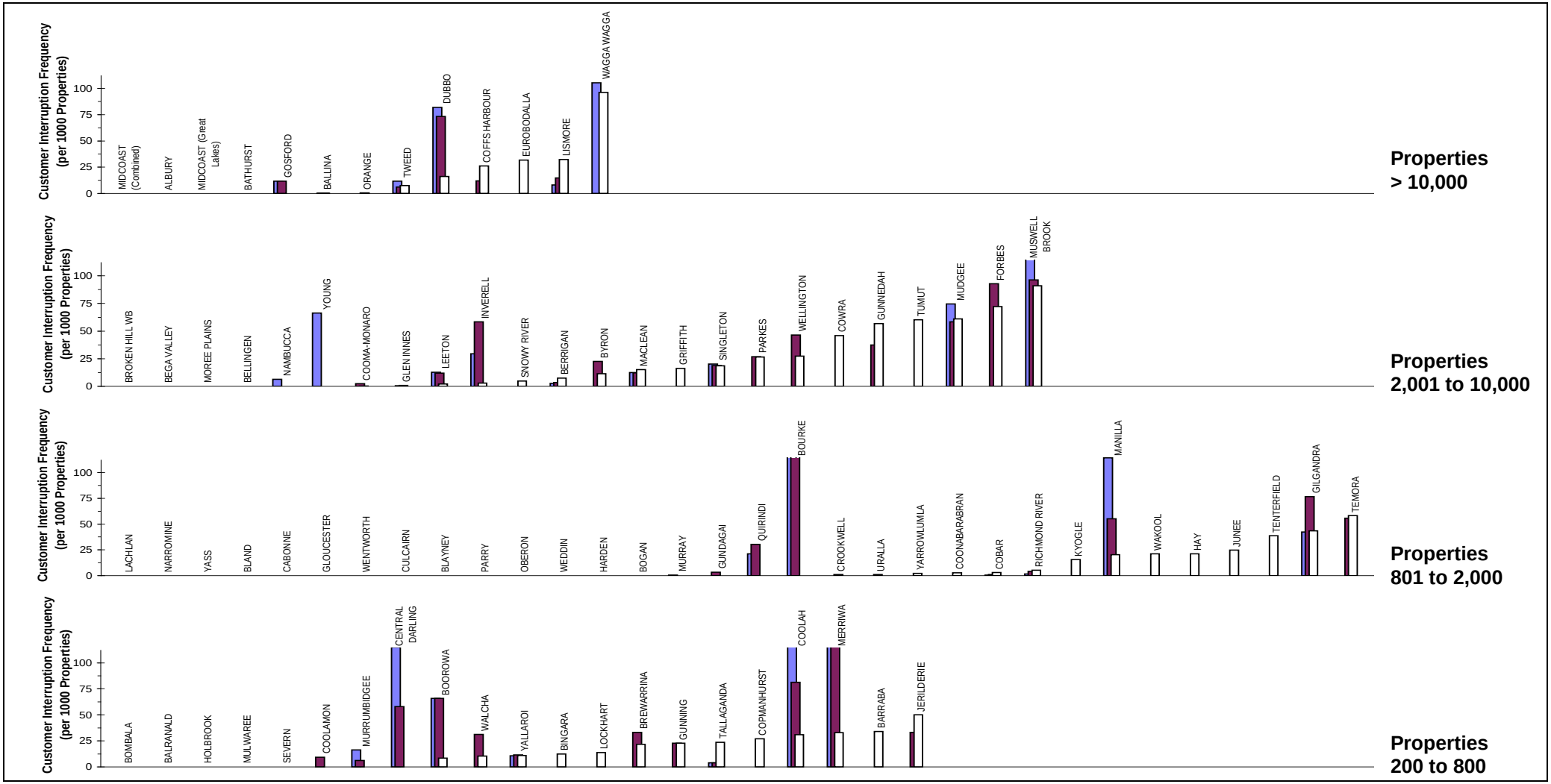
1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the number of customer dealings complaints for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the number of customer dealings complaints for the 32 councils shown ***range*** from ***nil to 48*** complaints per thousand connected properties. Results for the previous 2 years are also shown.
2. The Statewide median number of customer dealings complaints is ***nil*** (refer to Table 2 - percentage of connected properties basis).
3. Some 79% of reporting councils reported no customer dealings complaints.
4. 13% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
5. For general notes see page 33.

100 Customer Interruption Frequency

Sewerage



Parameter: No. of Properties affected by an unplanned interruption to service (Q20a + Q20b)

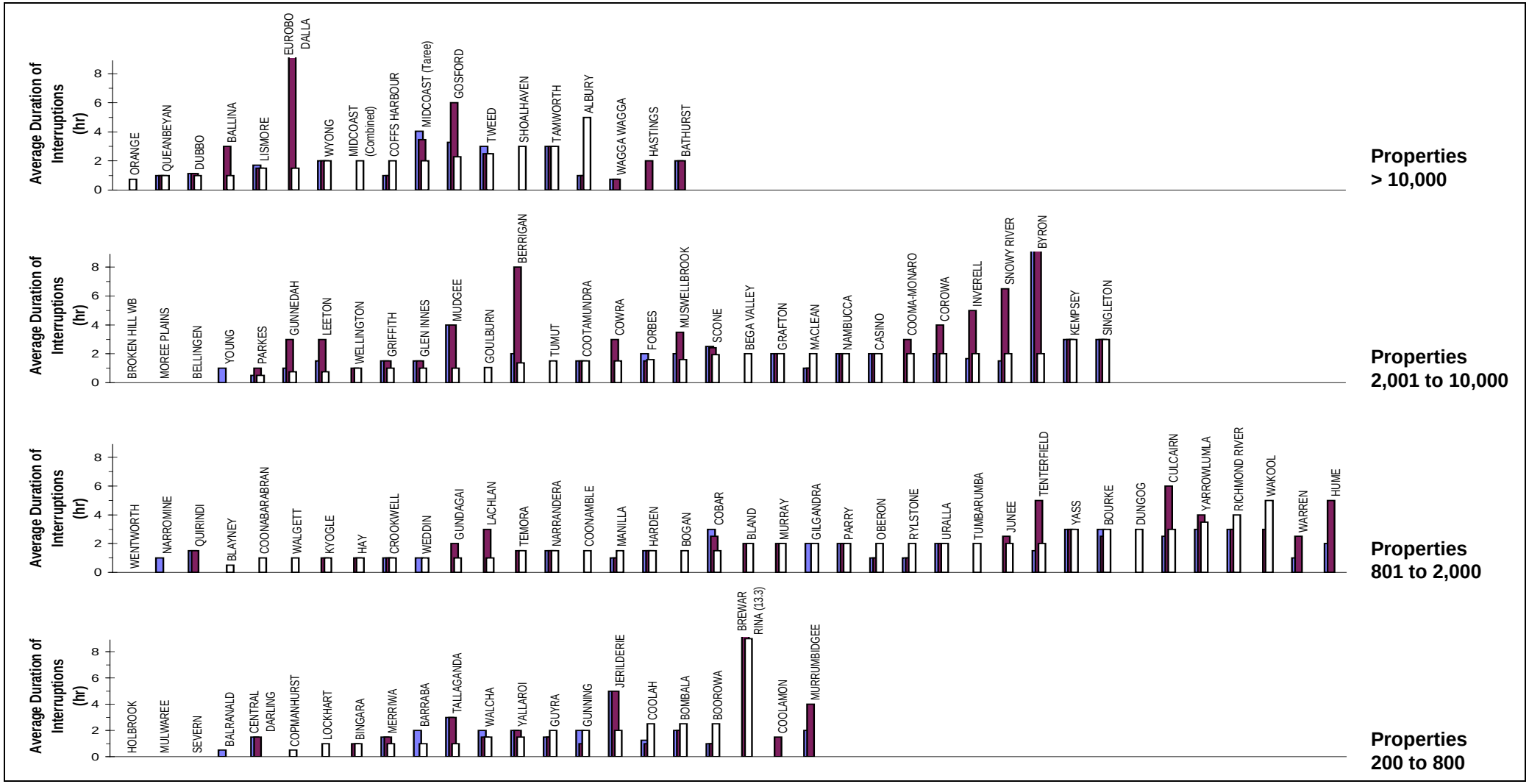
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. This figure shows ranked values of the customer interruption frequency for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range 2,001 to 10,000 the interruption frequencies for the 24 councils shown ***range*** from ***0 to 90*** per thousand connected properties. Results for the previous 2 years are also shown.
2. The Statewide median customer interruption frequency is 0.5 per thousand connected properties (refer to Table 2 - percentage of connected properties basis).
3. Some 42% of councils reported no unplanned interruptions to service.
4. 24% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
5. For general notes see page 33.

101 Average Duration of Interruptions

Sewerage



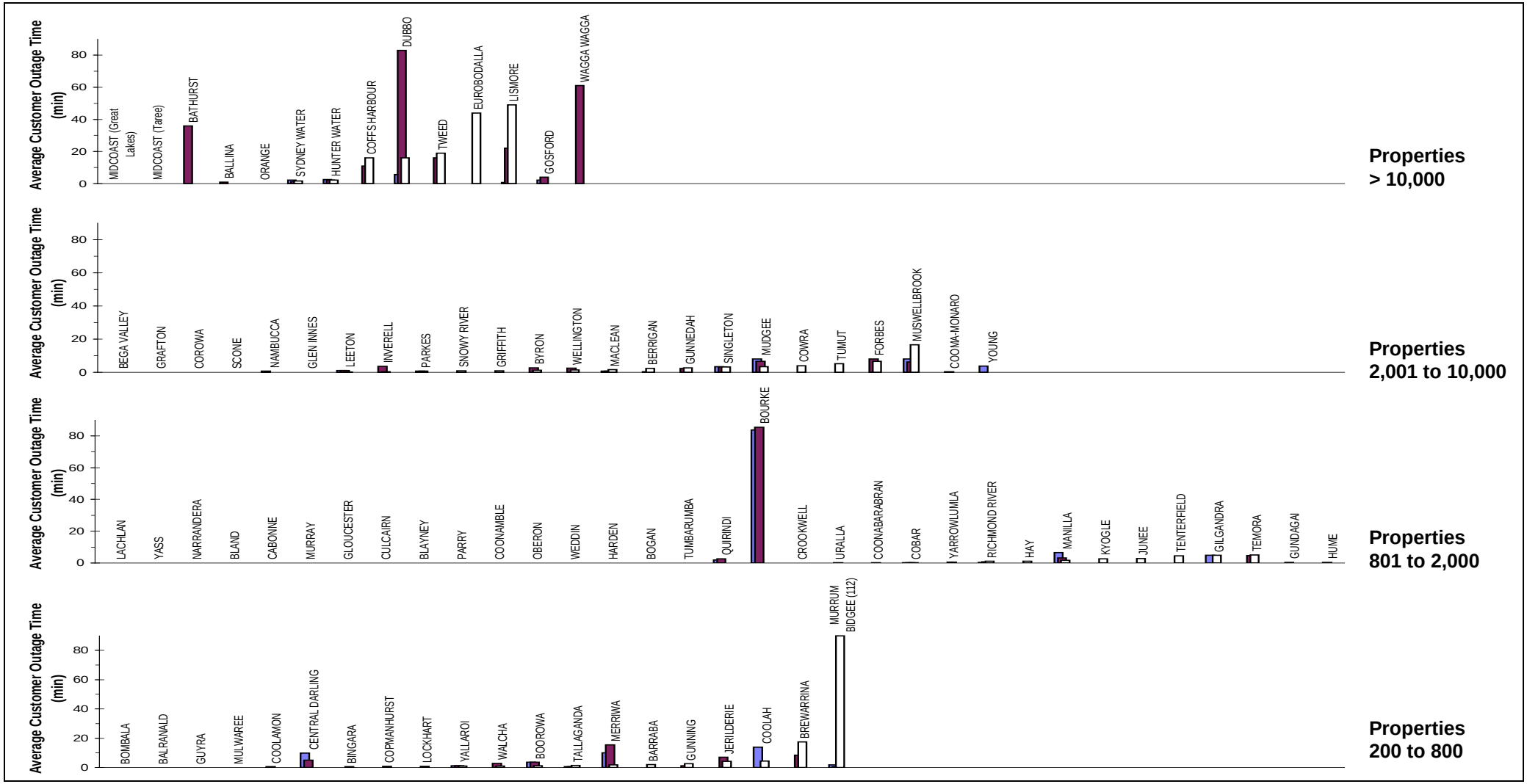
Parameter: Average time taken to restore an interrupted service (Q21)

Notes:

1. This figure shows ranked values of the average duration of interruption to service for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range 2,001 to 10,000 the duration of interruptions for the 31 councils shown ***ranges*** from ***0 to 3*** hours. Results for the previous 2 years are also shown.
2. The Statewide median duration of interruptions is 2 hours (refer to Table 2 - percentage of connected properties basis).
3. 17% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
4. For general notes see page 33.

102 Average Customer Outage Time

Sewerage



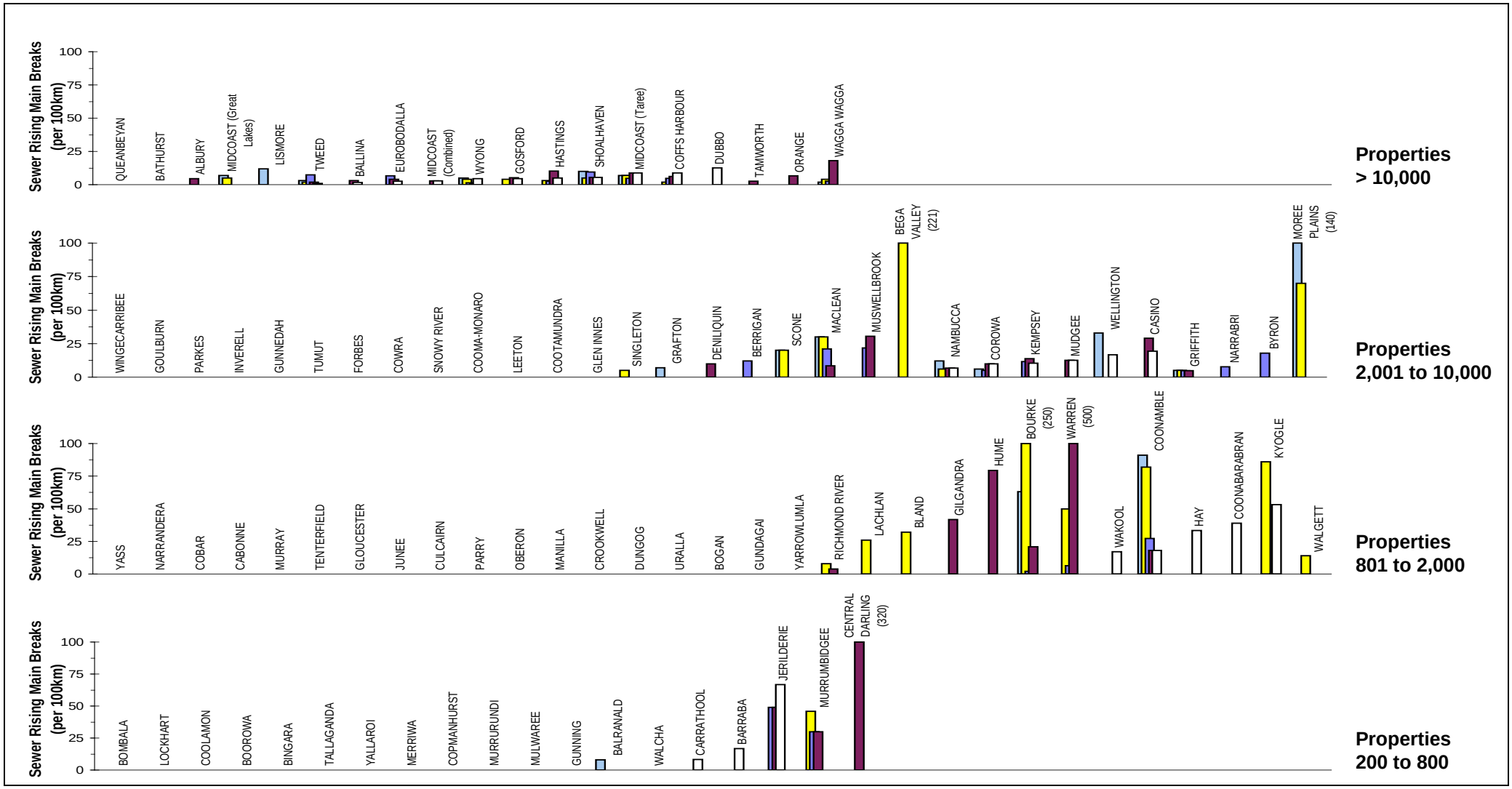
Parameter: $\frac{\text{No. of Properties affected by an unplanned interruption to service (Q20a + Q20b) x Average time taken to restore an interrupted service (Q21)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the average customer outage time for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range 2,001 to 10,000 the average customer outage time for the 24 councils shown ***ranges*** from 0 to 17 minutes. Results for the previous 2 years are also shown.
2. The Statewide median customer outage time is 1 hour (refer to Table 2 - percentage of connected properties basis).
3. 30% of councils were unable to report on this item and these councils should institute a system to record and report such occurrences.
4. For general notes see page 33.

103 Sewer Rising Main Breaks

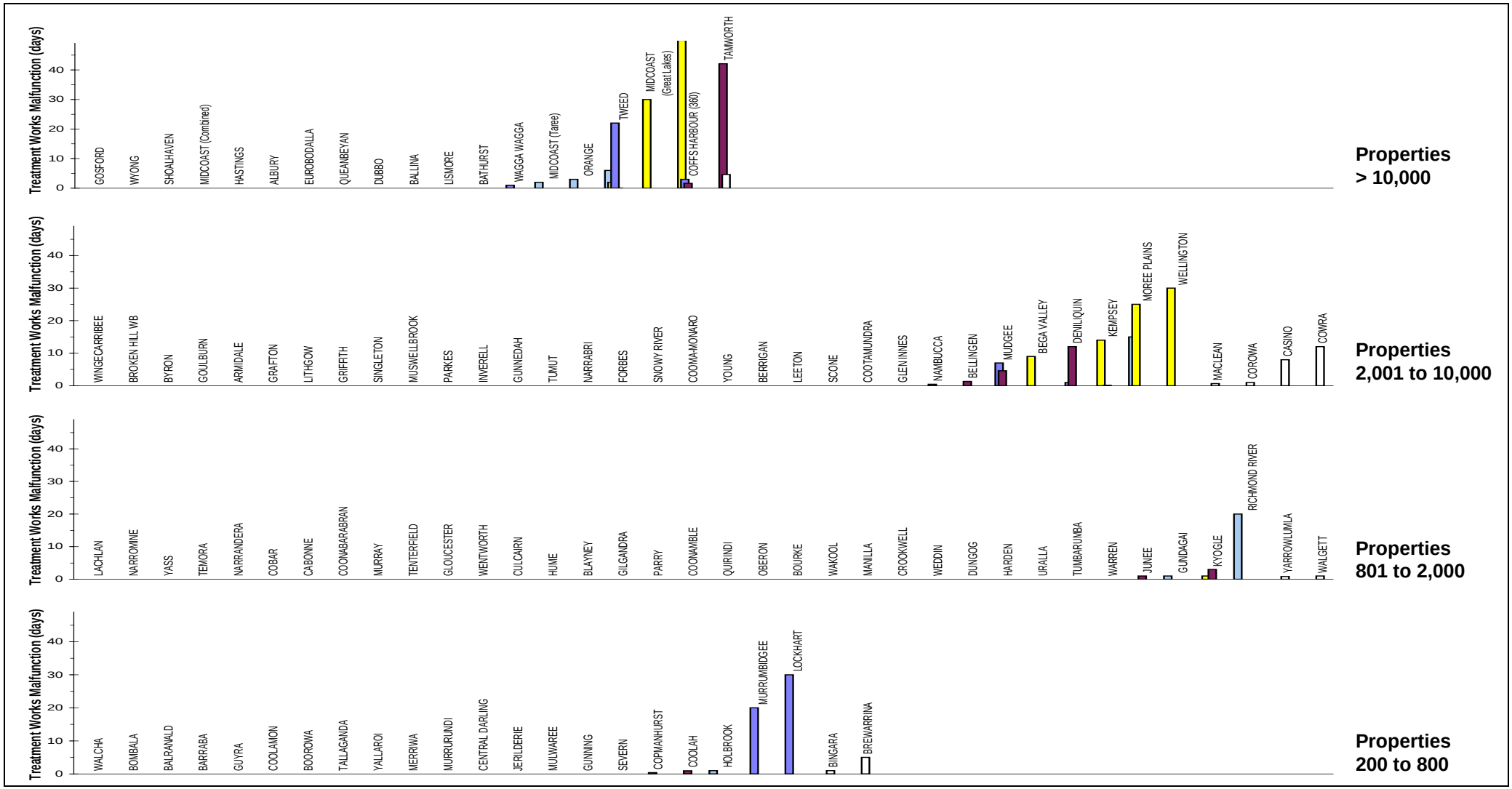


Parameter: $\frac{\text{No. of Pipeline Breaks (Q24) x 100}}{\text{Length of Rising Mains (Q10b)}}$

Notes:

1. This figure shows ranked values of the sewer rising main breaks for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the main breaks for the 31 councils shown ***ranges*** from ***nil to 19*** breaks per 100 km of rising mains. Results for the previous 4 years are also shown.
2. For general notes see page 33.

104 Treatment Works Malfunction



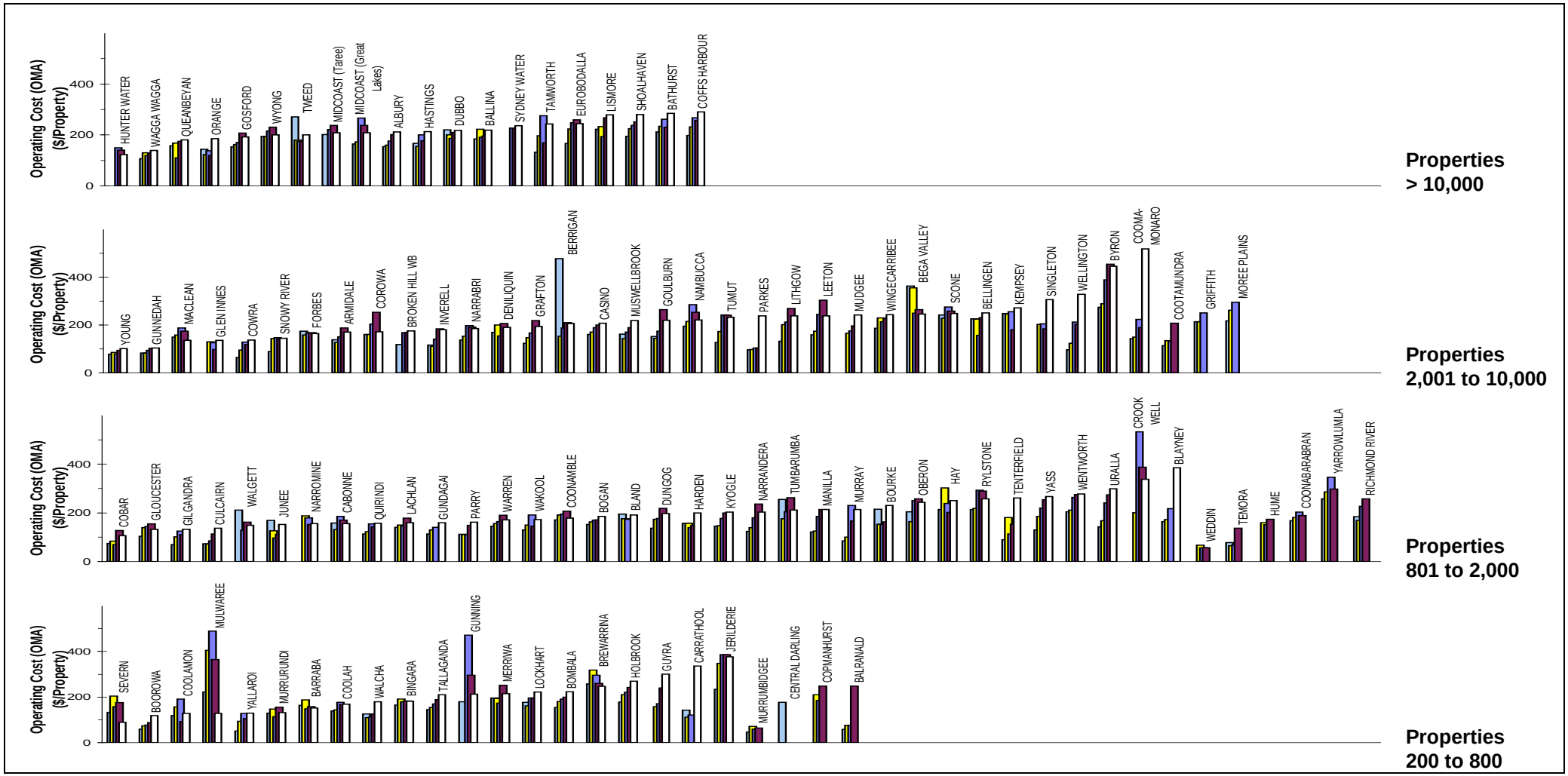
Parameter: No. of Days with Major Malfunction of Treatment Processes (Q50)

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 number of days of treatment works malfunction for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one Council***. As an example, for the property range from 2001 to 10,000, number of days of malfunction for the 36 councils shown ***ranges*** from about ***0 to 12***. Results for the previous 4 years are also shown.
2. For general notes see page 33.

105 Operating Cost (OMA) per property



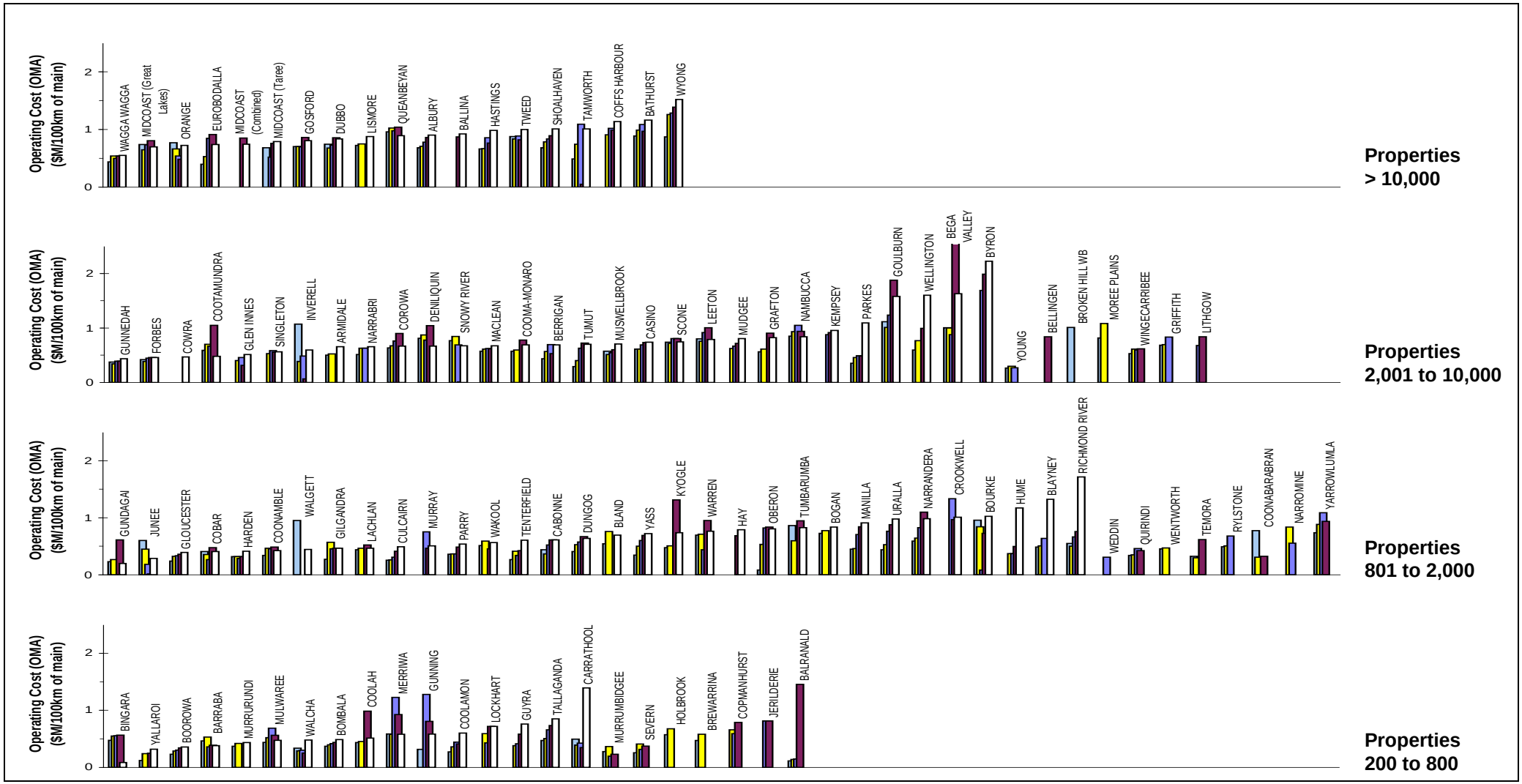
Parameter: $\frac{\text{Management Expenses (S1) + Total Operation and Maintenance Expenses (S2)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the 1998/99 sewerage operating cost (OMA - operation, maintenance and administration cost) per connected property for each council in 4 groups based on the number of connected properties served. Each white bar represents one council. As an example, for the property range from 2,001 to 10,000, the sewerage operating cost for the 36 councils shown ranges from about ***$100 to $520*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The 1998/99 Statewide median sewerage operating cost is $210 per connected property (refer to Table 2 – percentage of connected property basis).
3. For general notes see page 33.

106 Operating Cost per km of main

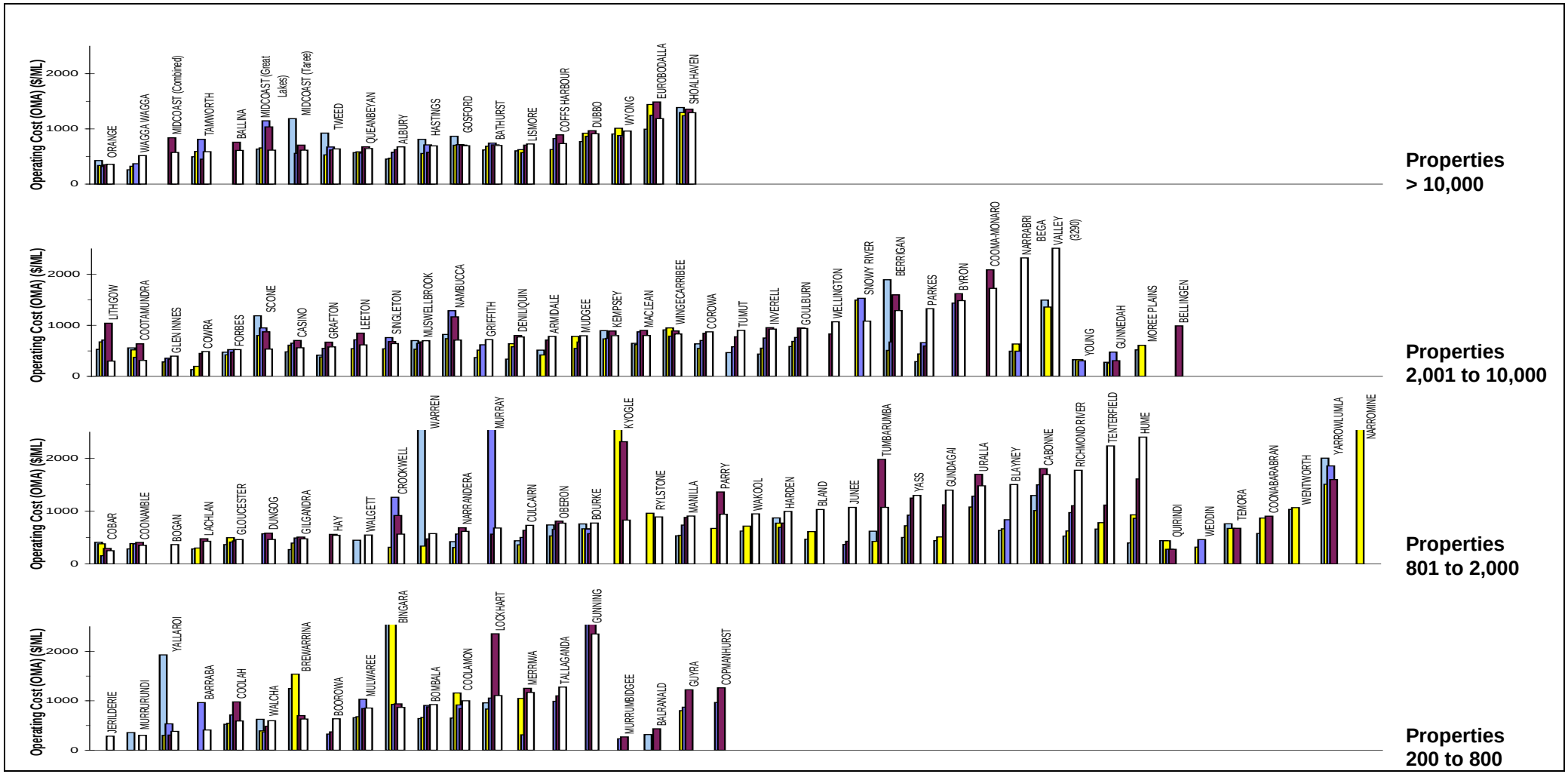


Parameter: $\frac{\text{(Management Expenses (S1) + Total Operation and Maintenance Expenses (S2))} \times 100}{\text{Length of Reticulation Mains (Q10a) + Length of Rising Mains (Q10b)}}$

Notes:

1. This figure shows ranked values of the sewerage operating cost (OMA - operation, maintenance and administration) per 100 km of main for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewerage operating costs for the 36 councils shown ***range*** from about ***$435,000 to $2.2M*** per 100 km of main. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median sewerage operating cost is $880,000 per 100 km of sewer main (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

107 Operating Cost per ML treated

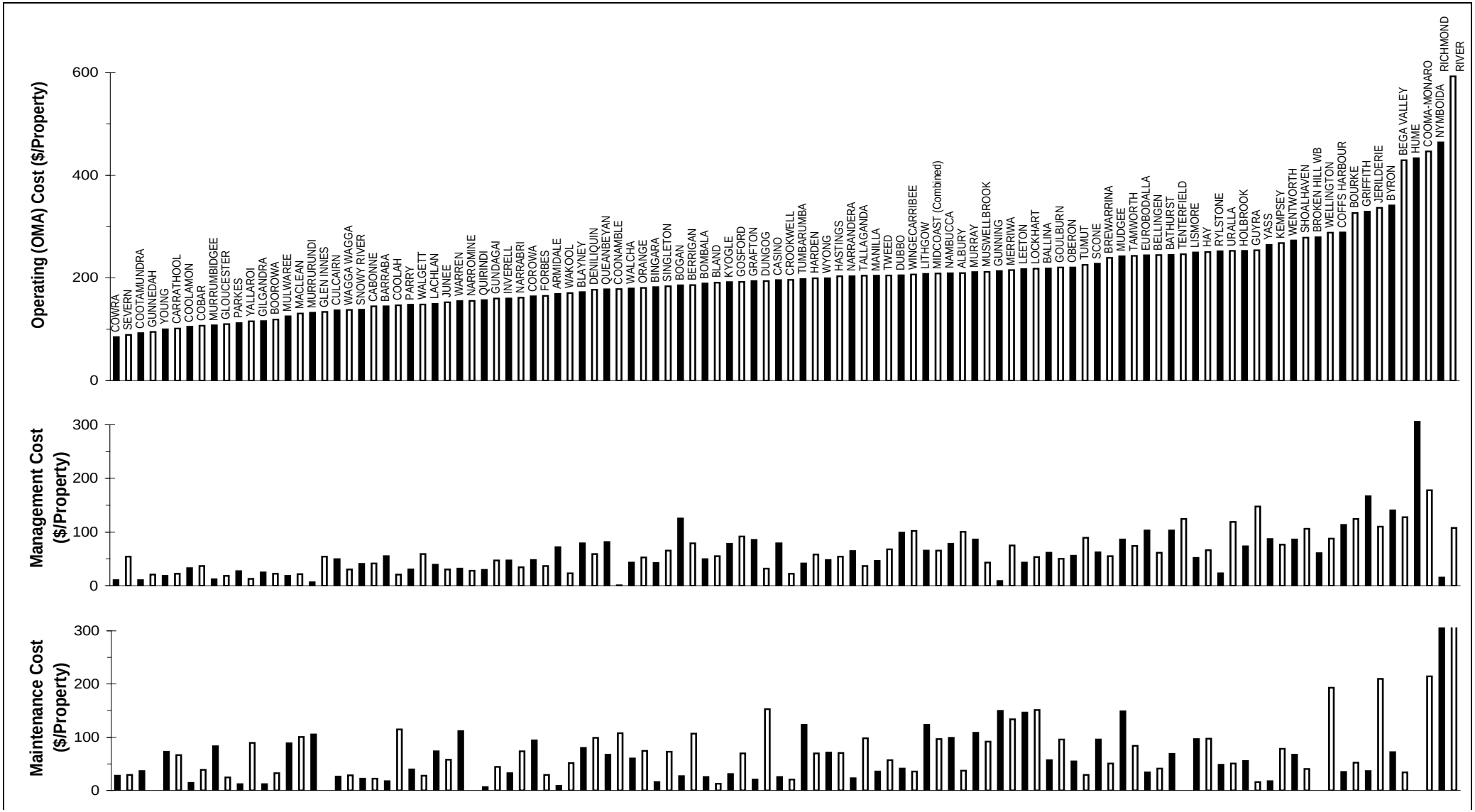


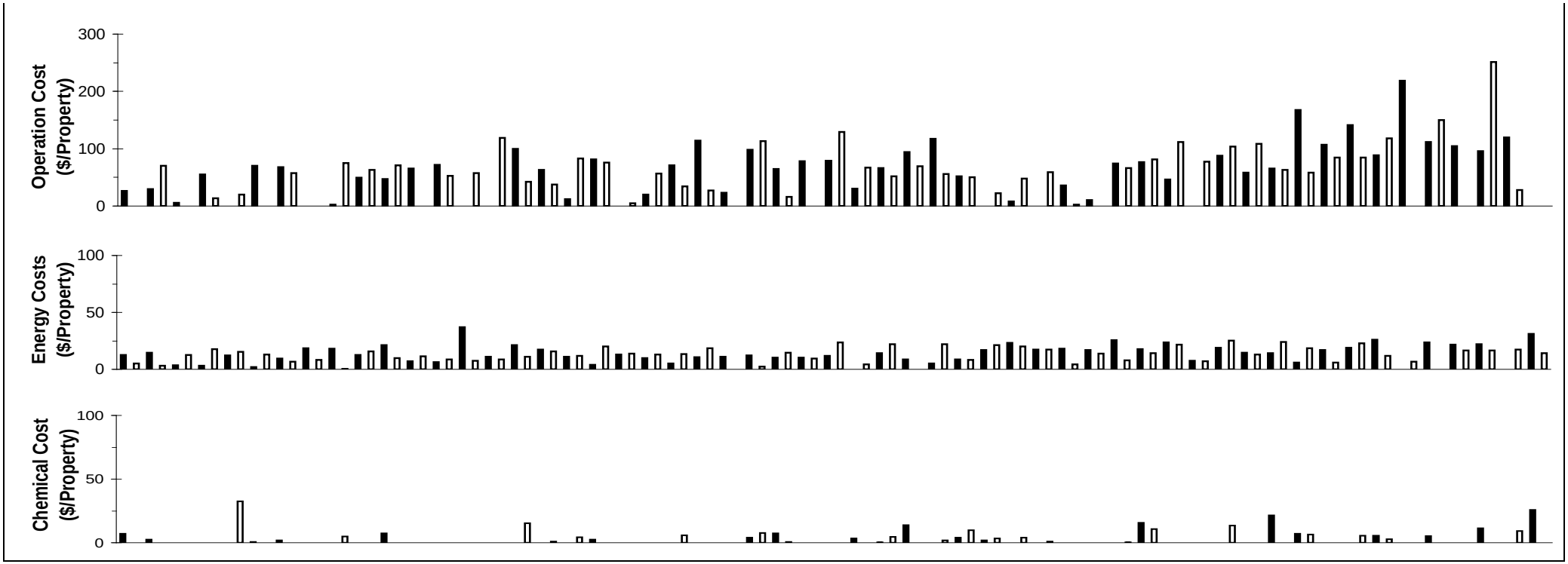
Parameter: Management Expenses (S1) + Total Operation and Maintenance Expenses (S2)
Volume of Sewage Receiving Secondary Treatment (Q38ca)

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the sewerage operating cost (OMA - operation, maintenance and administration) per ML of sewage treated for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewerage operating costs for the 35 councils shown ***range*** from about ***$300 to $2,500*** per ML. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median sewerage operating cost is $700 per ML of sewage treated (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.


Operating (OMA) Cost ($/Property)
600
400
200
0
COWRA
SEVERN
COOTAMUNDRA
GUNNEDAH
YOUNG
CARRATHOOL
COOLAMON
COBAR
MURRUMBIDGEE
GLOUCESTER
PARKES
YALLAROI
GILGANDRA
BOOROWA
MULWAREE
MACLEAN
MURRURUNDI
GLEN INNES
CULCAIRN
WAGGA WAGGA
SNOWY RIVER
CABONNE
BARRABA
COOLAH
PARRY
WALGETT
LACHLAN
JUNEE
WARREN
NARROMINE
QUIRINDI
GUNDAGAI
INVERELL
NARRABRI
COROWA
FORBES
ARMIDALE
WAKOOL
BLAYNEY
DENILIQUIN
QUEANBEYAN
COONAMBLE
WALCHA
ORANGE
BINGARA
SINGLETON
BOGAN
BERRIGAN
BOMBALA
BLAND
KYOGLE
GOSFORD
GRAFTON
DUNGOG
CASINO
CROOKWELL
TUMBARUMBA
HARDEN
WYONG
HASTINGS
NARRANDERA
TALLAGANDA
MANILLA
TWEED
DUBBO
WINGECARRIBEE
LITHGOW
MIDCOAST (Combined)
NAMBUCCA
ALBURY
MURRAY
MUSWELLBROOK
GUNNING
MERRIWA
LEETON
LOCKHART
BALLINA
GOULBURN
OBERON
TUMUT
SCONE
BREWARRINA
MUDGEE
TAMWORTH
EUROBODALLA
BELLINGEN
BATHURST
TENTERFIELD
LISMORE
HAY
RYLSTONE
URALLA
HOLBROOK
GUYRA
YASS
KEMPSEY
WENTWORTH
SHOALHAVEN
BROKEN HILL WB
WELLINGTON
COFFS HARBOUR
BOURKE
GRIFFITH
JERILDERIE
BYRON
BEGA VALLEY
HUME
COOMA-MONARO
NYMBOIDA
RICHMOND RIVER
Management Cost ($/Property)
300
200
100
0
Maintenance Cost ($/Property)
300
200
100
0



Parameter: Total Operation and Maintenance Expenses (S1 + S2)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Management Expenses (S1)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Total Maintenance Costs (Mains (S2b) + Pumping Stations (S2e) + Treatment Works (S2k) + Other (S2m) + Effluent Management (S2i) + Biosolids Management (S2j))
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Total Operation Costs (Mains (S2a) + Pumping Stations (S2c) + Treatment Works (S2f) + Other (S2l))
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

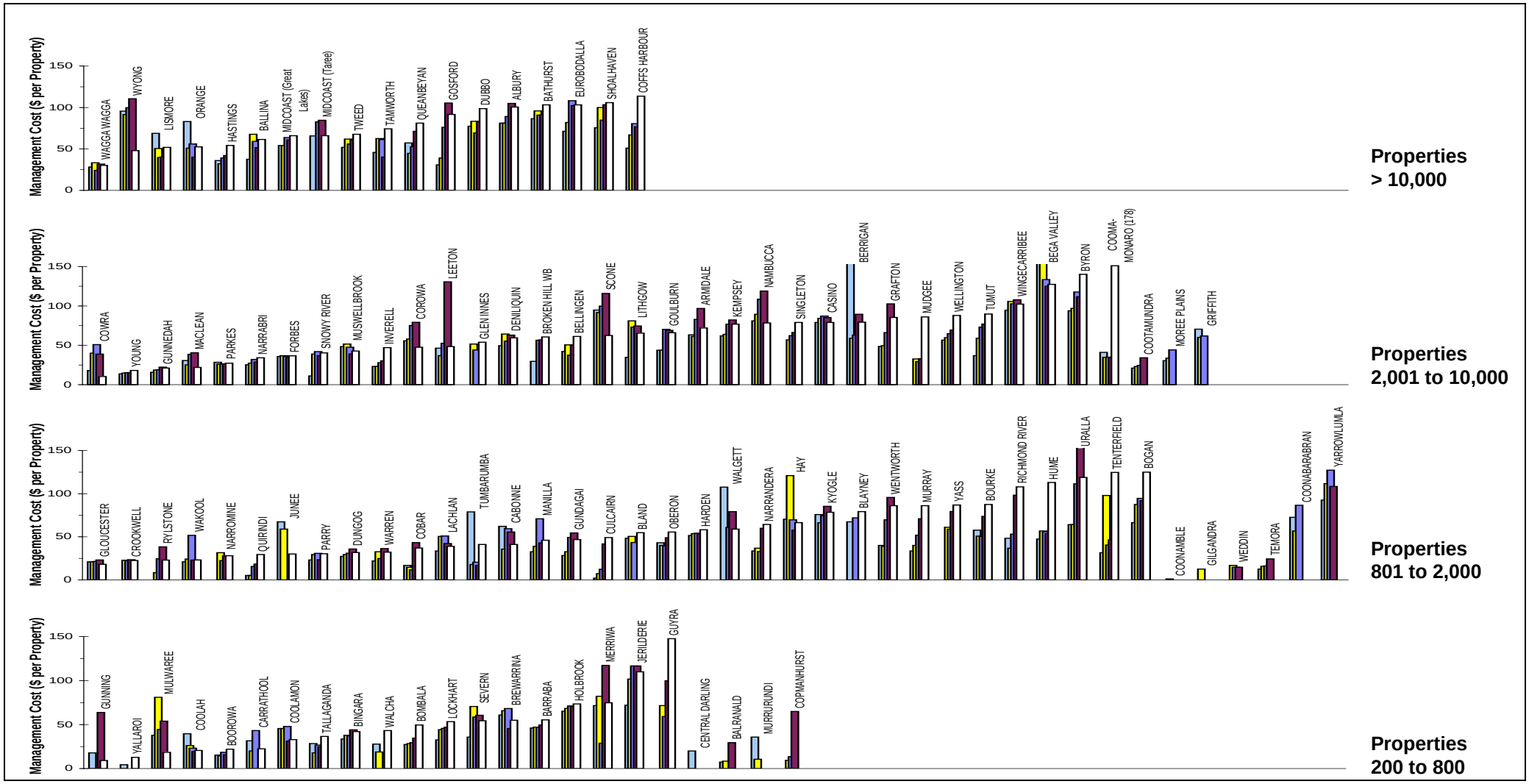
Parameter: Energy Cost (Pumping Stations (S2d) + Treatment Works (S2h))
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Chemical Cost (S2g)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:
1. The Statewide median sewerage operating cost (OMA – operation, maintenance and administration) is $209 per connected property (refer to Table 2 – percentage of connected properties basis).
2. For general notes see page 33.

109 Management Cost per property

Sewerage



Parameter:

$$\frac{\text{Total Management Expenses (S1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the sewerage management cost for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewerage management costs for the 36 councils shown ***range*** from about ***$10 to $151*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median sewerage management cost is $70 per connected property (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

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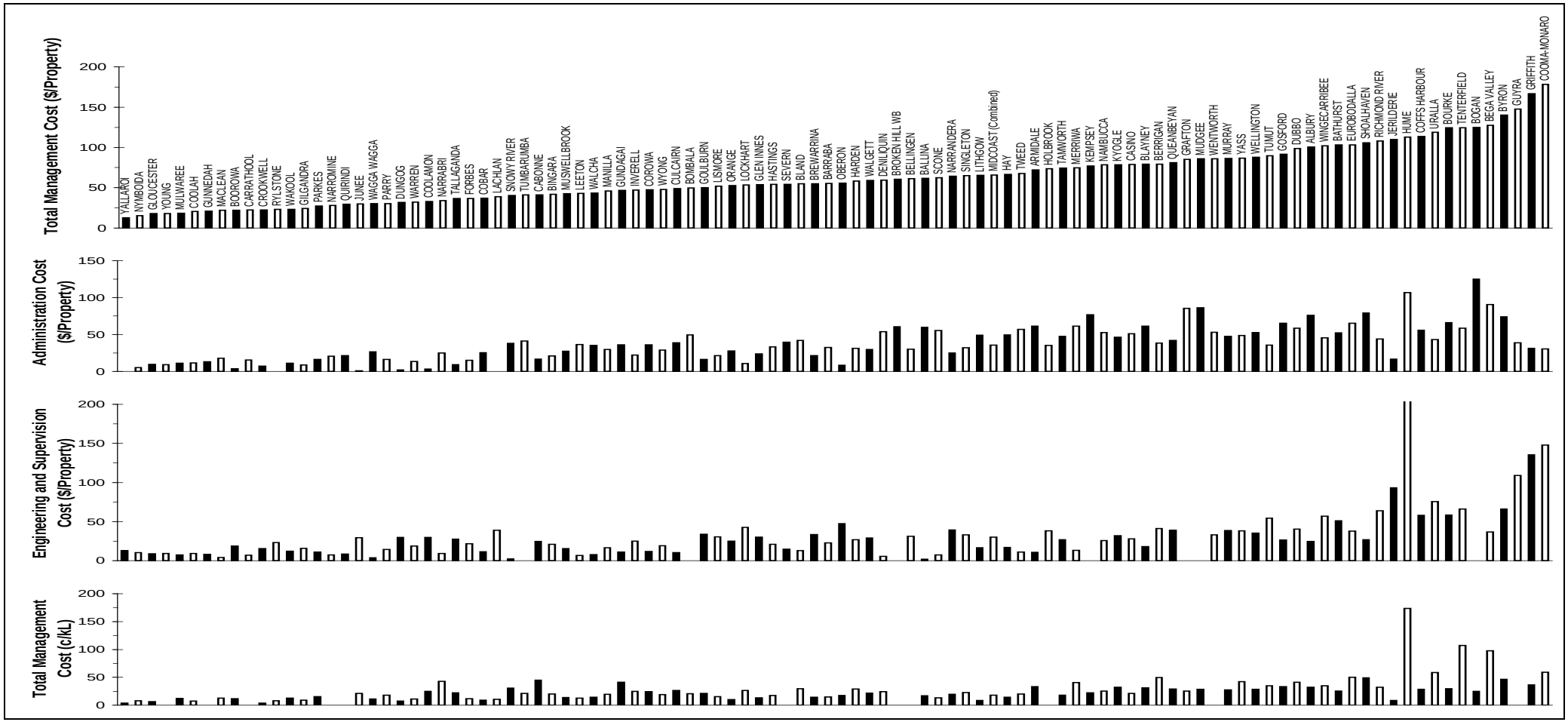
110 Components of Management Cost - 1998/99



Parameter:
$$\frac{\text{Total Management Expenses (S1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

Parameter:
$$\frac{\text{Administration Expenses (S1a)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

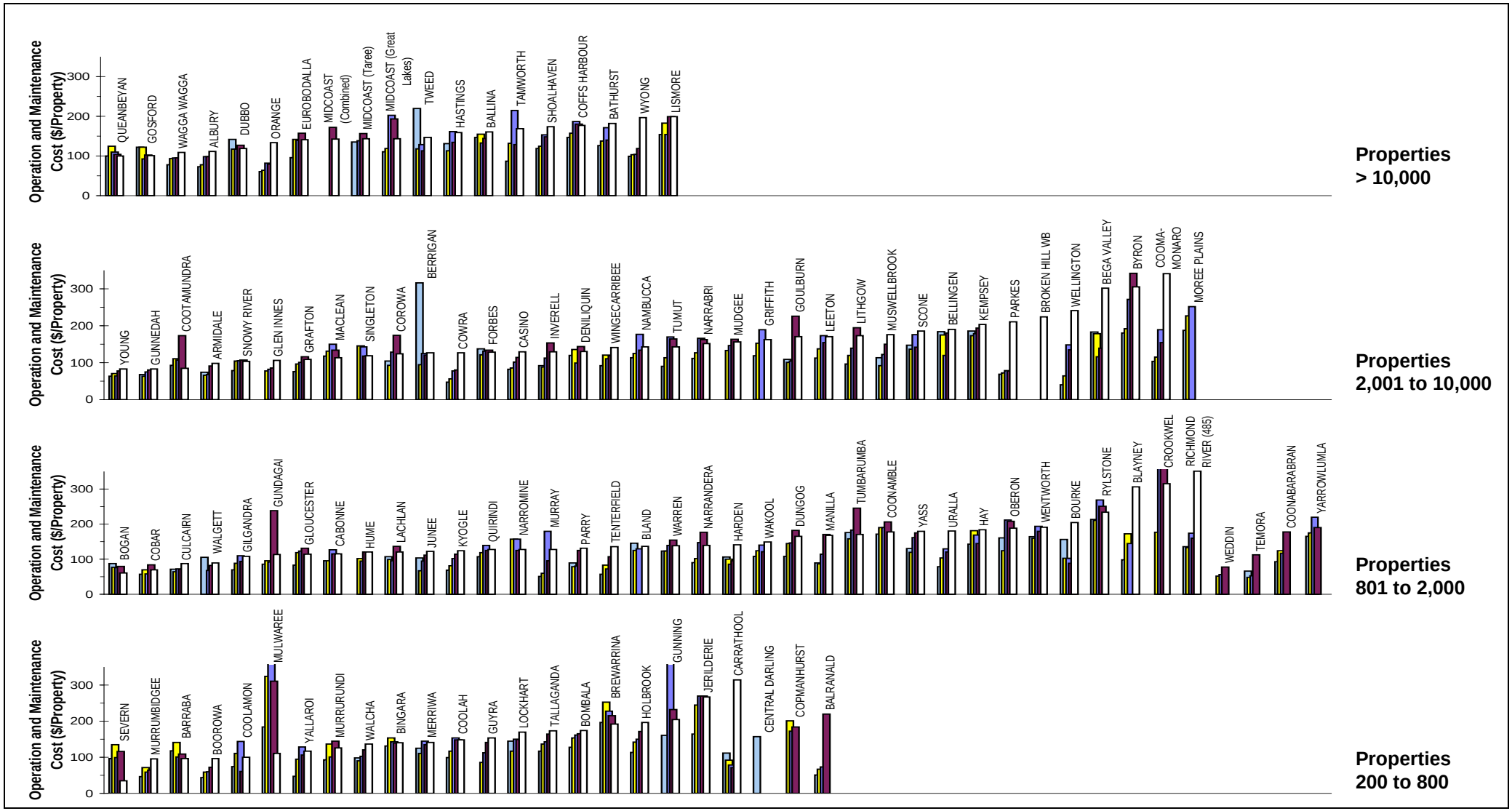
Parameter:
$$\frac{\text{Engineering and Supervision Expenses (S1b)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

Parameter:
$$\frac{\text{Total Management Expenses (S1)}}{\text{Volume of Sewage Receiving Secondary Treatment (Q38c) x 10}}$$

Notes:

1. The Statewide sewerage management cost is $70 per connected property (refer to Table 2 – percentage of connected properties basis).
2. For general notes see page 33.

111 Operation and Maintenance Cost



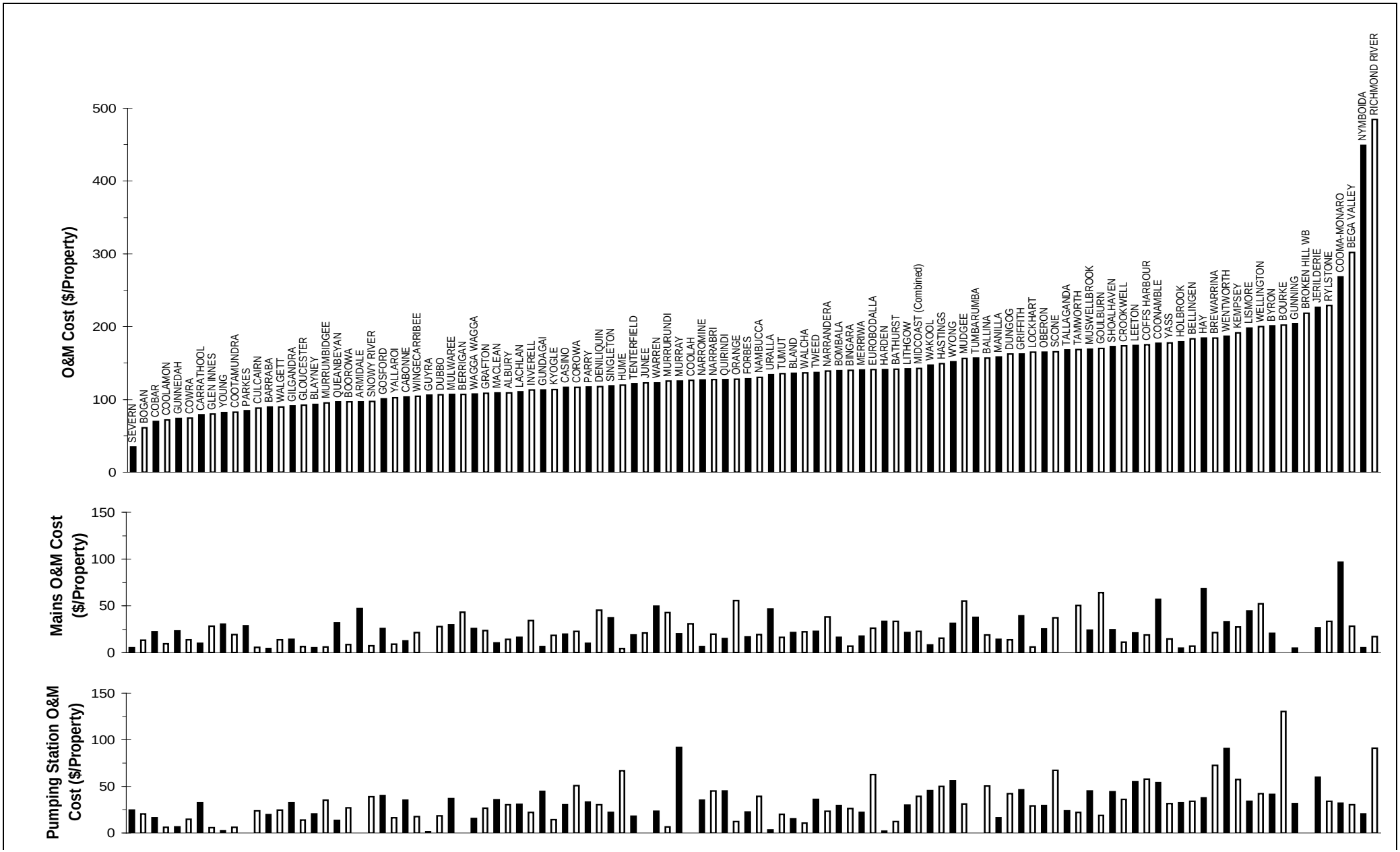
Parameter:

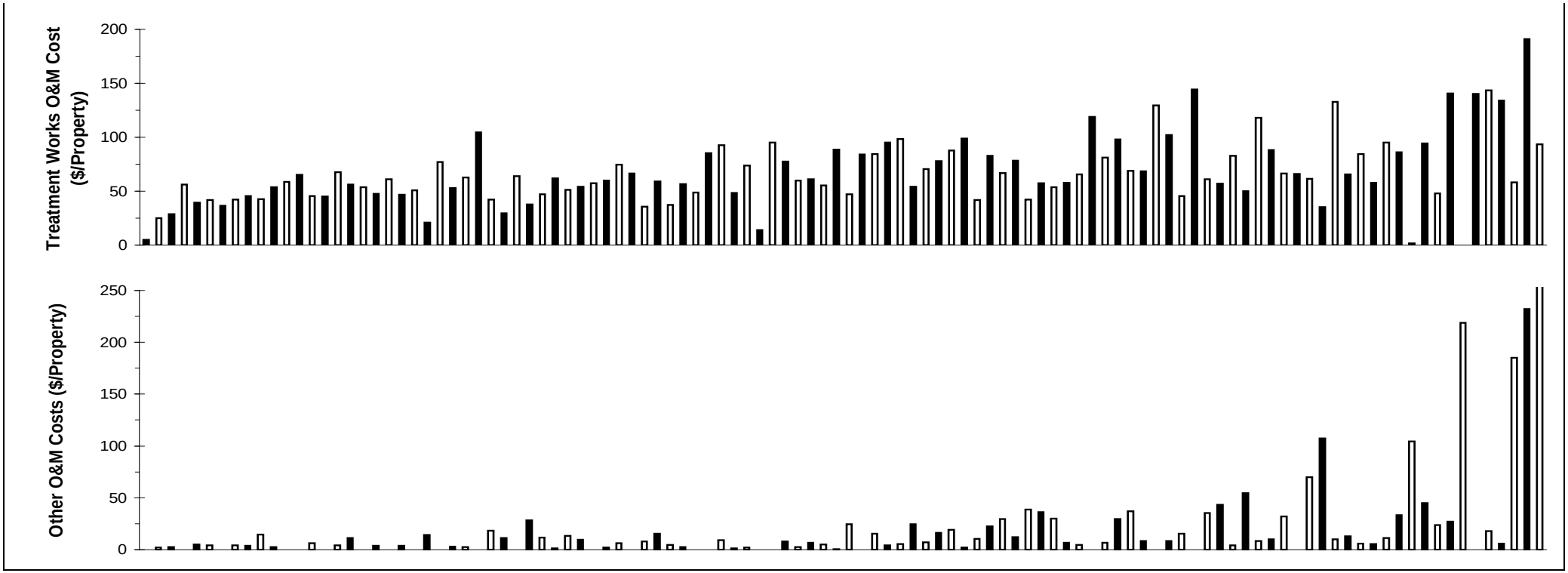
$$\frac{\text{Total Operation and Maintenance Expenses (S2)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the sewerage operation and maintenance cost for 1998/99 for each council in groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewerage operation costs for the 36 councils shown ***range*** from about *$90* ***to $340*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. For general notes see page 33.


O&M Cost ($/Property)
500
400
300
200
100
0
SEVERN
BOGAN
COBAR
COOLAMON
GUNNEDAH
COWRA
CARRATHOOL
GLEN INNES
YOUNG
COOTAMUNDRA
PARKES
CULCAIRN
BARRABA
WALGETT
GILGANDRA
GLOUCESTER
BLAYNEY
MURRUMBIDGEE
QUEANBEYAN
BOOROWA
ARMIDALE
SNOWY RIVER
GOSFORD
YALLAROI
CABONNE
WINGECARRIBEE
GUYRA
DUBBO
MULWAREE
BERRIGAN
WAGGA WAGGA
GRAFTON
MACLEAN
ALBURY
LACHLAN
INVERELL
GUNDAGAI
KYOGLE
CASINO
COROWA
PARRY
DENILIQUIN
SINGLETON
HUME
TENTERFIELD
JUNEE
WARREN
MURRURUNDI
MURRAY
COOLAH
NARROMINE
NARRABRI
QUIRINDI
ORANGE
FORBES
NAMBUCCA
URALLA
TUMUT
BLAND
WALCHA
TWEED
NARRANDERA
BOMBALA
BINGARA
MERRIWA
EUROBODALLA
HARDEN
BATHURST
LITHGOW
MIDCOAST (Combined)
WAKOOL
HASTINGS
WYONG
MUDGEE
TUMBARUMBA
BALLINA
MANILLA
DUNGOG
GRIFFITH
LOCKHART
OBERON
SCONE
TALLAGANDA
TAMWORTH
MUSWELLBROOK
GOULBURN
SHOALHAVEN
CROOKWELL
LEETON
COFFS HARBOUR
COONAMBLE
YASS
HOLBROOK
BELLINGEN
HAY
BREWARRINA
WENTWORTH
KEMPSEY
LISMORE
WELLINGTON
BYRON
BOURKE
GUNNING
BROKEN HILL WB
JERILDERIE
RYLSTONE
COOMA-MONARO
BEGA VALLEY
NYMBOIDA
RICHMOND RIVER
Mains O&M Cost ($/Property)
150
100
50
0
Pumping Station O&M Cost ($/Property)
150
100
50
0



Parameter: Total Operations Expenses (S2)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Mains Operations Expenses (S2a + S2b)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Pumping Stations Operations Expenses (S2c + S2d + S2e)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

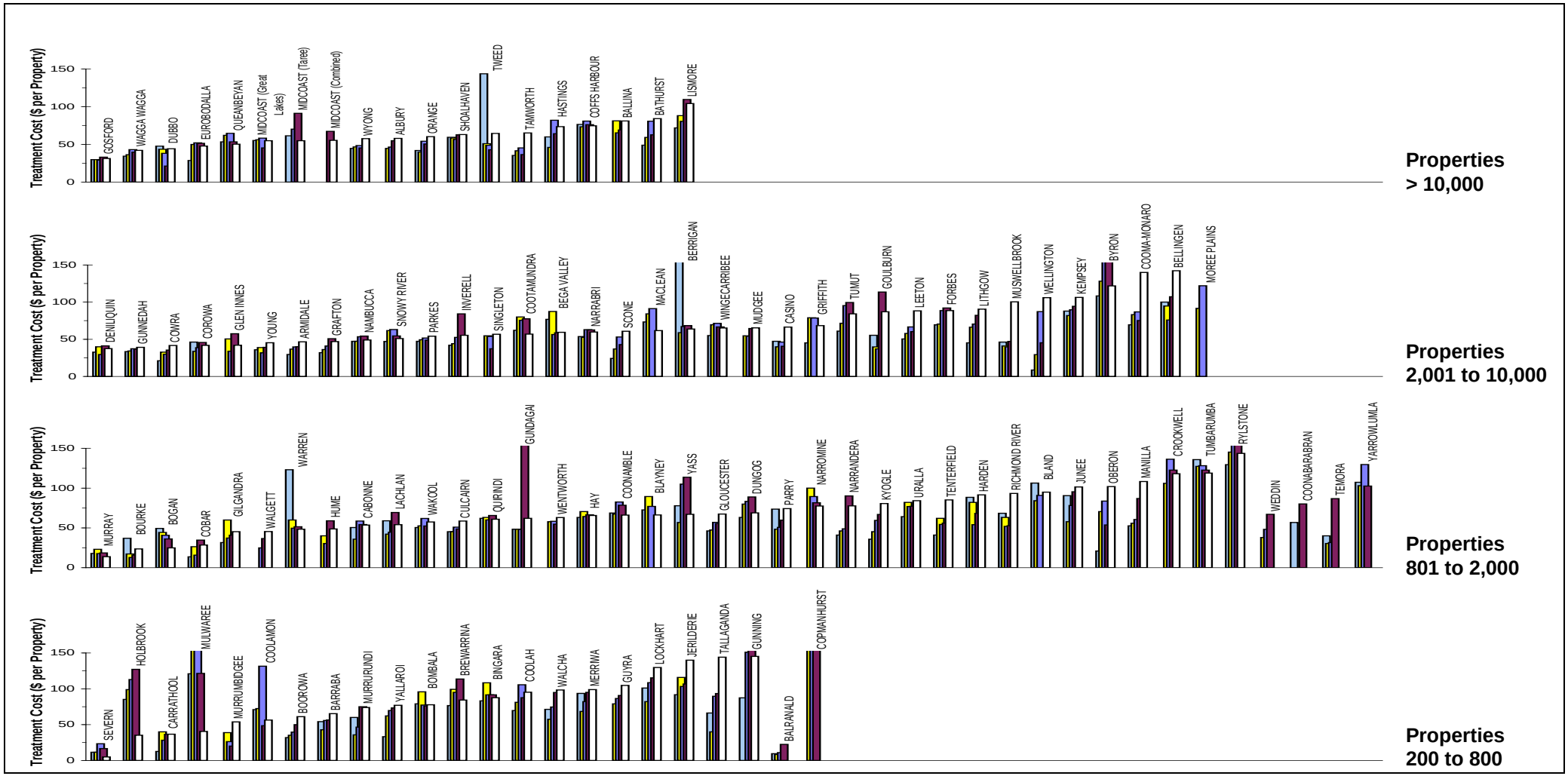
Parameter: Treatment Works Operations Expenses (S2f + S2g + S2h + S2k)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Parameter: Other Operations Expenses (S2l + S2m) + Effluent Management Expenses (S2i) + Biosolids Management Expenses (S2j)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q3b)) x No. of Connected Properties per Assessment

Notes:

1. For general notes see page 33.

113 Treatment Operation and Maintenance Cost



Parameter: Treatment Works Operation Expenses (S2f) + Chemical Cost (S2g) + Energy Cost (S2h) + Maintenance Expenses (S2k)

(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. This figure shows ranked values of the sewage treatment operation and maintenance cost per property for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the sewage treatment operation and maintenance costs for the 35 councils shown ***range*** from about ***$38 to $142*** per property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median sewage treatment operation and maintenance cost is $60 per connected property (refer to Table 2 - percentage of properties basis)
3. For general notes see page 33.

1994/95 1995/96 1996/97 1997/98 1998/99

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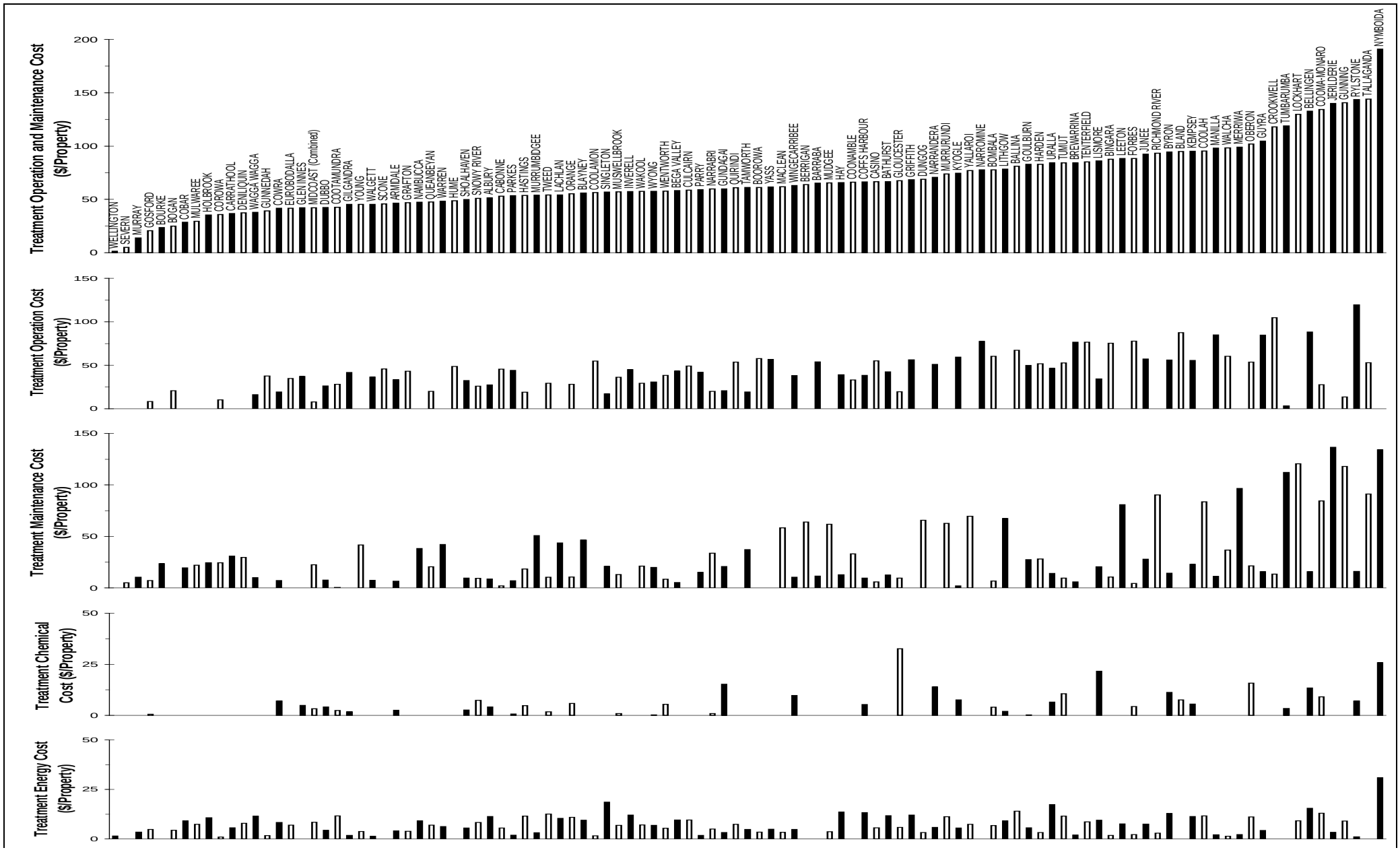
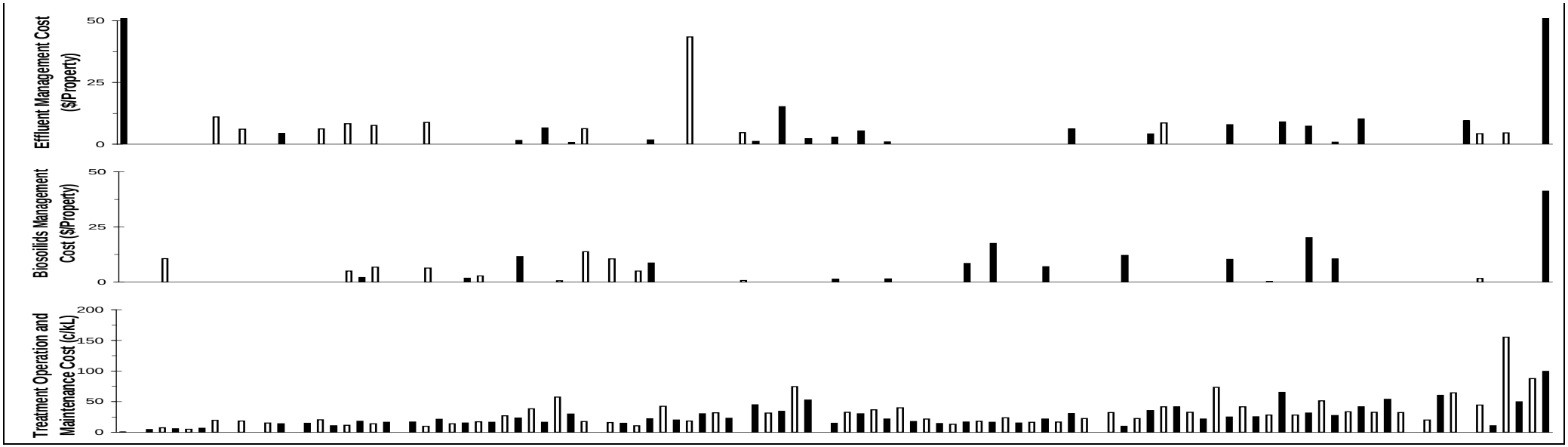

Treatment Operation and Maintenance Cost ($/Property)
Treatment Operation Cost ($/Property)
Treatment Maintenance Cost ($/Property)
Treatment Chemical Cost ($/Property)
Treatment Energy Cost ($/Property)
WELLINGTON
SEVERN
MURRAY
GOSFORD
BOURKE
BOGAN
COBAR
MULWAREE
HOLBROOK
COROWA
CARRATHOOL
DENILIQUIN
WAGGA WAGGA
GUNNEDAH
COWRA
EUROBODALLA
GLEN INNES
MIDCOAST (Combined)
DUBBO
COOTAMUNDRA
GILGANDRA
YOUNG
WALGETT
SCONE
ARMIDALE
GRAFTON
NAMBUCCA
QUEANBEYAN
WARREN
HUME
SHOALHAVEN
SNOWY RIVER
ALBURY
CABONNE
PARKES
HASTINGS
MURRUMBIDGEE
TWEED
LACHLAN
ORANGE
BLAYNEY
COOLAMON
SINGLETON
MUSWELLBROOK
INVERELL
WAKOOL
WYONG
WENTWORTH
BEGA VALLEY
CULCAIRN
PARRY
NARRABRI
GUNDAGAI
OURINDI
TAMWORTH
BOOROWA
YASS
MACLEAN
WINGECARRIBEE
BERRIGAN
BARRABA
MUDGEE
HAY
COONAMBLE
COFFS HARBOUR
CASINO
BATHURST
GLOUCESTER
GRIFFITH
DUNGOG
NARRANDERA
MURRURUNDI
KYOGLE
YALLAROI
NARROMINE
BOMBALA
LITHGOW
BALLINA
GOULBURN
HARDEN
URALLA
TUMUT
BREWARRINA
TENTERFIELD
LISMORE
BINGARA
LEETON
FORBES
JUNEE
RICHMOND RIVER
BYRON
BLAND
KEMPSEY
COOLAH
MANILLA
WALCHA
MERRIWA
OBERON
GUYRA
CROOKWELL
TUMBARUMBA
LOCKHART
BELLINGEN
COOMA-MONARO
JERILDERIE
GUNNING
RYLSTONE
TALLAGANDA
NYMBOIDA



Parameter: $\frac{\text{Treatment Expenses (S2f + S2g + S2h + S2k)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Operation Expenses (S2f)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Maintenance Expenses (S2k)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Chemical Cost (S2g)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Energy Cost (S2h)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Effluent Management Cost (S2i)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

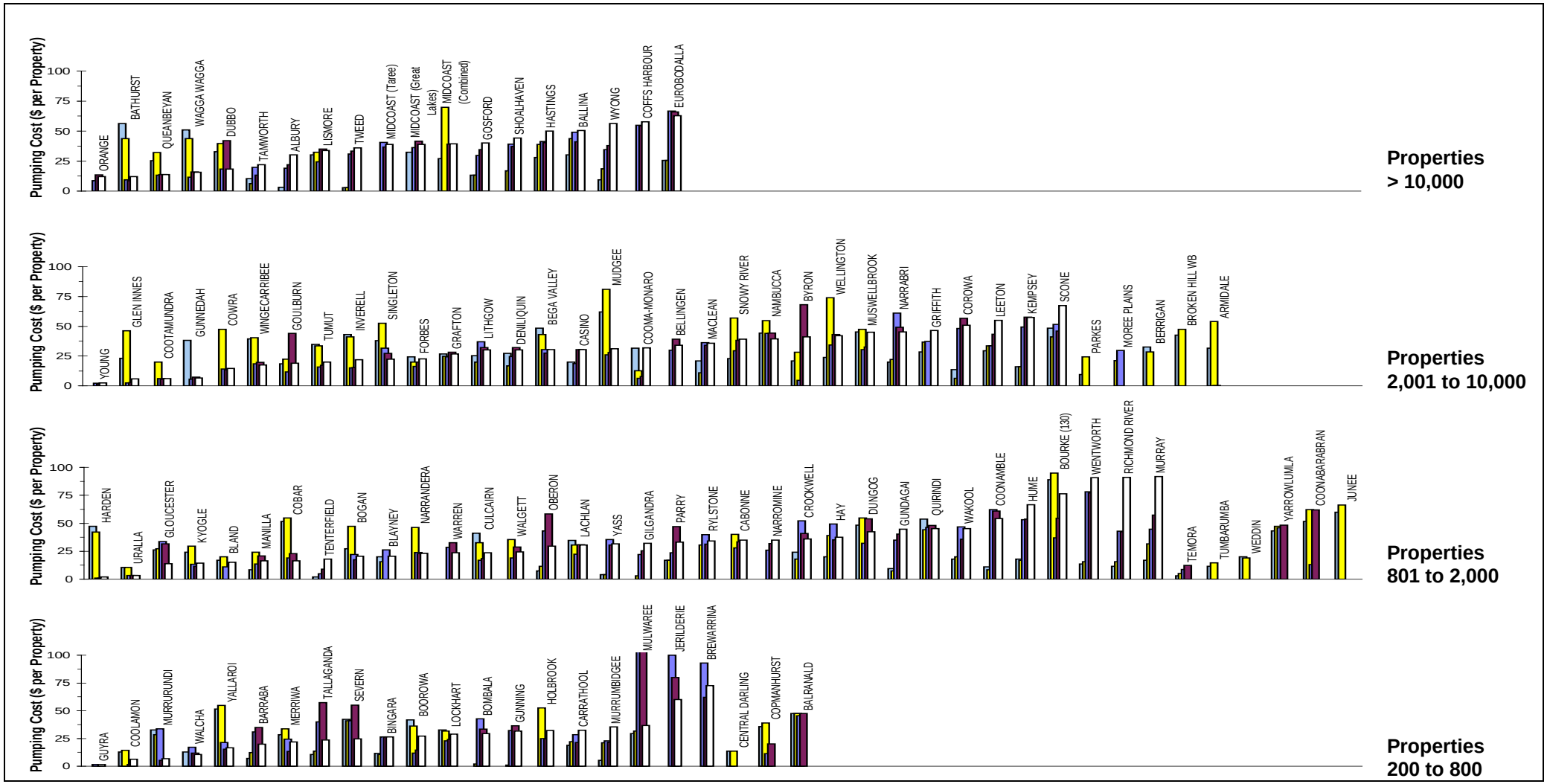
Parameter: $\frac{\text{Biosolids Management Cost (S2j)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Expenses (S2f + S2g + S2h + S2k)}}{\text{Volume of Sewage Receiving Secondary Treatment (Q38c) x 10}}$

Notes:

1. The Statewide median sewage treatment operation and maintenance cost (excluding effluent and biosolids management costs) is $60 per connected property (refer to Table 2 – percentage of connected properties basis).
2. For general notes see page 33.

115 Pumping Operation and Maintenance Cost



Parameter:

$$\frac{\text{Pumping Station Operation Cost (S2c) + Maintenance Cost (S2d) + Energy Cost (S2e)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$$

1994/95 1995/96 1996/97 1997/98 1998/99

Notes:

1. This figure shows ranked values of the sewage pumping operation and maintenance cost per property for 1998/99 for each council in 4 groups based on the number of connected properties served. ***Each bar represents one council***. As an example, for the second ***graph*** (population range 2,001 to 10,000), the sewage pumping operation and maintenance costs for the 36 councils shown ***range*** from about ***$2.30 to $67*** per connected property. Results for the previous 4 years are also shown in Jan 1999$.
2. The Statewide median sewage pumping cost is $40 per connected property (refer to Table 2 - percentage of connected properties basis).
3. For general notes see page 33.

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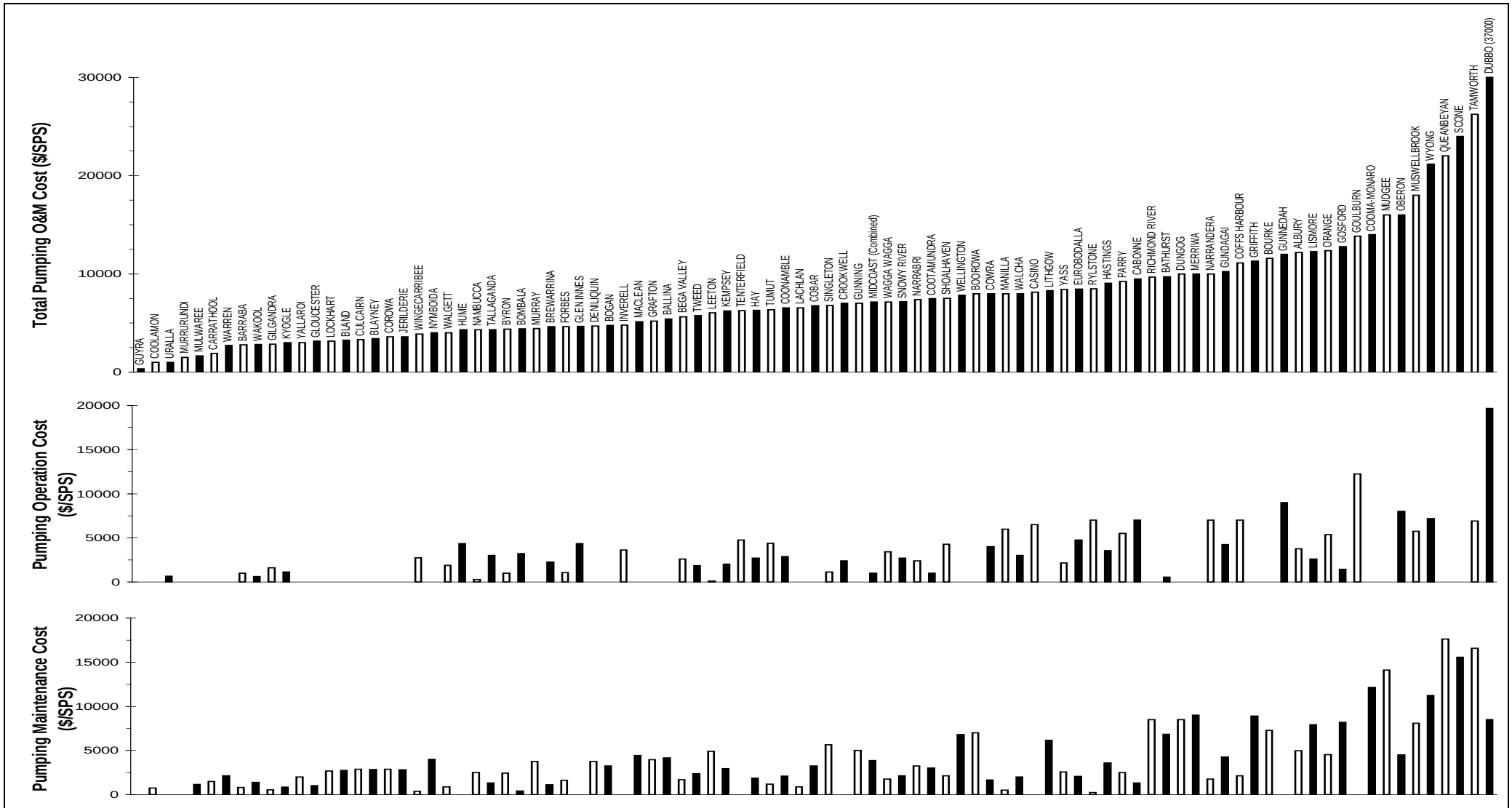
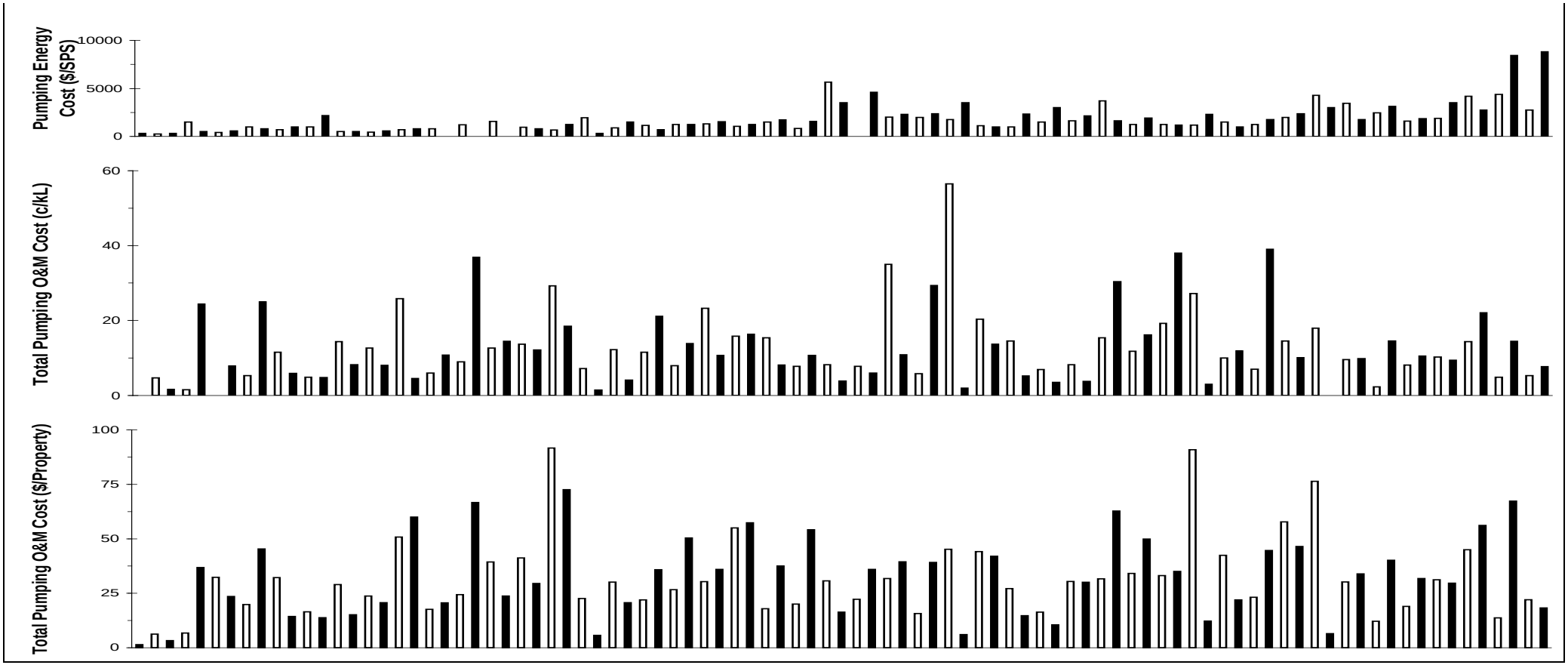

Total Pumping O&M Cost ($/SPS)
30000
20000
10000
0
GUYRA
COOLAMON
URALLA
MURRURUNDI
MULWAREE
CARRATHOOL
WARREN
BARRABA
WAKOOL
GILGANDRA
KYOGLE
YALLAROI
GLOUCESTER
LOCKHART
BLAND
CULCAIRN
BLAYNEY
COROWA
JERILDERIE
WINGECARRIBEE
NYMBOIDA
WALGETT
HUME
NAMBUCCA
TALLAGANDA
BYRON
BOMBALA
MURRAY
BREWARRINA
FORBES
GLEN INNES
DENILIQUIN
BOGAN
INVERELL
MACLEAN
GRAFTON
BALLINA
BEGA VALLEY
TWEED
LEETON
KEMPSEY
TENTERFIELD
HAY
TUMUT
COONAMBLE
LACHLAN
COBAR
SINGLETON
CROOKWELL
GUNNING
MIDCOAST (Combined)
WAGGA WAGGA
SNOWY RIVER
NARRABRI
COOTAMUNDRA
SHOALHAVEN
WELLINGTON
BOOROWA
COWRA
MANILLA
WALCHA
CASINO
LITHGOW
YASS
EUROBODALLA
RYLSTONE
HASTINGS
PARRY
CABONNE
RICHMOND RIVER
BATHURST
DUNGOG
MERRIWA
NARRANDERA
GUNDAGAI
COFFS HARBOUR
GRIFFITH
BOURKE
GUNNEDAH
ALBURY
LISMORE
ORANGE
GOSFORD
GOULBURN
COOMA-MONARO
MUDGEE
OBERON
MUSWELLBROOK
WYONG
QUEANBEYAN
SCONE
TAMWORTH
DUBBO (37000)
Pumping Operation Cost ($/SPS)
20000
15000
10000
5000
0
Pumping Maintenance Cost ($/SPS)
20000
15000
10000
5000
0



Parameter: Pumping Stations Operation Expenses (S2c) + Pumping Stations Energy Cost (S2d) + Pumping Stations Maintenance Expenses (S2e)
No. of Pumping Stations (Q9a)

Parameter: Pumping Stations Operation Expenses (S2c)
No. of Pumping Stations (Q9a)

Parameter: Pumping Stations Maintenance Expenses (S2e)
No. of Pumping Stations (Q9a)

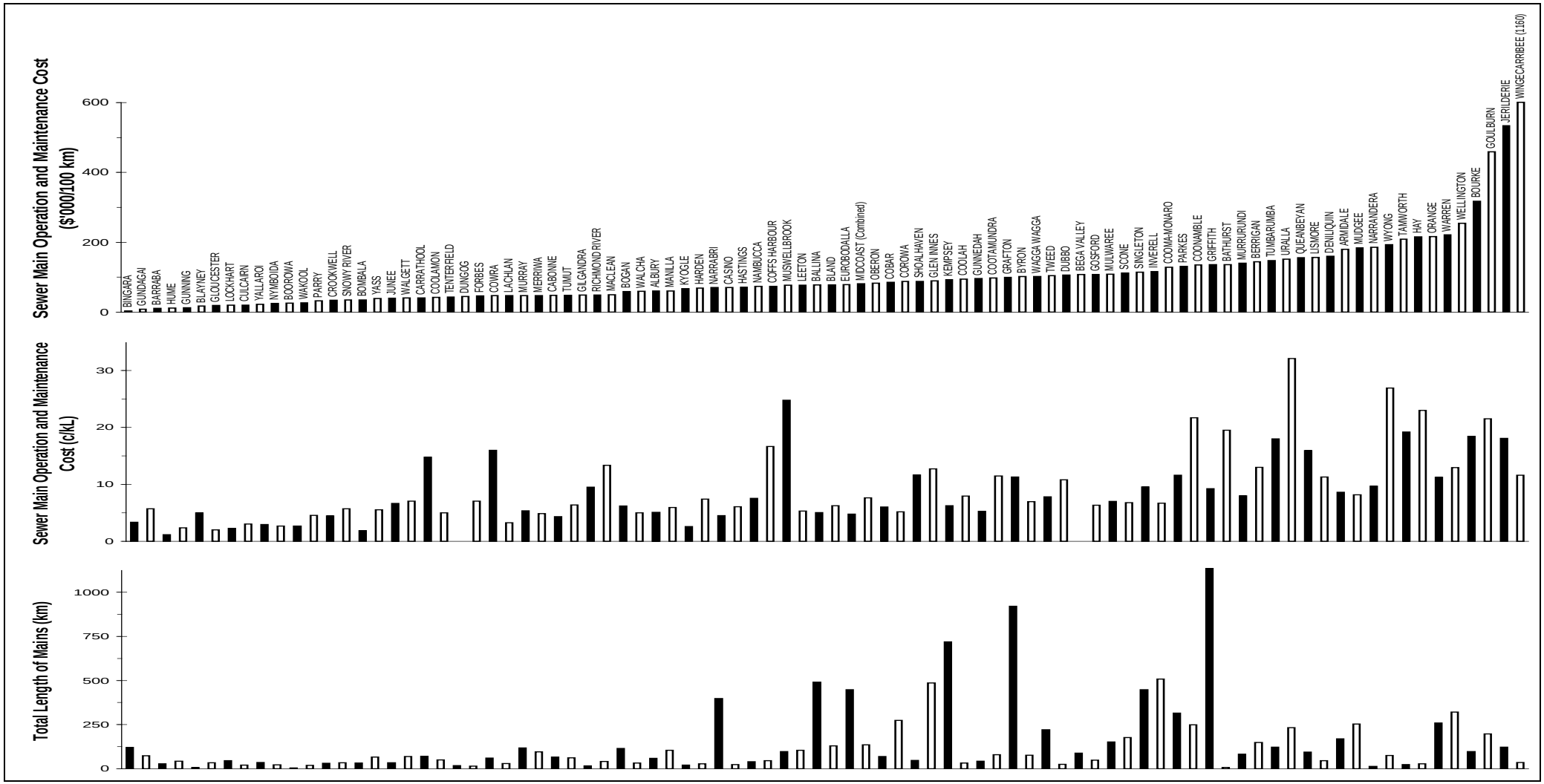
Parameter: Pumping Stations Energy Cost (S2d)
No. of Pumping Stations (Q9a)

Parameter: Pumping Stations Operation Expenses (S2c) + Pumping Stations Energy Cost (S2d) + Pumping Stations Maintenance Expenses (S2e)
Volume of Sewage Receiving Secondary Treatment (Q38c)

Parameter: Pumping Stations Operation Expenses (S2c) + Pumping Stations Energy Cost (S2d) + Pumping Stations Maintenance Expenses (S2e)
(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment

Notes:

1. The Statewide median sewage pumping operation and maintenance cost (including energy costs) is $40 per connected property (refer to Table 2 – percentage of connected properties basis).
2. For general notes see page 33.



Parameter: $\frac{\text{Sewer Main Operation Expenses (S2a) + Sewer Main Maintenance Cost (S2b)}}{\text{Length of Main (Q10a + Q10b) x 10}}$

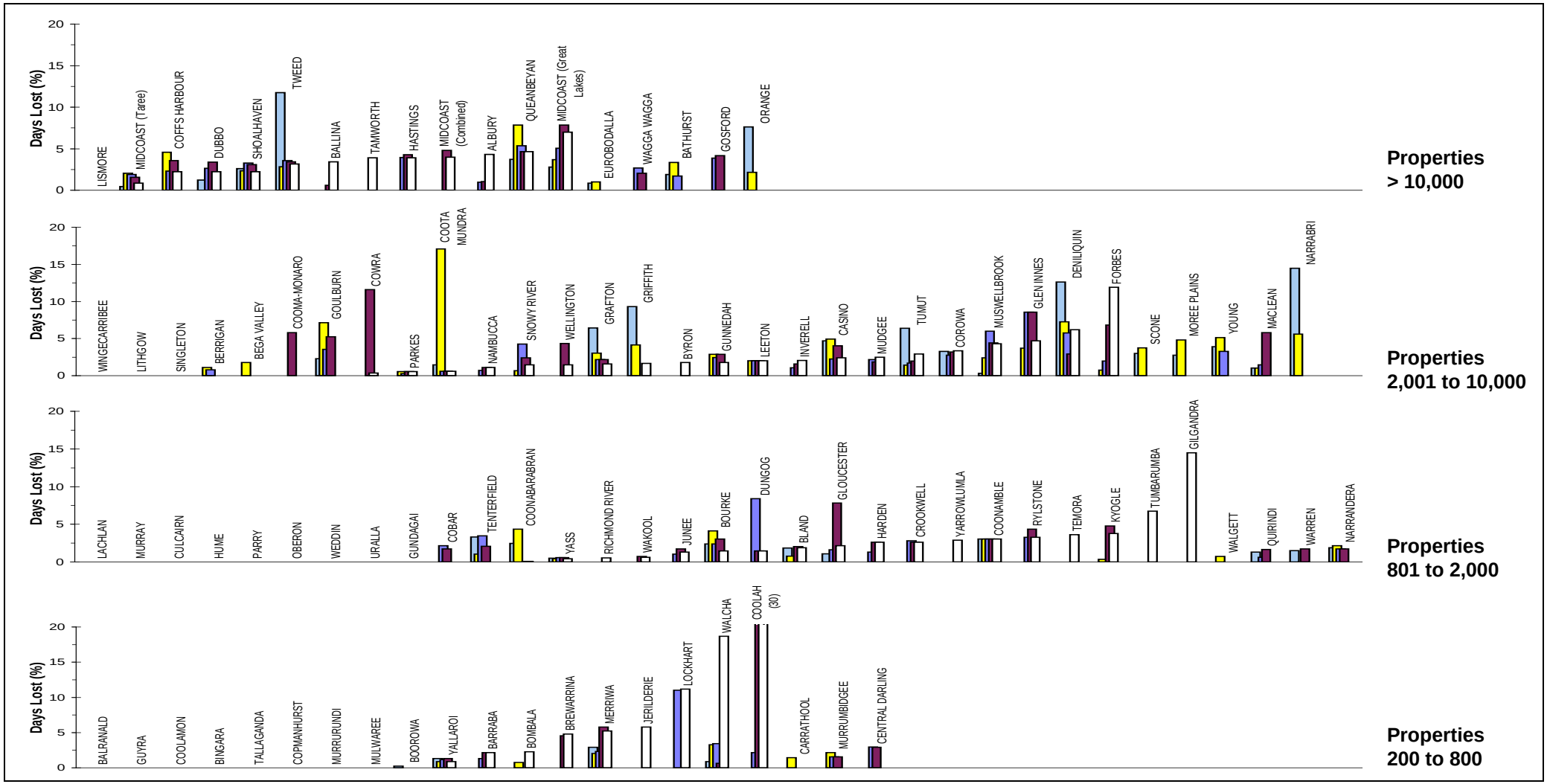
Parameter: $\frac{\text{Sewer Main Operation Expenses (S2a) + Sewer Main Maintenance Cost (S2b)}}{\text{Total Volume of Sewage Treated (Q36a) x 10}}$

Parameter: Total Length of Main (Q10a + Q10b)

Notes

1. The Statewide median sewer main operation and maintenance cost is $25 per connected property (refer to Table 2 – percentage of connected properties basis).
2. For general notes see page 33.

118 Total Days Lost



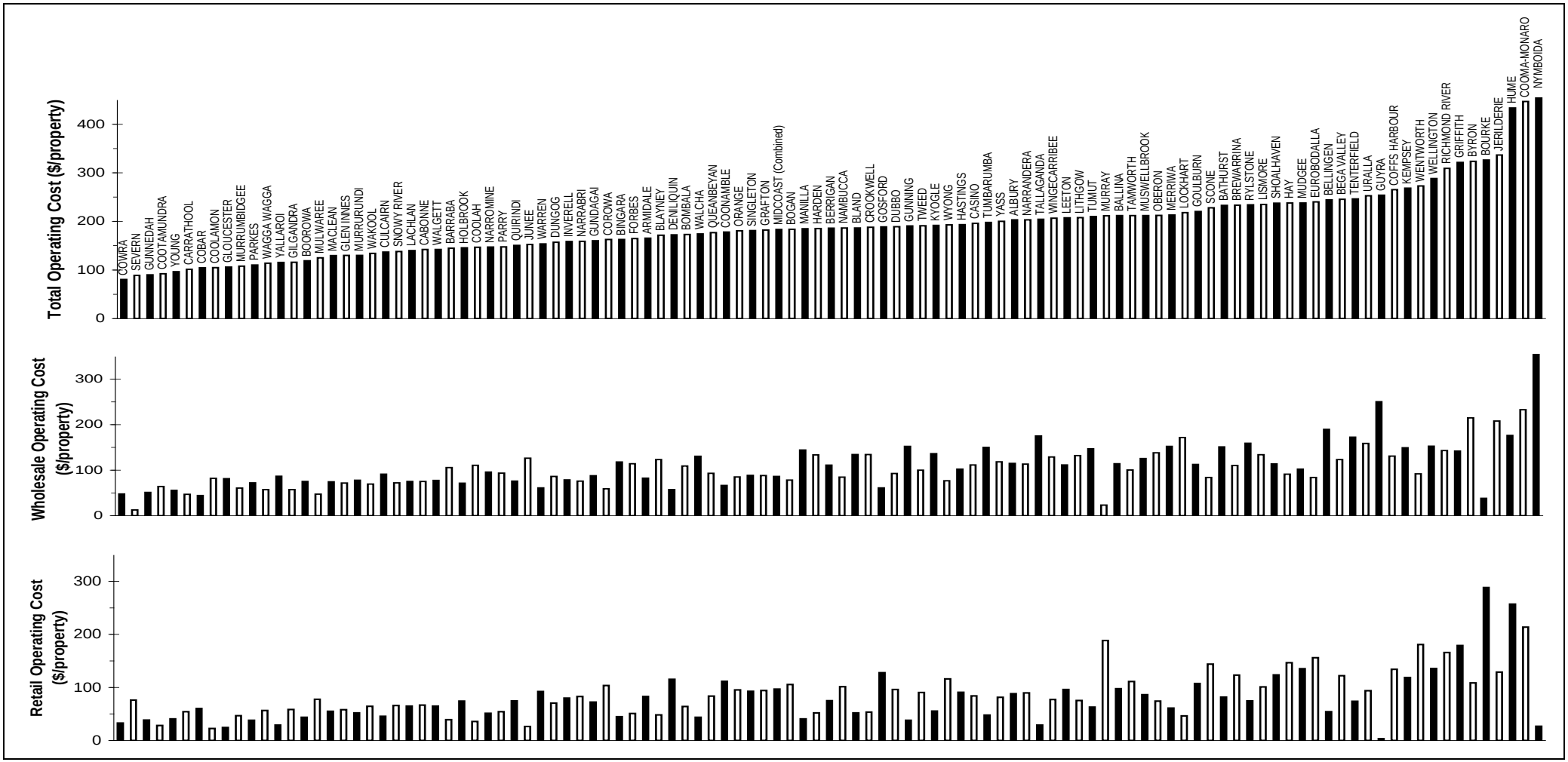
Parameter:

$$\frac{\text{Total Numbers of Days Lost in Year (Q27) x 100}}{\text{Equivalent full time employees (Q26) x available number of working days in year (ie. 230)}}$$

Notes:

1. This figure shows ranked values of the 1998/99 percentage of days lost for each council in 4 groups based on the number of connected properties served. ***Each white bar represents one council***. As an example, for the property range from 2,001 to 10,000, the percentage of days lost for the 32 councils shown ***range*** from about ***0 to 12%***. Results for the previous 4 years are also shown.
2. The Statewide median the percentage of days lost is 2% (refer to Table 1 - percentage of connected properties basis).
3. For general notes see page 33.

119 Retail/Wholesale Operating Cost - 1998/99



Parameter: $\frac{\text{Total Operation and Maintenance Expenses (S1 + S2)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Treatment Operation and Maintenance Expenses (W2f + W2g + W2h + W2i + W2j + W2k) + Pro-rata Share of Management Expenses (S1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Parameter: $\frac{\text{Mains O\&M (S2a +S2b) + Pumping Station O\&M (S2c +S2d + S2e) + Pro-rata Share of Management Expenses (S1)}}{\text{(No. of Residential Assessments (Q4a) + No. of Non-Residential Assessments (Q4b)) x No. of Connected Properties per Assessment}}$

Notes:

1. For general notes see page 33.

APPENDIX A

ARMCANZ PERFORMANCE COMPARISONS 1988/89 - 1998/99

(Refer also to page xi)

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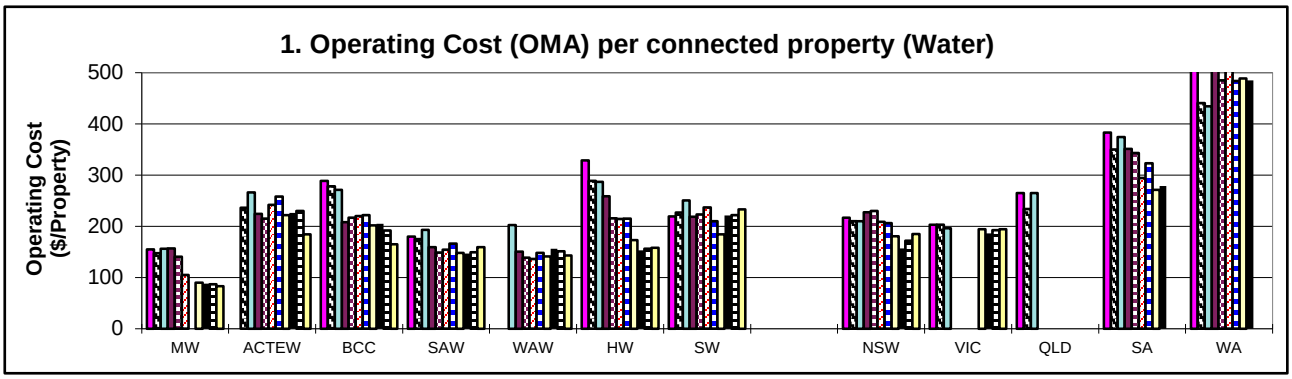
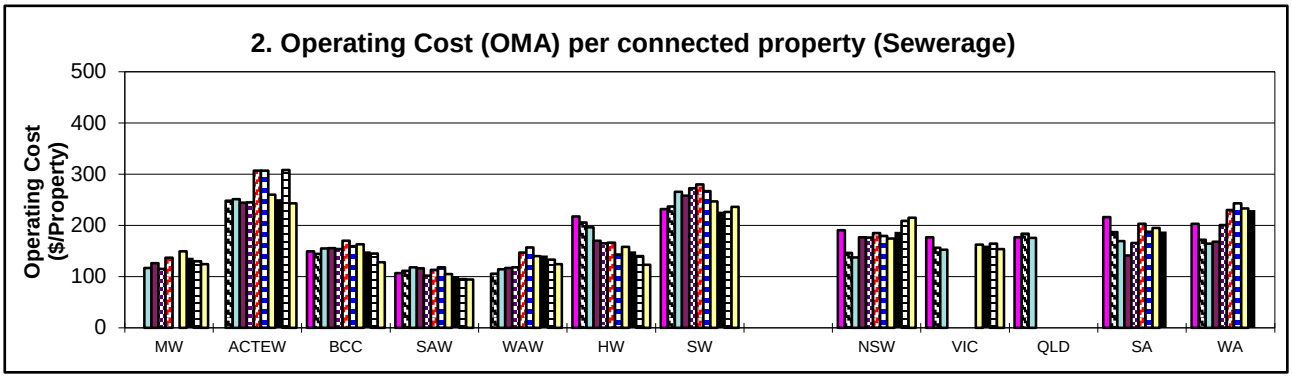
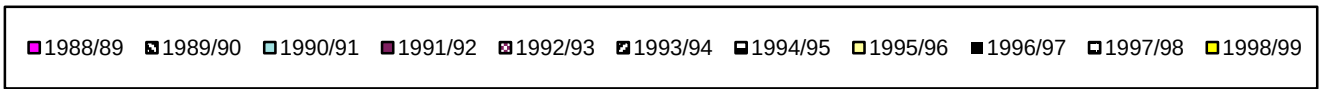
ARMCANZ PERFORMANCE COMPARISONS 1988/89 - 1998/99
WATER SUPPLY AND SEWERAGE SERVICES







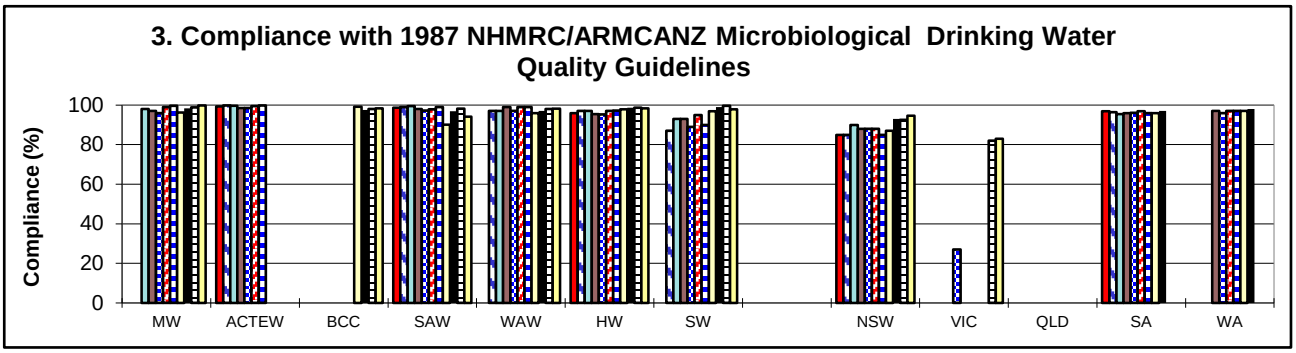
Metropolitan Water Utilities		Country Water Utilities	
MW	Melbourne Water*	NSW	NSW Country
ACTEW	ACT Electricity and Water	VIC	VIC Country
BCC	Brisbane City Council	QLD	QLD Country
SAW	SA Water (Adelaide)	SA	SA Country
WAW	WA Water (Perth)	WA	WA Country
HW	Hunter Water		
SW	Sydney Water		

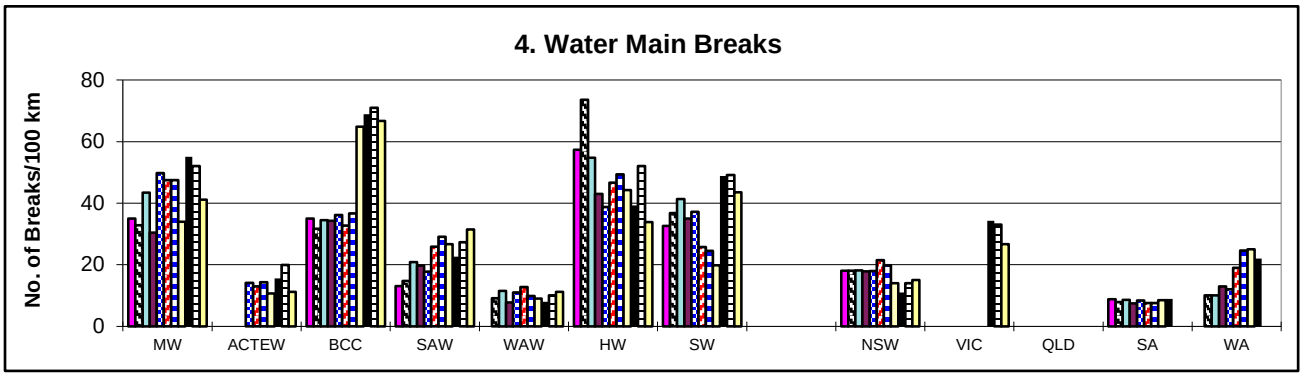
** Melbourne Water was disaggregated into 4 constituent utilities in 1994. Melbourne Water results shown for 1994/95 to 1998/99 have been aggregated from the reported results of the constituent utilities.*

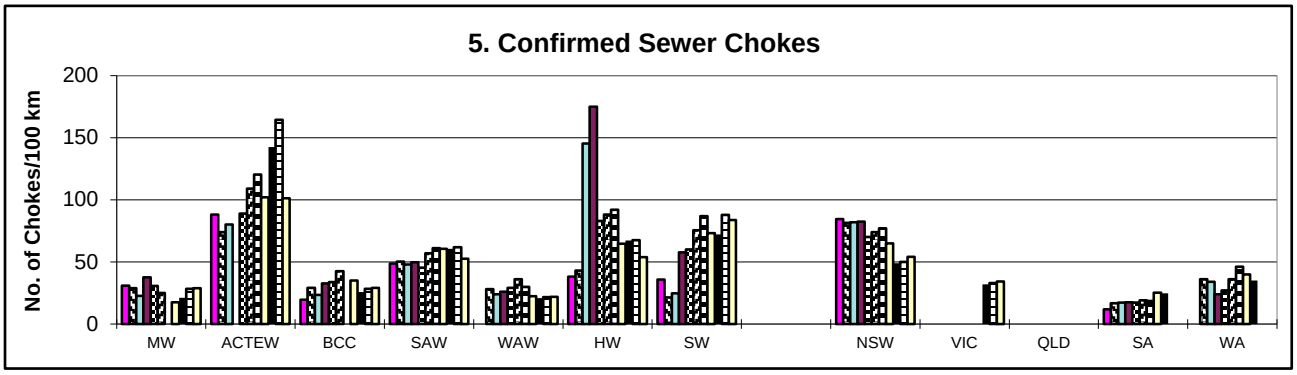
NOTES:

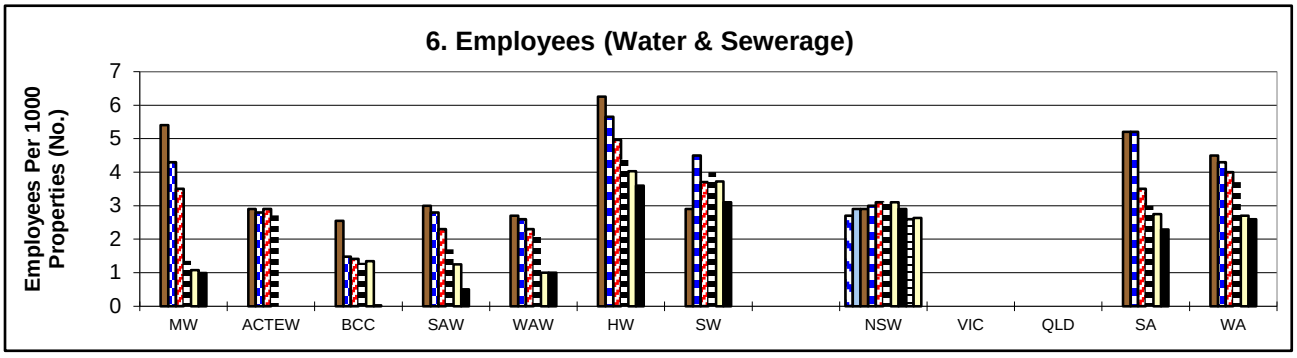
1. Operating Cost (OMA) is the Operation, Maintenance and Administration Cost
2. Results for the metropolitan water utilities for 1993/94 to 1998/99 obtained from "The Australian Urban Water Industry - WSAA Facts '99", Water Services Association of Australia, 1999
3. Results for Victoria for 1996/97 to 1998/99 obtained from *"Urban Water Review 1998/99"*, Victorian Water Industry Association, 2000.
4. Results for SA Country and WA Country for 1991/92 to 1996/97 obtained from *"Government Trading Enterprises Performance Indicators 1991/92 to 1996/97"*, Steering Committee on National Performance Monitoring of Government Trading Enterprises, April 1998.

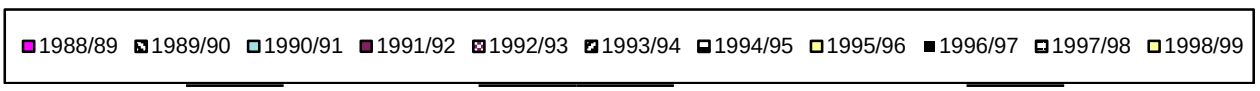
ARMCANZ PERFORMANCE COMPARISONS 1988/89 - 1998/99
WATER SUPPLY AND SEWERAGE SERVICES







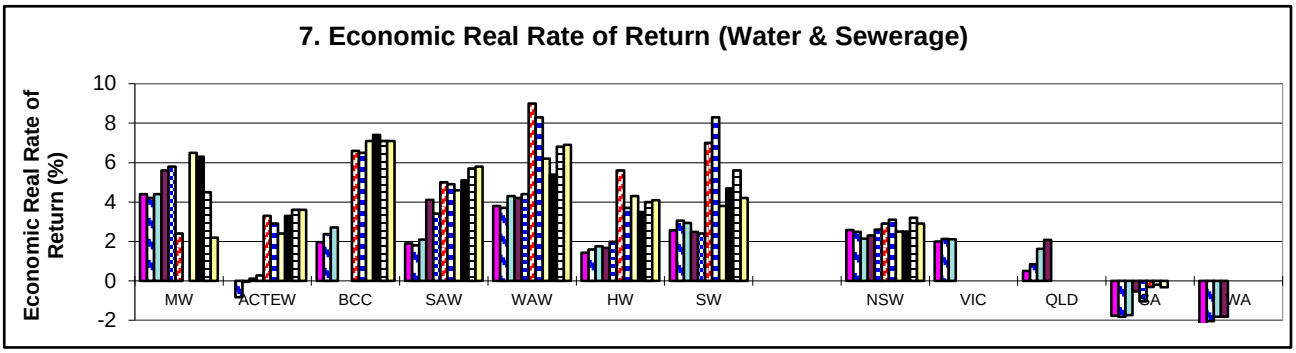


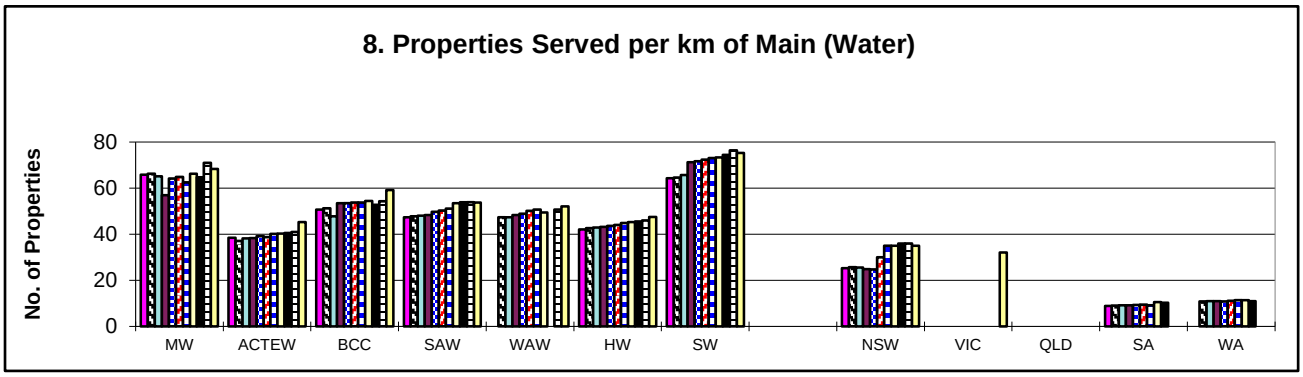


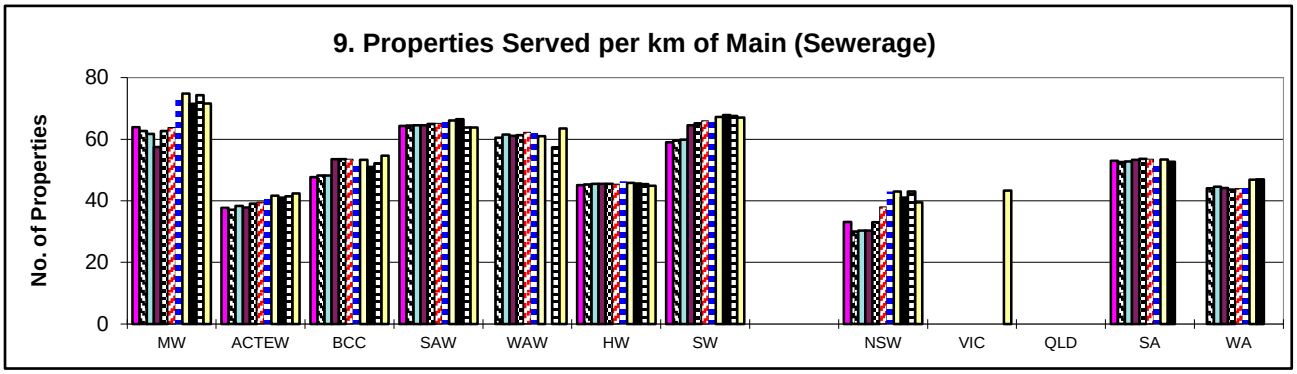
NOTE Limited data for the above parameters is available for country water utilities in the eastern states other than NSW. (In Queensland, many councils do not disinfect their drinking water supplies.)

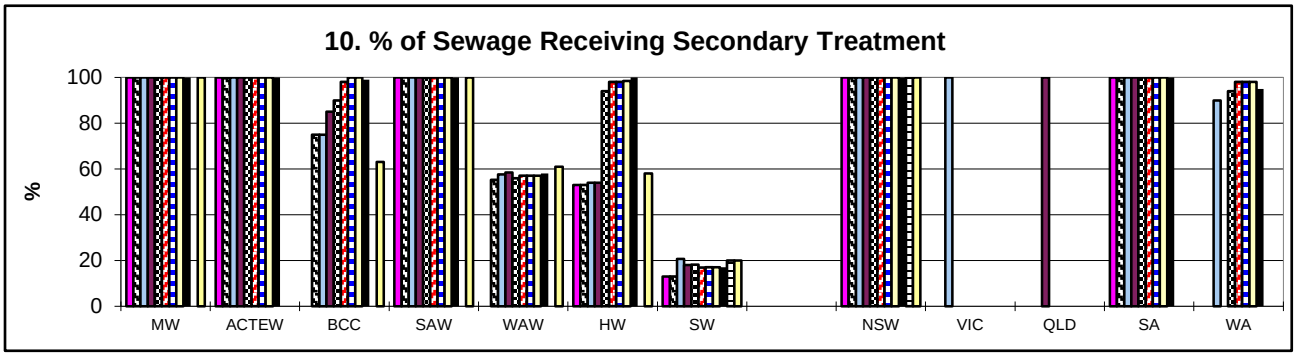
[+] *The data for Sydney Water is reported on the basis of the 1980 Drinking Water Quality Guidelines*

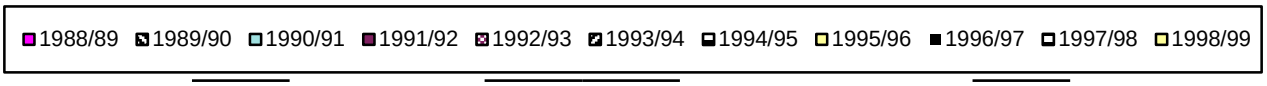
ARMCANZ PERFORMANCE COMPARISONS 1988/89 - 1998/99
WATER SUPPLY AND SEWERAGE SERVICES











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APPENDIX B

NSW ANNUAL WATER SUPPLY AND SEWERAGE REPORTING FORMS

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ANNUAL WATER REPORT FOR 1998/99

COUNCIL

WATER SUPPLY BUSINESS

BUSINESS CHARACTERISTICS

1	**Population Served:**	Permanent:		persons	Peak:		persons
2	**No. of Residential Properties Connected:**						
		No. of Single Dwellings:		No.	No. of Multiple Dwellings:		No.
					Average No. of Properties per Multiple Dwellling:		No.
3	**No. of Non-Residential Properties Connected:**			No.			
4	**No. of Assessments:**	Residential:		No.	Non-Residential:		No.
5	**No. of Premises Metered:**	Residential:		No.	Non-Residential:		No.
6	**No. of New Residential Dwellings Connected in year:**			No.			
7	**Unserved Urban Premises** (in Council Area)**:**	Premises:		No.	Population:		persons
8	**Estimated Annual Yield of Sources:**	Surface Water:		ML/a			
	(This refers to the annual demand which	Ground Water:		ML/a			
	could be met for the critical drought.	Recycled Water:		ML/a			
	The yield is not the present demand.)	Bulk Purchases:		ML/a			
		Total:		ML/a			
9	**Bulk Purchases:**	Source (Supply Scheme):			Price:		c/kL
10	**No. of Water Treatment Works:**			No.	Total Capacity:		ML/d
11	**No. of Service Reservoirs:**			No.	Total Capacity:		ML
12	**No. of Pumping Stations:**			No.	Total Capacity:		ML/d
13	**No. of Bores:**			No.	Total Capacity:		ML/d
14	**No. of Dams:**			No.	Total Capacity:		ML
15	**No. of Weirs:**			No.	Total Capacity:		ML
16	**Delivery Capacity into Reticulation:**	Total:		ML/d			
17	**Length of Mains:**	Distribution Trunk Mains:		km	Reticulation		km
		Headworks Trunk Mains:		km			

1998/99 WATER CONSUMPTION

18	**Annual Consumption:**	Residential:		ML			
	(Potable supply only. For raw water	Commercial:		ML			
	component see Item 20)	Industrial:		ML			
		Institutional:		ML			
		Bulk Sales:		ML			
		Public Uses:		ML			
		Unaccounted for Water (including Estimated Leakage):		ML	(Estimated Leakage:)		ML
		Total:		ML			
19	**Peak Daily Consumption:**	Total:		ML/d			
20	**Raw Water Component in Dual Supply System:**			ML			
21	**Source Usage in 1998/99:**	Council's Off-stream Dams:		ML			
		Council's On-stream Dams:		ML			
		Run-of-River Pumping (without off-stream dam):		ML			
		River Release (from DLWC dam):		ML			
		Groundwater:		ML			
		Recycled Water:		ML			
		Bulk Purchases:		ML			
		Total:		ML			
22	**Estimated Reliability of Consumption & Usage Data:**						eg. Excellent, good, fair, poor
23	**Rainfall for Year:**	This year:		mm	Average:		mm

FINANCIAL

Financial data is provided by Council in Special Schedule No.3 to its Financial Statement. This data includes amounts under the item "Operation and Maintenance Expenses". Please break-up the total under this item into "headworks" and "distribution and reticulation" components.

24	**Operation and Maintenance Expenses:**	Headworks* Component:		% of total O & M Expenses
		Distribution and Reticulation Component:		% of total O & M Expenses

* Headworks include dams, bores, water treatment works and associated mains, tunnels and pumping stations.

Indicates that a definition of this item is provided in Attachment 1.

(see over)

1998/99 PERFORMANCE INDICATORS

25 **No. of Water Quality Complaints Reported:** No.

26 **Common Quality Complaints:**

27 **No. of Water Service Complaints Reported:** No.

28 **Common Service Complaints:**

29 **No. of Customer Dealings Complaints reported:** No.
(Refers to instances where customers are dissatisfied with responsiveness of Council officers; exclude billing inquiries/concerns)

30 **No. of Properties Affected by an Unplanned Interruption to Supply:**
≤ 5hr No. (include each occurrence of interruption)
> 5hr No.

31 **Average Time taken to Restore an Interrupted Supply:**
hr

32 **No. Days of Water Restrictions Due to Drought:** days

33 **No. of Pipeline Breaks:** No.

34 **Total Energy Usage:** MWh

35 **Equivalent Full-time Employees:** No.
(Include staff engaged in operation, maintenance and management, including billing; exclude staff engaged on design or construction)

36 **Total No. of Days Lost in year:** days
(Include employee days lost for all reasons eg. industrial disputes, sick leave, industrial accidents)

1999/2000 WATER CHARGES

37 **Residential Access (or Availability) Charges:**
Uniform Access Charge $
OR
Minimum Amount (based on Land Value) $

38 **Residential Usage Charges:**

0	to		kL/a	Price:		c/kL
	to		kL/a	Price:		c/kL
	to		kL/a	Price:		c/kL

39 **Non-Residential Access (or Availability) Charges:**
Describe below the basis for Non-Residential Access Charges eg. Land value, meter size, service connection size etc.

40 **Non-Residential Usage Charges:**

0	to		kL/a	Price:		c/kL
	to		kL/a	Price:		c/kL
	to		kL/a	Price:		c/kL

41 **Typical Developer Charge:** $ per ET (Equivalent Tenement)

1998/99 WATER QUALITY AND TREATMENT WORKS PERFORMANCE

If no water treatment works, complete Table as far as practicable.
For businesses with 2 or more water treatment works, show details on following worksheets.

42 **Water Treatment Works :** Name:
Capacity: ML/d

43 **Type of Treatment Works:** Volume Treated: ML

		Max	Min	Avge		Max	Min	Avge
44 **Colour Units:**	Raw Water				Treated Water			
45 **Turbidity Units:**	Raw Water				Treated Water			

46 **Chemical Usage per year:** Alum: t Alkali: t Chlorine: t Fluoride: t

47 **Percentage Test Compliance With 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines:** (Percent of No. of Samples)

Physical/Chemical:

Physical:		% of	Samples	Chemical:		% of	Samples
Turbidity:		% of	Samples	pH:		% of	Samples
Colour:		% of	Samples				

Microbiological:

Faecal Coliforms:		% of	Samples	Total Coliforms:		% of	Samples

48 **Common Reasons for Less than 100% Test Compliance:**

49 **Number of Days Chlorination System failed to Operate:** days

50 **No. of Days of Major Malfunction of Treatment Processes:** days
(This is the number of days in the year when a significant portion of the treatment works was either not operating (other than routine maintenance) or not functioning properly.)

Indicates that a definition of this item is provided in Attachment 1.

Report Completed by: _____ Signature: _____ Date: _____

ANNUAL SEWERAGE REPORT FOR 1998/99

COUNCIL

SEWERAGE BUSINESS

BUSINESS CHARACTERISTICS

1	**Population Served:**	Permanent:		persons	Peak:		persons
2	**No. of Residential Properties Connected:**						
		No. of Single Dwellings:		No.	No. of Multiple Dwellings:		No.
					Average No. of Properties per Multiple Dwellling:		No.
3	**No. of Non-Residential Properties Connected:**			No.			
4	**No. of Assessments:**	Residential:		No.	Non-Residential:		No.
5	**No. of New Residential Dwellings Connected in year:**			No.			
6	**Unserved Urban Premises (in Council Area):**						
		Premises:		No.	Population:		persons
7	**Area Sewered (ie. catchment):**			ha			
8	**No. of Sewage Treatment Works:**			No.	Total Capacity:		EP
9	**No. of Pumping Stations:**			No.	Total Capacity:		ML/d
10	**Length of Mains:**	Reticulation/gravity:		km			
		Rising mains:		km			
11	**Volumes of Sewage in 1998/99:**	Infiltration/Inflow:		ML			
		Residential/Non-residential Sewage:		ML			
		Trade Waste:		ML			
		Total Transported through Sewerage Network:		ML			
12	**No. of Treated Sewage Effluent Discharges:**						
		Ocean Discharges:		No.			
		Estuary Discharges:		No.			
		Inland Water Discharges:		No.			

1998/99 PERFORMANCE INDICATORS

13	**No. of Sewage Odour Complaints:** (Include all complaints whether phone, verbal, letter)	Treatment works:		No.	Pumping stations:		No.
14	**No. of Sewage Overflows:** (Record any overflow/surcharge in Council sewers and pumping stations. Count each access chamber, pumping station etc. overflow as one overflow. Exclude overflows in sewer risers and sidelines (house connections) and at customers' gully traps).			No.			
15	**No. of Sewage Service or Choke Complaints Reported:**			No.			
16	**Common Service Complaints:**						
17	**No. of Customer Dealings Complaints reported:** (Refers to instances where customers are dissatisfied with responsiveness of Council officers; exclude billing inquiries/concerns)			No.			
18	**No. of Confirmed Sewer Chokes:** (Sewer Chokes are confirmed partial or total blockages in Council sewer reticulation mains occasioning an interruption to service. Exclude blockages in Council's sewer risers and sidelines (house branch connections) or in customers internal drains.)			No.			
19	**No. of Confirmed Sewer Chokes Attended to Within 5 hr:**			No.			
20	**No. of Properties Affected by an Unplanned Interruption to Service:**						
	(Include each occurrence of interruption)	≤ 5hr		No.			
		> 5hr		No.			
21	**Average Time to Restore an Interrupted Service:**			hr			
22	**No. of Chokes in House Branch Connections:** (Record blockages in Council's sewer risers and sidelines (house branch connections) up to the customers' gully traps. Exclude blockages in customers' house drains (internal drains).)			No.			
23	**No. of Chokes in House Drains:** (Record blockages in customers' internal drains (house drains).)			No.			
24	**No. of Pipe Breaks (Rising Mains Only):**			No.			
25	**Total Energy Usage:**			MWh			
26	**Equivalent Full-time Employees:** (Include staff engaged in operation, maintenance and management including billing. Exclude staff engaged on design and construction.)			No.			
27	**Total No. of Days Lost in Year:** (Include employee days lost for all reasons eg. industrial disputes, sick leave, industrial accidents.)			days			

Indicates that a definition of this item is provided in Attachment 1.

(see over)

1999/2000 SEWERAGE CHARGES

28 Residential Access (or Availability) Charges: Uniform Access Charge: $

OR

Minimum Amount (based on Land Value): $

29 Does Council have Usage Charges for Residential Sewerage Services?: Yes/No

If Yes, what are the Usage Charges:

30 Non-Residential Access (or Availability) Charges:

Describe below the basis for Non-Residential Access Charges eg. Land value, pedestal charges etc.

31 Does Council have Usage Charges for Non-Residential Sewerage Services?: Yes/No

If Yes, what are the Usage Charges:

32 Does Council have Trade Waste Charges?: Yes/No

33 Typical Developer Charge: $ per ET (Equivalent Tenement)

1998/99 TREATMENT WORKS PERFORMANCE

For businesses with 2 or more Sewage Treatment Works show details on the following worksheets.

34 Sewage Treatment Works Name:

Capacity: EP

35 Type of Treatment Works:

Nutrient Removal (Yes/No): Disinfection (Yes/No):

36 Volume Received through Sewerage Network:

ML Recorded (R) or Estimated (E):

37 Tankered Flows: Septic Tank Effluent: kL

Septic Tank Sludge/Pan: kL

38 Volume of Sewage Receiving Treatment:

No Treatment ML Primary ML

Secondary ML Tertiary ML

(Tertiary treatment involves removal of over 90% of BOD and significant nutrient removal eg. by biological treatment, sand filtration, disinfection.)

39 Volume Recycled: ML

(Refers to reclaimed effluent for watering of golf courses etc. and does not refer to internal recycling within the treatment works.)

40 Biosolids

Biosolids Produced: tonnes dry solids: t

Biosolids reused/recycled: % recycled: %

Biosolids Management: to farmland: %

to land fill: %

to other: %

41 Average Dry Weather Flow: Permanent Population: L/s Peak Population: L/s

42 Peak Dry Weather Flow: Permanent Population: L/s Peak Population: L/s

43 Peak Wet Weather Flow: L/s

44 Qualification of Operators (eg. DLWC Certificate):

45 EPA Discharge Licence Expiry Date:

46 Effluent Volume Licensed: ML/d

47 90 Percentile Licence Limits:

BOD mg/L	SS mg/L	Total N mg/L	NH3N mg/L	Oil & Grease mg/L	Total P mg/L	Faecal coliforms cfu/100mL

48 Percentage of Samples Complying with 90 Percentile Licence Limits at Licensed Point of Discharge:

%	%	%	%	%	%	%

(Results for SS should be the measured values for effluent at the licensed point of discharge. The effluent should not be filtered to remove algae prior to testing.)

49 No. of Sampling Days (including DLWC Sampling Days): days

50 No. of Days with Major Malfunction of Treatment Processes: days

(This refers to the number of days in the year when a significant portion of the treatment works was either not operating (other than routine maintenance) or not functioning properly (odours, loss of MLSS etc.))

Indicates that a definition of this item is provided in Attachment 1.

Report Completed by: _____ Signature: _____ Date: _____

ATTACHMENT 1

NSW ANNUAL WATER SUPPLY AND SEWERAGE PERFORMANCE REPORTING

BACKGROUND

The NSW annual water supply and sewerage performance reporting system has been developed in response to a need recognised by the Department of Land and Water Conservation/Local Government Liaison Committee for Water Supply and Sewerage. NSW has been a national leader in performance reporting since commencement of reporting in 1986. The main objectives of performance reporting are:

- To enable self-monitoring by each council of trends in its performance indicators and to compare its performance with that of similar councils to assist it to improve performance.
- To assist Local and State Government to obtain an overview of the present position and future needs of water supply and sewerage businesses in NSW and to facilitate national performance comparisons.
- Public accountability to the community.

Performance comparisons and benchmarking are an important element of the associated reforms under the Council of Australian Governments' (COAG) National Competition Policy, and are also regarded as essential by the Minister for Land and Water Conservation, the NSW Independent Pricing and Regulatory Tribunal and the Local Government and Shires Associations.

Nearly all country councils are now participating in the NSW Performance Reporting system, and the value of the system has been greatly enhanced by such full participation.

A Report illustrating the Statewide results is issued each year to all councils. The Report enables each council to compare its performance against Statewide results, and also against similar sized or relevant councils.

To meet its obligations under the COAG agreements, NSW will also continue to provide the key performance indicators for the larger NSW utilities (over 10 000 assessments) for inclusion in the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) national performance monitoring report for "Non-Major Urban" water supply and sewerage utilities. A copy of this national report will also be provided to all councils in country NSW.

For consistency with national performance reporting, from 1998/99, most NSW performance indicators will be reported on the basis of "per connected property", rather than the previous "per assessment" basis. Councils are therefore requested to carefully estimate the values requested for Q2 and Q3 to indicate the total number of properties connected to Council's water supply and sewerage businesses.

As for previous years, Financial Information will be obtained by DLWC from Special Schedule Nos 3 to 6 of Council's 1998/99 Financial Statement.

Councils are reminded they need only provide a single consolidated report for each of their water supply and sewerage businesses. However, if it is more convenient for Council to provide a separate reporting form for each of its water supply or sewerage schemes, this is equally satisfactory.

DEFINITION OF KEY TERMS

The following definitions of key terms are provided to ensure a consistent interpretation of terms and to assist councils in completing their reports.

GENERAL

To facilitate analysis of results, if the information to answer a particular question is not known or is unavailable, "N/A" should be entered in the relevant space. If the answer to a particular question is zero, "0" or "NIL" should be entered, not " - ".

WATER SUPPLY

Q1 to Q5 Population, Properties, Assessments

These questions refer to the figures at 30 June 1999. In Q1, exclude population in unserviced areas.

Q2 **No. of Residential Properties Connected**

Example:

Single Dwellings = 5000
Multiple Dwellings = 300
Av No. of Dwellings per Multiple Dwelling = 4

No. of Residential Properties Connected
= 5000 + 300 x 4 = 6200

Q6 **New Residential Dwellings Connected in Year**

This is the number of new residential dwellings (ie. houses, villas, units, flats) connected within the financial year).

WATER SUPPLY CONT'D

Q7 Unserved Urban Premises in Council Area
This refers to the total number of premises in urban zoned land in towns or villages which are not served by a Council reticulated water supply. Please also indicate the estimated population living in these premises.
If Council has more than one water supply scheme reported on separate forms, this question need only be answered once (on the form for the main scheme).

Q8 Estimated annual yield of sources
The estimated annual yield refers to the annual demand level which could just be supplied by a water supply system during a repetition of the most severe historical drought. The yield is not the present annual demand.

Q18 Consumption
The various categories of consumption in this question are defined as follows:

- Residential - Domestic in-house and ex-house.
- Commercial - Offices, shops, clubs, hotels, motels, caravan parks etc.
- Industrial - Industrial uses.
- Institutional - Hospitals, schools, colleges etc.
- Bulk Sales - Sales to other Councils/Water Utilities.
- Public Uses - Uses such as watering of public parks, gardens, ovals etc.
- Unaccounted-for-Water includes allowance for leakage, theft and illegal connections, illegal use of unmetered customer fire services, fire fighting (street hydrants), mains flushing, under-registration of customer meters, errors in system meters.
- Estimated Leakage - Leakage in the water supply system; leakage studies carried out for 30 NSW towns have indicated an average leakage of about 17% of annual consumption (range 7% to 35%).

Note that for consistency with national performance reporting, Unaccounted-for-Water has been redefined above to include leakage and water used for fire fighting and mains flushing. Water for fire fighting and mains flushing have therefore been excluded from Public Uses.

Q21 Off-stream Dams
Most NSW councils with dams have an off-stream dam with run-of-river pumping to the storage.

Recycled Water
Many councils have not indicated an amount for recycled water in their Water Supply Reports but their Sewerage Reports indicate significant amounts of recycled water. The amounts in the two Reports should be in agreement and should represent the best estimate of the annual volume of sewage effluent reclaimed.

Q25, Q27, Q29 Complaints Reported
Each complaint reported to a Council employee, whether in person, by telephone, or in writing should be recorded and the total entered in Council's Report. Exclude reports of leaking house services and billing inquiries/concerns.

Q30 Interruption To Supply
The number of properties affected by unplanned interruptions to supply should be recorded for each occurrence of interruption. Totals for the year should be entered for durations of ≤ 5 hr and > 5 hr.

Q32 No. of Days of Water Restrictions due to Drought
Include all days of water restrictions no matter what level of restriction is applied.

Q33 Number of Pipeline Breaks
This refers to breaks where the main has to be shut down. Exclude breaks in house services.

Q47 Percentage test compliance with 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines
Compliance is to be reported on the basis of the above 1996 NHMRC/ARMCANZ guidelines.

SEWERAGE

Q1 to Q4 Population, Properties, Assessments
See comments for Q1 for water supply.

Q5 New Residential Dwellings Connected in Year
See comments for Q6 for Water Supply.

Q6 Unserved Urban Premises in Council Area
This refers to the total number of premises in urban zoned land in towns or villages which are not served by a Council reticulated sewerage scheme. Please also indicate the estimated population living in these premises.
If Council has more than one sewerage scheme each reported on separate forms, this question need only be answered once (on the form for the main scheme).

Q11 Infiltration/Inflow
This refers to the estimated groundwater infiltration and stormwater inflow into Council's sewerage system.

Q13, Q15, Q17 Complaints Reported
See comments for Q25, Q27, Q29 for Water Supply.

Q14, Q18 No. of Sewage Overflows, and Confirmed Sewer Chokes
The definitions for these items have been expanded to emphasize they refer to Council sewerage reticulation mains and exclude sewer risers and sidelines (house connections) and internal drains. This was done in response to queries from a number of councils and to ensure consistent reporting.

Q22 Chokes in House Branch Connections, and Q23 Chokes in House Drains
For consistency with national performance reporting, chokes in councils' sewer risers and sidelines (house branch connections) and in customers' internal drains (house drains) are reported in these items respectively.

Q38 Volume of Sewage Receiving Treatment
For each of the four levels of treatment shown, record the volume of sewage receiving treatment eg. for an IDEA treatment works with nutrient removal which received 200ML of sewage, with wet weather by-pass of 5%, the values entered would be:

No Treatment	10 ML
Primary Treatment	190 ML
Secondary Treatment	190 ML
Tertiary Treatment	190 ML

Q39 Volume Recycled
This refers to sewage effluent reclaimed for purposes such as watering of golf-courses, race-courses, industrial use etc. and does not refer to any internal recycling within the sewage treatment works. Also see comments for Q21 for Water Supply.

Q40 Biosolids
This refers to how Council manages its biosolids (sludge) ie. to farm land, to landfill or other. The percentage reuse or recycling is also requested.

COUNCIL OF / COUNCIL OF THE CITY OF .....
SPECIAL SCHEDULE NO. 3
WATER SUPPLY OPERATING STATEMENT
(GROSS INCLUDING INTERNAL TRANSACTIONS)
for the year ended .....
($'000)

		19X8/X9	19X7/X8
A. EXPENSES & REVENUES			
	Expenses		
1.	Management Expenses		
	a. Administratiion		
	b. Engineering and Supervision		
2.	Operation and Maintenance Expenses		
	- Dams and Weirs		
	a. Operation Expenses		
	b. Maintenance Expenses		
	-Mains		
	c. Operation Expenses		
	d. Maintenance Expenses		
	- Reservoirs		
	e. Operation Expenses		
	f. Maintenance Expenses		
	- Pumping Stations		
	g. Operation Expenses (excluding energy costs)		
	h. Energy Costs		
	i. Maintenance Expenses		
	- Treatment		
	j. Operation Expenses (excluding chemical costs)		
	k. Chemical Costs		
	l. Maintenance Expenses		
	- Other		
	m. Operation Expenses		
	n. Maintenance Expenses		
	o. Purchase of Water		
3.	Depreciation		
	a. System Assets		
	b. Plant and Equipment		
4.	Miscellaneous Expenses		
	a. Interest Expenses		
	b. Other Expenses		
5.	**Total Expenses**		
	Revenues		
6.	Rates & Service Availability Charges		
	a. Residential		
	b. Commercial		
	c. Industrial		
	d. Other		
7.	User Charges		
	a. Sales of Water : Residential		
	b. Sales of Water : Commercial		
	c. Sales of Water : Industrial		
	d. Sales of Water : Other		
8.	Extra Charges		
9.	Interest Income		
10.	Other Revenues		
11.	Grants		
	a. Grants for Acquisition of Assets		
	b. Other Grants		
12.	Contributions		
	a. Developer Charges		
	b. Developer Provided Assets		
	c. Other Contributions		
13.	**Total Revenues**		
14.	Operating Result		
15.	**Operating Result** (less Grants for Acquisition of Assets)		

WATER SUPPLY OPERATING STATEMENT (Cont'd)

		19X8/X9	19X7/X8
B. CAPITAL TRANSACTIONS			
	Non-Operating Expenditures		
16.	Acquisition of Fixed Assets		
	a. Subsidised Scheme		
	b. Other New System Assets		
	c. Renewals		
	d. Plant & Equipment		
17.	Repayment of Debt		
	a. Loans		
	b. Advances		
	c. Finance Leases		
18.	Transfer to Sinking Fund		
19.	**Totals**		
	Non-Operating Funds Employed		
20.	Proceeds from Disposal of Assets		
21.	Borrowing Utilised		
	a. Loans		
	b. Advances		
	c. Finance Leases		
22.	Transfer from Sinking Fund		
23.	**Totals**		
C. RATES AND CHARGES			
24.	Number of Assessments		
	a. Residential (occupied)	.....	
	b. Residential (unoccupied)	.....	
	c. Non-Residential (occupied)	.....	
	d. Non-Residential (unoccupied)	.....	
25.	Number of ETs for which Developer Charges were received	..... ET	
26.	Total Amount of Pensioner Rebates	$.....	

COUNCIL OF / COUNCIL OF THE CITY OF .....
SPECIAL SCHEDULE NO. 4
WATER SUPPLY STATEMENT OF FINANCIAL POSITION
(GROSS INCLUDING INTERNAL TRANSACTIONS)
as at .....
($'000)

		Current	Non-Current	Total
	ASSETS			
27.	Cash and Investments			
	a. Developer Charges			
	b. Specific Purpose Grants			
	c. Accrued Leave			
	d. Unexpended Loans			
	e. Sinking Fund			
	f. Other			
28.	Receivables			
	a. Specific Purpose Grants			
	b. Rates and Charges			
	c. Other			
29.	Inventories			
30.	Property, Plant and Equipment			
	a. System Assets			
	b. Plant and Equipment			
31.	Other Assets			
32.	**Total Assets**			
	LIABILITIES			
33.	Bank Overdraft			
34.	Creditors			
35.	Borrowings			
	a. Loans			
	b. Advances			
	c. Finance Leases			
36.	Provisions			
37.	**Total Liabilities**			
38.	**NET ASSETS COMMITTED**			
	EQUITY			
39.	Accumulated Surplus			
40.	Asset Revaluation Reserve			
41.	**Total Equity**			
	Note to System Assets :			
42.	Current Replacement Cost of System Assets			
43.	Accumulated Current Cost Depreciation of System Assets			
44.	Written Down Current Cost of System Assets			

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COUNCIL OF / COUNCIL OF THE CITY OF .....

SPECIAL SCHEDULE NO. 5

SEWERAGE OPERATING STATEMENT

(GROSS INCLUDING INTERNAL TRANSACTIONS)

for the year ended .....

($'000)

		19X8/X9	19X7/X8
A. EXPENSES & REVENUES			
	Expenses		
1.	Management Expenses		
	a. Administratiion		
	b. Engineering and Supervision		
2.	Operation and Maintenance Expenses		
	-Mains		
	a. Operation Expenses		
	b. Maintenance Expenses		
	- Pumping Stations		
	c. Operation Expenses (excluding energy costs)		
	d. Energy Costs		
	e. Maintenance Expenses		
	- Treatment		
	f. Operation Expenses (excluding chemical, energy, effluent and biosolids management costs)		
	g. Chemical Costs		
	h. Energy Costs		
	i. Effluent Management		
	j. Biosolids Management		
	k. Maintenance Expenses		
	- Other		
	l. Operation Expenses		
	m. Maintenance Expenses		
3.	Depreciation		
	a. System Assets		
	b. Plant and Equipment		
4.	Miscellaneous Expenses		
	a. Interest Expenses		
	b. Other Expenses		
5.	**Total Expenses**		
	Revenues		
6.	Rates & Service Availability Charges		
	a. Residential		
	b. Commercial		
	c. Industrial		
	d. Other		
7.	Trade Waste Charges		
8.	Other Sales and Charges		
9.	Extra Charges		
10.	Interest Income		
11.	Other Revenues		
12.	Grants		
	a. Grants for Acquisition of Assets		
	b. Other Grants		
13.	Contributions		
	a. Developer Charges		
	b. Developer Provided Assets		
	c. Other Contributions		
14.	**Total Revenues**		
15.	Operating Result		
16.	**Operating Result** (less Grants for Acquisition of Assets)		

SEWERAGE OPERATING STATEMENT (Cont'd)

		19X8/X9	19X7/X8
B. CAPITAL TRANSACTIONS			
	Non-Operating Expenditures		
17.	Acquisition of Fixed Assets		
	a. Subsidised Scheme		
	b. Other New System Assets		
	c. Renewals		
	d. Plant & Equipment		
18.	Repayment of Debt		
	a. Loans		
	b. Advances		
	c. Finance Leases		
19.	Transfer to Sinking Fund		
20.	**Totals**		
	Non-Operating Funds Employed		
21.	Proceeds from Disposal of Assets		
22.	Borrowing Utilised		
	a. Loans		
	b. Advances		
	c. Finance Leases		
23.	Transfer from Sinking Fund		
24.	**Totals**		
C. RATES AND CHARGES			
25.	Number of Assessments		
	a. Residential (occupied)	.....	
	b. Residential (unoccupied)	.....	
	c. Non-Residential (occupied)	.....	
	d. Non-Residential (unoccupied)	.....	
26.	Number of ETs for which Developer Charges were received	..... ET	
27.	Total Amount of Pensioner Rebates	$.....	

COUNCIL OF / COUNCIL OF THE CITY OF .....
SPECIAL SCHEDULE NO. 6
SEWERAGE STATEMENT OF FINANCIAL POSITION
(GROSS INCLUDING INTERNAL TRANSACTIONS)
as at .....
($'000)

		Current	Non-Current	Total
	ASSETS			
28.	Cash and Investments			
	a. Developer Charges			
	b. Specific Purpose Grants			
	c. Accrued Leave			
	d. Unexpended Loans			
	e. Sinking Fund			
	f. Other			
29.	Receivables			
	a. Specific Purpose Grants			
	b. Rates and Charges			
	c. Other			
30.	Inventories			
31.	Property, Plant and Equipment			
	a. System Assets			
	b. Plant and Equipment			
32.	Other Assets			
33.	**Total Assets**			
	LIABILITIES			
34.	Bank Overdraft			
35.	Creditors			
36.	Borrowings			
	a. Loans			
	b. Advances			
	c. Finance Leases			
37.	Provisions			
38.	**Total Liabilities**			
39.	**NET ASSETS COMMITTED**			
	EQUITY			
40.	Accumulated Surplus			
41.	Asset Revaluation Reserve			
42.	**Total Equity**			
	Note to System Assets :			
43.	Current Replacement Cost of System Assets			
44.	Accumulated Current Cost Depreciation of System Assets			
45.	Written Down Current Cost of System Assets			

NOTES TO SPECIAL SCHEDULE NOS. 3 AND 5

Administration comprises the following:

- Administration Staff
    - Salaries and Allowance
    - Travelling Expenses
    - Accrual of Leave Entitlements
    - Employment Overheads
- Meter Reading
- Bad and Doubtful Debts
- Other Administrative/Corporate Support Services

Engineering and Supervision comprises the following:

- Engineering Staff
    - Salaries and Allowance
    - Travelling Expenses
    - Accrual of Leave Entitlements
    - Employment Overheads
- Other Technical and Supervision Staff
    - Salaries and Allowance
    - Travelling Expenses
    - Accrual of Leave Entitlements
    - Employment Overheads

Operation Expenses comprise the day to day operational expenses excluding maintenance expenses.

Maintenance Expenses comprise the day to day repair and maintenance expenses. (Refer to Section 5 of the Asset Accounting Manual regarding capitalisation principles and the distinction between capital and maintenance expenditure).

Other Expenses include all expenses not recorded elsewhere.

Other Revenues include all revenues not recorded elsewhere.

Other Contributions include capital contributions for water supply or sewerage services received by Council under Section 565 of the Local Government Act.

Formulae for Calculation of Performance Indicators in Tables 7 to 9

Table	Column No.	Performance Indicator	Formula
7. Water Supply - 1998/99 Business Characteristics, Financial			
	(1)	Total No. of Assessments (assessments)	$Q_{4a} + Q_{4b}$
	(2)	No. of Connected Properties per Assessment	$[Q_{2a} + (Q_{2c} \times Q_{2b}) + Q_3] / (1)$
	(2A)	No. of Connected Residential Properties per Residential Assessment	$(Q_{2a} + (Q_{2c} \times Q_{2b})) / Q_{4a}$
	(3)	Properties Served per km of Main (connected properties/km main)	$[(1) \times (2)] \div (Q_{17a} + Q_{17b} + Q_{17c})$
	(4)	Total Annual Consumption (ML)	$Q_{18i} + Q_{20} + Q_{21F}$ (Check = Q_{21h})
	(5)	Average Annual Residential Consumption (kL/ connected property)	$Q_{18a} \times 1000 \div [Q_{4a} \times (2a)]$
	(6)	Economic Real Rate of Return (%)	$(W_{14} + W_{4a} - W_9 - W_{11a}) \times 100 \div W_{30}$
	(7)	Total Revenue (excl Capital Works Grants) ($'000)	$W_{13} - W_{11a}$
	(8)	Debt to Equity (%)	$(W_{33} + W_{35}) \times 100 \div W_{41}$
8. Water Supply - 1999/2000 Charges, 1998/99 Bills			
	(9)	Access Charge ($)	Q_{37a}
	(10)	Independent of Land Value? (Yes/No)	from Q_{37b}
	(11)	Allowance (kL)	from Q_{38a}
	(12)	Usage Charge for >200kL/a or for > Allowance (c/kL)	$Q_{38b,}$ Q_{38e} or Q_{38h}
	(13)	Typical Developer Charge ($/Equivalent Tenement(ET))	Q_{41} (see note D)
	(13A)	Typical Residential Bill ($)	(Q_{37a}) + (5) x $(Q_{38h})/100$
	(14)	Average Residential Bill ($)	$(W_{6a} + W_{7a}) \times 1000 \div [Q_{4a} \times (2a)]$
	(15)	Average Bill for Customer Using 200kL/a ($)	
	(16)	Real Increase in Bill for Customer using 200 kL/a (%)	
9. Water Supply - 1998/99 Levels of Service, Efficiency			
	(17)	Water Quality Compliance - Physical & Chemical (%)	see note E
	(18)	Water Quality Compliance - Microbiological (%)	see note F
	(19)	Water Quality Complaints (per 1000 properties)	$(Q_{25} \times 1000) \div [(1) \times (2)]$
	(20)	Average Customer Outage Time (min)	$(Q_{30a} + Q_{30b}) \times (Q_{31}) \times 60 \div [(1) \times (2)]$
	(21)	Operating Cost OMA ($/property)	$[W_1 + W_{2(a\ to\ n)}] \times 1000 \div [(1) \times (2)]$
	(22)	Management Cost ($/property)	$(W_1) \times 1000 \div [(1) \times (2)]$

Notes:

A. References to Q (eg. Q_{4a}) refer to questions on each council's Annual Water Supply Reporting Form for 1998/99.

B. References to W (eg. W_{15a}) refer to items in Special Schedules Nos 3 and 4 of each council's 1998/99 Annual Financial Statement.

C. References to (1) to (26) (eg. (2)) refer to columns in Tables 7 to 9 for 1998/99.

D. Developer Charges under $400/ET have not been included in Table 8.

E. Sum for each treatment works, the lesser of Q_{47a} and $Q_{47c,}$ multiplied by Q_{47b} for that treatment works. Divide the total by the sum of Q_{47b} for all treatment works.

F. Sum for each treatment works, $Q_{47k,}$ multiplied by Q_{47l} for that treatment works. Divide the total by the sum of Q_{47l} for all treatment works. Long term compliance has been determined on the basis of the 1987 NHMRC/AWRC Guidelines for Drinking Water Quality in Australia. Eg. where a water utility has taken 20 microbiological samples in 1998/99 and up to 4 of those have failed, the water utility would nevertheless achieve long term compliance.

G. Many councils have provided insufficient data to calculate the number of Connected Properties per Assessment (Columns (2) and (2A)). A value has been estimated by DLWC for such councils on the basis of results for similar councils and are shown in italics bold in Table 7.

Formulae for Calculation of Performance Indicators in Tables 10 to 12

Table	Column No.	Performance Indicator	Formula
10. Sewerage - 1998/99 Business Characteristics, Financial			
	(1)	Total No. of Assessments (assessments)	$(Q_{4a} + Q_{4b})$
	(2)	No. of Connected Properties per Assessment	[Q2a + (Q2c x Q2b) + Q3] ÷ (1)
	(2A)	No. of Connected Residential Properties per Residential Assessment	[Q2a + (Q2c x Q2b)] ÷ Q_{4a}
	(3)	Properties Served per km of Main (connected properties/km main)	[(1) x (2)] ÷ $(Q_{10a} + Q_{10b})$
	(4)	Total Volume of Sewage Collected (ML)	Q_{11d}
	(5)	Volume of Sewage Treated per Property (kL/property)	(greater of Q_{38b}, Q_{38c} and Q_{38d}) ÷ [(2)x(1)]
	(6)	Economic Real Rate of Return (%)	$(S_{15} + S_{4a} - S_{10} - S_{12a}) \times 100 \div S_{31}$
	(7)	Total Revenue (excl Capital Works Grants) ($'000)	$S_{14} - S_{12a}$
	(8)	Debt to Equity (%)	$(S_{34} + S_{36}) \times 100 \div S_{42}$
11. Sewerage - 1999/2000 Charges, 1998/99 Bills			
	(9)	Access Charge ($)	Q_{28a}
	(10)	Independent of Land Value? (Yes/No)	from Q_{28b}
	(11)	Typical Developer Charge ($/Lot)	Q_{33} (see noted D)
	(11A)	Typical Residential Bill (= Residential Access Charge) ($)	Q_{28a}
	(12)	Average Residential Bill ($)	$(S_{6a}) \times 1000 \div [Q_{4a} \times (2a)]$
	(13)	Real Increase in Average Residential Bill (%)	
12. Sewerage - 1998/99 Levels of Service, Efficiency			
	(14)	EPA Licence Compliance BOD (%)	Q_{48a} (see note E)
	(15)	EPA Licence Compliance SS (%)	Q_{48b} (see note E)
	(16)	Confirmed Sewer Chokes (per 100 km of main)	$(Q_{18}) \times 100 \div (Q_{10a} + Q_{10b})$
	(17)	Sewage Overflows (per 100 km of main)	$(Q_{14}) \times 100 \div (Q_{10a} + Q_{10b})$
	(18)	Odour Complaints (per 1000 properties)	$(Q_{13}) \times 1000 \div [(1) \times (2)]$
	(19)	Average Customer Outage Time (min)	$(Q_{20a} + Q_{20b}) \times (Q_{21}) \times 60 \div [(1)x(2)]$
	(20)	Operating Cost OMA ($/property)	$(S_1 + S_2) \times 1000 \div [(1) \times (2)]$
	(21)	Management Cost ($/property)	$S_1 \times 1000 \div [(1) \times (2)]$

Notes:

A. References to Q (eg. Q_{4a}) refer to questions on each council's Annual Sewerage Reporting Form for 1998/99.

B. References to S (eg. S_{16}) refer to items in Special Schedules Nos 5 and 6 of each council's 1998/99 Annual Financial Statement.

C. References to (1) to(24) (eg. (2)) refer to columns in Tables 10 to 12 for 1998/99.

D. Developer Charges under $400/ET have not been included in Table 11.

E. For multiple treatment works, the Licence Compliance indicators are calculated as a weighted average, on the basis of the number of sampling days for each treatment works. For example, BOD Compliance for 3 treatment works is calculated as follows:

BOD Compliance = [(Q_{48a} x Q_{49}) at works 1
+ (Q_{48a} x Q_{49}) at works 2
+ (Q_{48a} x Q_{49}) at works 3] ÷
[Q_{49} at works 1 +
Q_{49} at works 2 +
Q_{49} at works 3]

SS, Total N and Total P Compliance are similarly calculated.

F. Many councils have provided insufficient data to calculate the number of Connected Properties per Assessment (Columns (2) and (2A)). A value has been estimated by DLWC for such councils on the basis of results for similar councils and are shown in italics bold in Table 10.

APPENDIX C

1998/99 COUNCIL PERFORMANCE REPORTS

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Lismore City Council — Water Supply Performance — 1998/99

Lismore Council is a reticulator with a fully treated bulk water supply provided by Rous County Council. Lismore Council has one dam with a storage capacity of 25 ML. The system comprises 18 service reservoirs (48 ML), 3 pumping stations, 1 weir (0.7 ML), 10.7 ML/d delivery capacity into the reticulation, 35 km of trunk mains and 300 km of reticulation. System assets are valued at $36M and turnover was $4.3M (excluding capital works grants).

Business Planning

Strategic Business Plan (SBP)	*Year Prepared*	1997/98	*Year Updated:*	1999/00	*Is Further Development Required[2] ?*	NO
Financial Sustainability of Business	*Demonstrated?*	YES	*Year Updated:*	1999/00	*Is Further Development Required[2] ?*	NO

Performance Indicators

			Result	Ranking (see note 1)	Statewide Median
Business Characteristics	1	***Population Served:*** **27,000** **(0.96 connected properties per assessment)**			
	2	***Number of Assessments*** : **12,301** ***Number of Connected Properties*** **11,800**			
	2a	***Urban Population without Reticulated Public Water Supply*** (%)	4	3	1.1
	3	***Residential Assessments*** (% of total)	90	2	94
	3a	***New Residential Dwellings Connected to Water Supply*** (%)	0.7	3	1.4
	4	***Properties Served per km*** (properties/km of main)	39	1	35
	5	***Annual Total Consumption*** (at Master Meters - ML)	3830	2	6200
	6	***Average Annual Residential Consumption*** (kL/property)	240	2	230
	7	***Peak Week to Average Consumption*** (%)			
	8	***Unaccounted for water*** (including leakage) (%)	22	5	15
	9	***Energy Consumption*** (kWh/ML)			0.6
	10	***Energy Consumption*** (kWh/property)			0.2
	11	***Renewals Expenditure*** (% of current replacement cost of system assets)	1.2	1	0.0
	12	***Employees*** (employees/1000 properties)	1.1	1	1.3
Charges/Bills	13	***Description of Tariff Structure:*** Two-part tariff, independent of property value			
	14	***Water Usage Charge:*** ***All usage*** (c/kL)	85	1	60
	15	***Access Charge 1999/00*** ($/assessment)	84	1	195
	15a	***Typical Residential Bill 1999/00*** ($/assessment)	288	1	310
	15b	***Typical Developer Charge 1999/00*** ($/equivalent tenement)	3100	1	2400
	16	***Average Residential Bill 1998/99*** ($/connected property)	245	1	295
	17	***Bill for Residential Customer using 200kL/a (1998/99)*** ($/assessment)	254	3	260
	18	***Real increase over previous year's Bill for Residential Customer using 200kL/a*** (%)	-3	1	-1.9
Financial	19	***Revenue from Usage Charges*** (% of total)	49	1	25
	20	***Revenue from Access Charges*** (% of total)	36	3	44
	21	***Revenue from Other*** (% of total)	15	2	23
	22	***Economic Real Rate of Return*** (%)	2.7	2	2.4
	23	***Return on Assets*** (%)	2.7	2	2.4
	23a	***Debt to Equity*** (%)	4	3	4
	23b	***Interest Cover*** (%)	>500	1	500
	23c	***Loan Payment*** ($/property)	28	4	60
Levels of Service	24	***Water Quality Compliance on basis of 1996 NHMRC/ARMCANZ Guidelines***			
	25	***Physical and Chemical Water Quality Compliance*** (%)	100	1	98
	26	***Microbiological Water Quality Compliance*** (%)	100	1	100
	27	***Water Quality Complaints*** (per 1000 properties)	3	2	4
	27a	***Water Service Complaints*** (per 1000 properties)	3	2	10
	27b	***Customer Dealings Complaints*** (per 1000 properties)			0
	28	***Customer Interruption Frequency*** (per 1000 properties)	11	3	3
	29	***Average duration of Interruptions*** (hr)	3	4	3
	30	***Average customer outage time*** (min)	2	3	0
	31	***Number of Main breaks*** (per 100km)	50	5	15
	32	***Drought Water Restrictions*** (% of time)	0	1	0
Efficiency	32a	***Operating Cost (OMA) per 100km of Main*** ($'000)	400	2[3]	580
	33	***Operating Cost (OMA) per property*** ($/property)	101	1[3]	185
	34	***Operating Cost (OMA) per ML*** ($/ML)	310	1[3]	480
	34a	***Management Cost*** ($/property)	48	2	80
	34b	***Treatment Operation & Maintenance Cost*** ($/property)	0	1[3]	17
	34c	***Pumping Operation & Maintenance Cost*** ($/property)	6	1[3]	20
	34d	***Water Main Operation & Maintenance Cost*** ($/property)	35	2	35
	34e	***Total Days Lost*** (%)	0	1	0

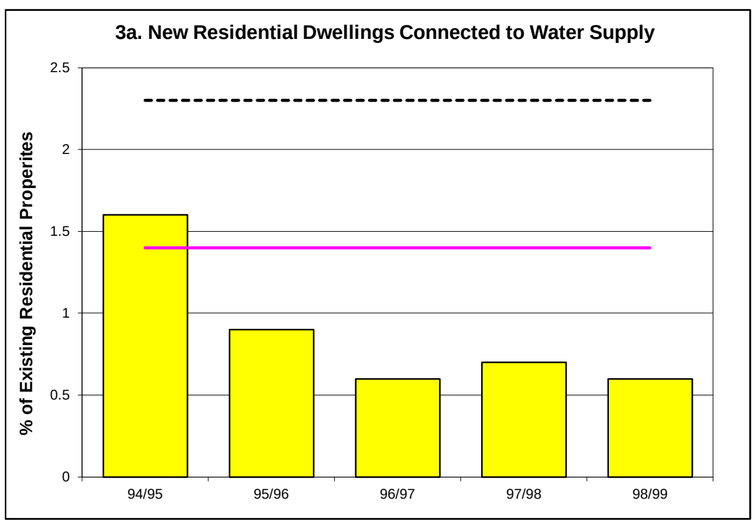
Notes:

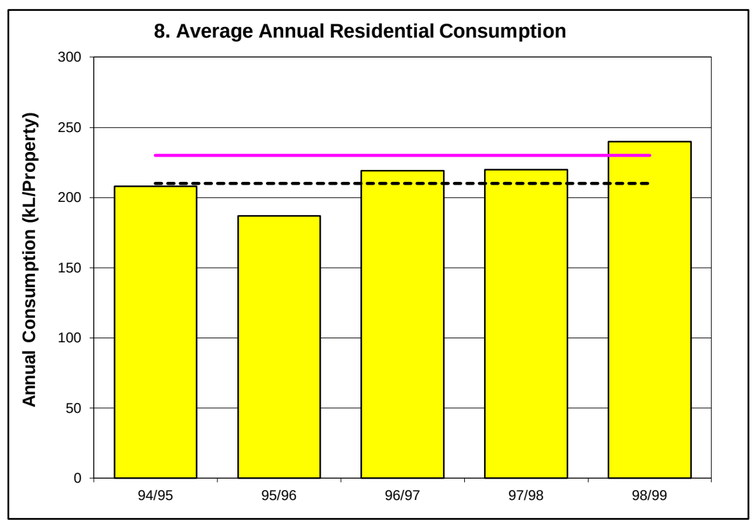
1 *Ranking for each performance indicator is based on dividing the results for all councils into 5 equal divisions of 20%, ie:*
- *a ranking of 1 indicates the Council is in the top 20% of Councils*
- *a ranking of 5 indicates the Council is in the bottom 20% of Councils*

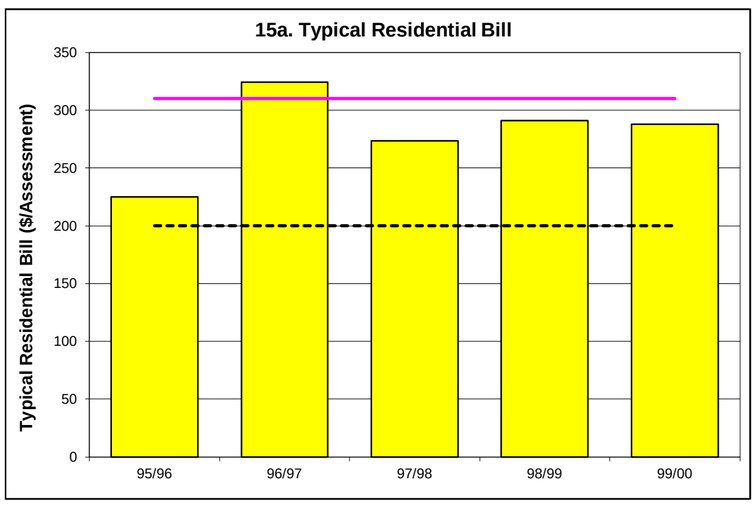
2 *Annual review of the key projections and actions in Council's SBP are required, together with annual updating of Council's financial plan.*

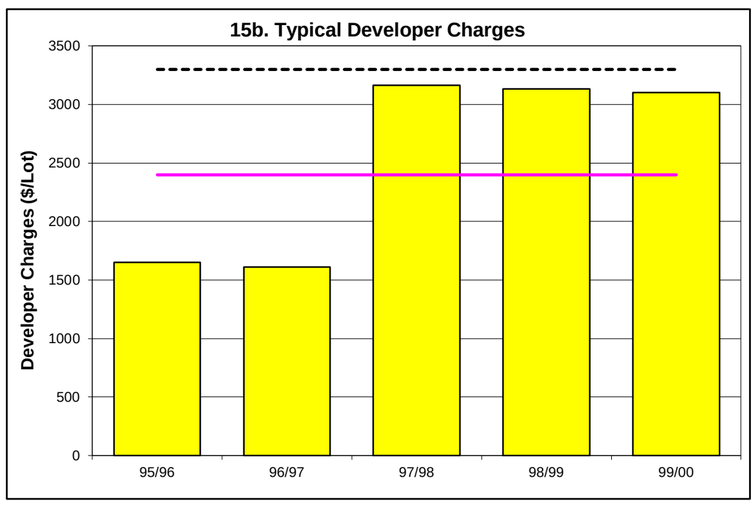
3 *Reticulator - costs exclude water harvesting and water treatment which are provided by Rous County Council.*

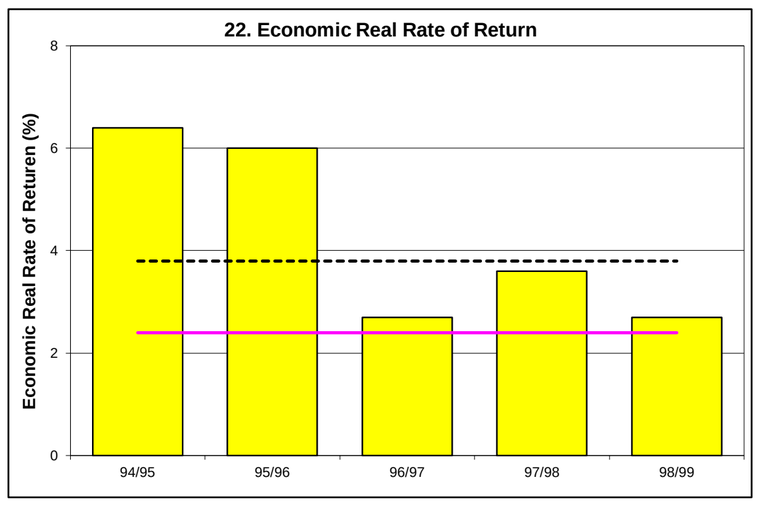
Lismore Council Performance (Results shown for 5 years together with 1998/99 Statewide Median and Top 20%)

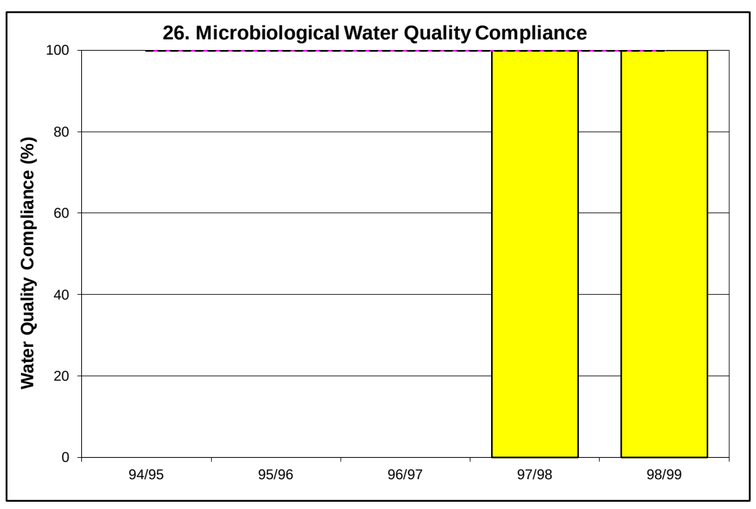


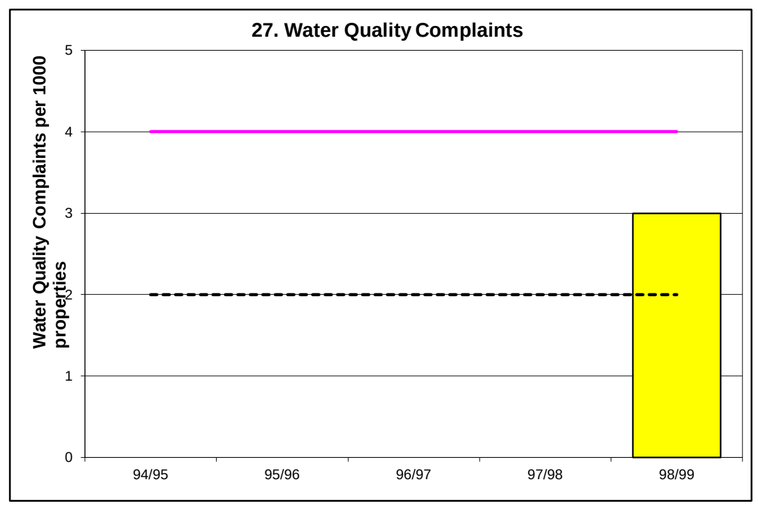


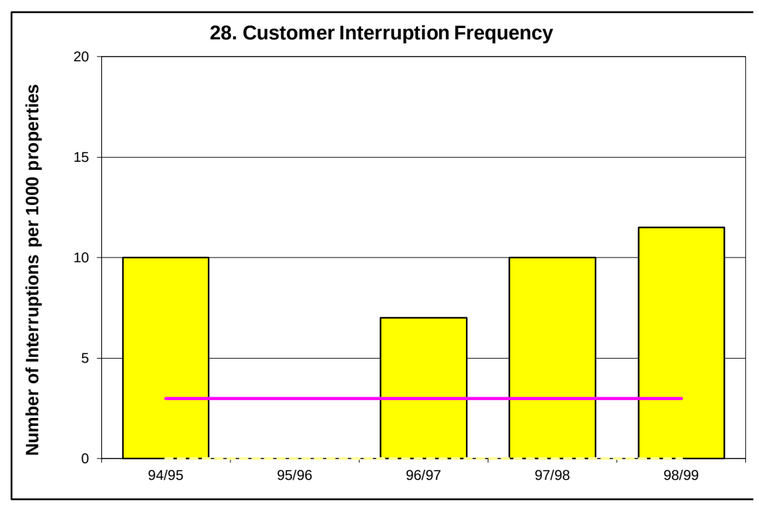


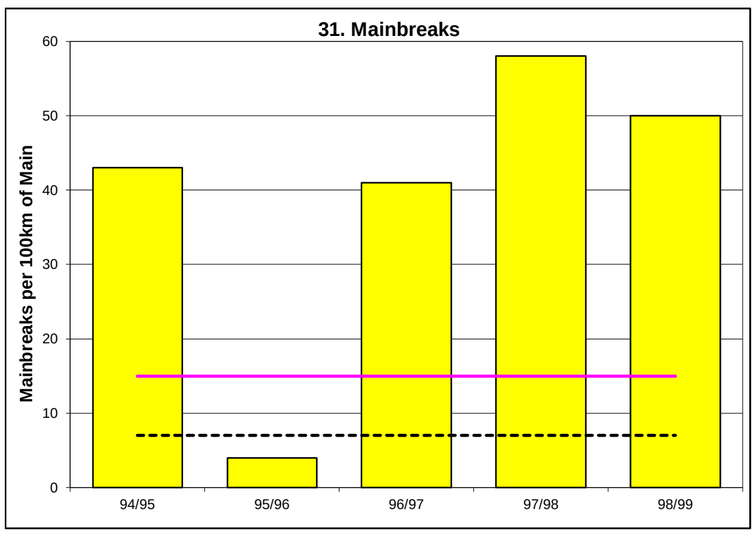


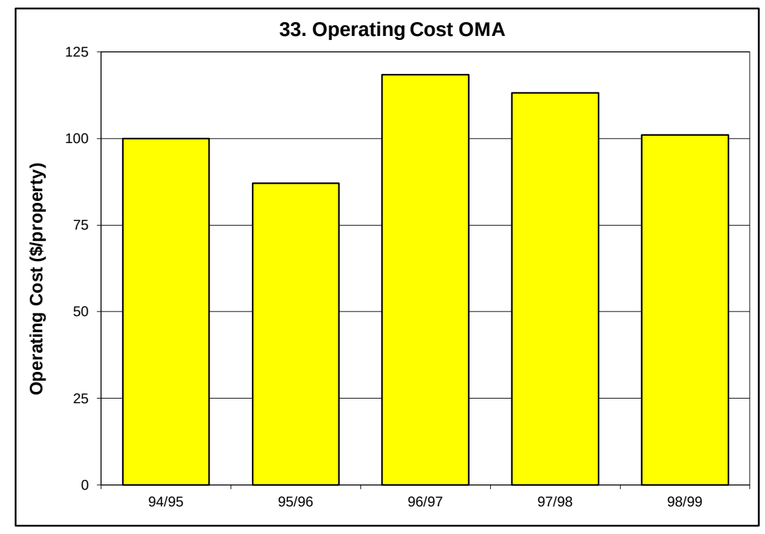


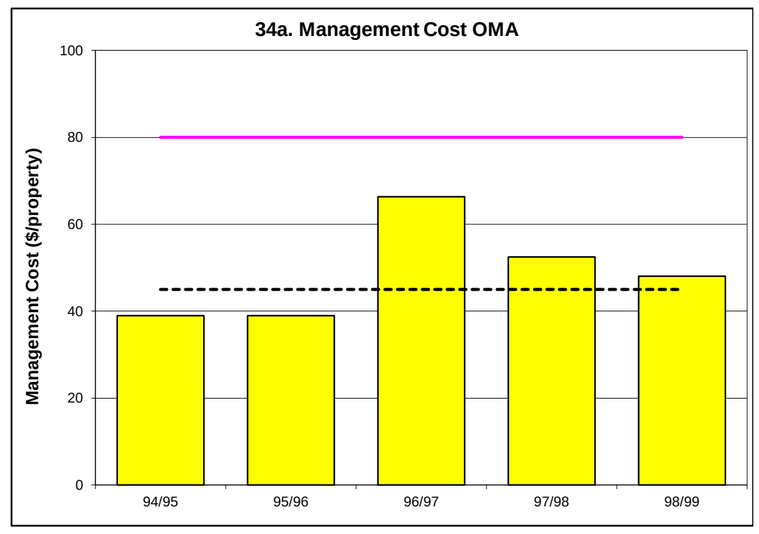


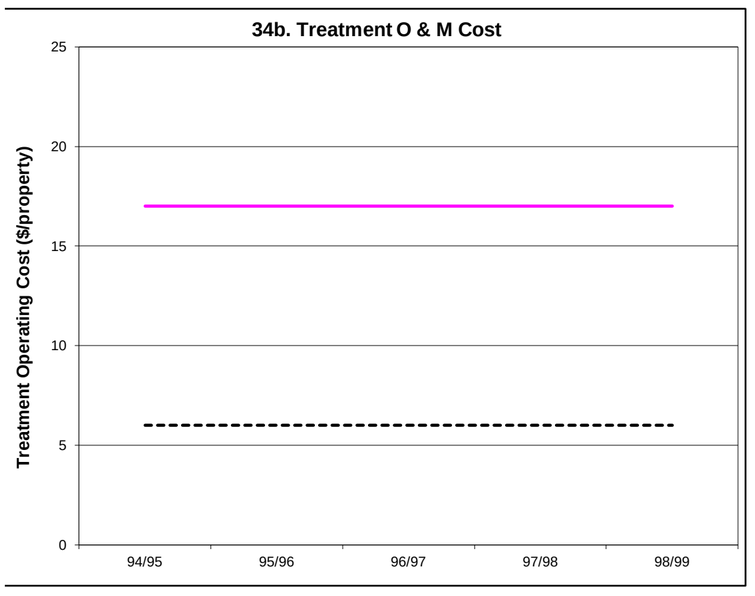


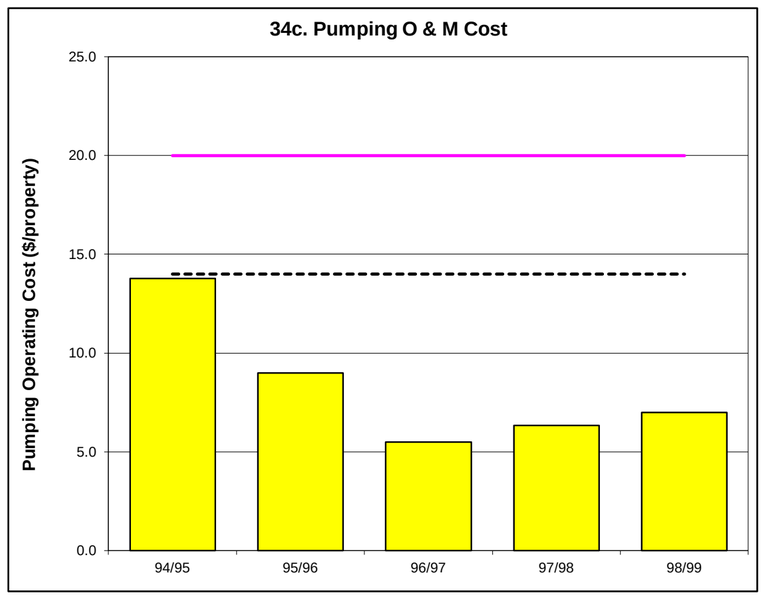


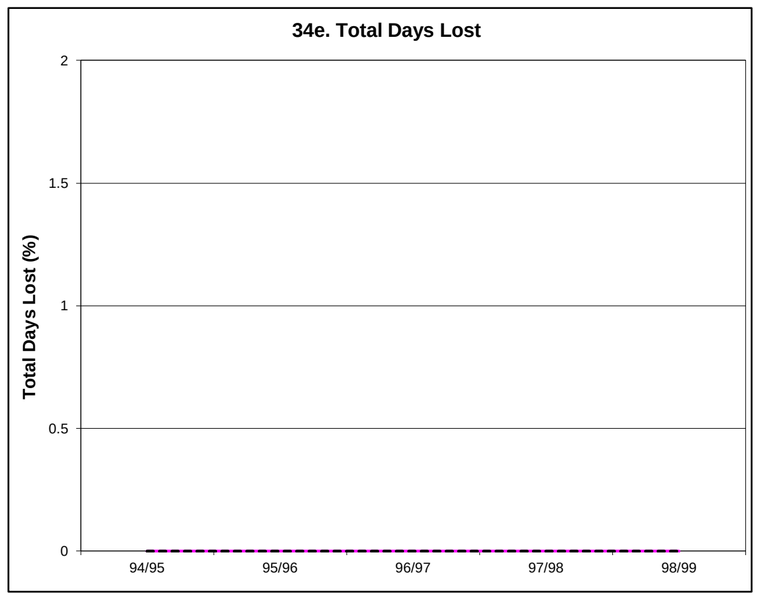












Costs are in Jan 1999$.

LEGEND

1998/99 State Median

1998/99 Top 20%

Muswellbrook Council — Sewerage Performance — 1998/99

The area sewered is 2850 ha. Council has 2 sewage treatment works providing tertiary treatment. The system comprises 22,000 EP treatment capacity (comprising trickling filters and 1 extended aeration and Bathurst Box), 11 pumping stations (3.5 ML/d), 23km of rising mains, 113km of reticulation, with effluent discharge to land. The number of sampling days at each treatment works ranged from 16 to 54. There were no major malfunctions of the treatment processes. Peak wet weather flow is 142 L/s; average dry weather flow is 36 L/s. System assets are valued at $18 M and turnover was $1.6 M (excluding capital works grants).

Business Planning

Strategic Business Plan (SBP)	*Year Prepared*	1995/96	*Year Updated*	1999/00	*Is Further Development Required[2] ?*	NO
Financial Sustainability of Business	*Demonstrated?*	YES	*Year Updated*	1999/00	*Is Further Development Required[2] ?*	NO

Performance Indicators

					Result	Ranking (see note)	Statewide Median
Scheme Characteristics	1	***Population Served:***	**14,250**	**(0.95 connected properties per assessment)**			
	2	***Number of Assessments:***	**4,633**	***Number of Connected Properties*** **4,570**			
	2a	***Residential Assessments*** (% of total)			95	5	93
	3	***Urban properties without Reticulated Sewerage Service*** (%)			1.3	2	2.3
	3a	***New Residential Dwellings connected to Sewerage*** (%)			1	2	1.6
	4	***Properties Served per km*** (properties/km of main)			34	3	40
	4a	***Volume of Sewage treated per property*** (kL/property)			313	2	280
	5	***Energy Consumption*** (kWh/ML)			531	4	490
	6	***Energy Consumption*** (kWh/property)			158	4	120
	7	***Reclaimed Water*** (% of effluent reclaimed)			1	3	0.6
	8	***Bio-solids Reuse*** (%)			100	1	0
	9	***Renewals Expenditure*** (% of current replacement cost of system assets)			0.4	1	0.0
	10	***Employees*** (employees/1000 properties)			0.9	1	1.5
Charges/Bills	11	***Description of Tariff Structure:***		Access charge/property, independent of property value			
	12	***Access Charge 1999/00*** ($/assessment)			271	3	365
	12a	***Typical Residential Bill 1999/00*** ($/assessment)			271	2	395
	12b	***Typical Developer Charge 1999/00*** ($/equivalent tenement)			2500	1	1600
	13	***Average Residential Bill 1998/99*** ($/connected property)			277	2	360
	14	***Real increase over previous year's Average Residential Bill*** (%)			9	4	-0.1
Financial	15	***Revenue from Usage Charges*** (% of total)			6		
	16	***Revenue from Access Charges*** (% of total)			66	5	78
	17	***Revenue from Trade Waste Charges*** (% of total)			1	1	0
	18	***Revenue from Other*** (% of total)			27	4	18
	19	***Economic Real Rate of Return*** (%)			1.3	3	3.3
	20	***Return on Assets*** (%)			1.2	3	2.3
	20a	***Debt to Equity*** (%)			1	4	10
	20b	***Interest Cover*** (%)			>500	1	300
	20c	***Loan Payment*** ($/property)			27	4	80
Levels of Service	21	***Licence Standards for Effluent Discharge:***		***BOD 20mg/L*** ***SS 30mg/L***			
	22	***Compliance with BOD in Licence*** (% of samples)			100	1	100
	23	***Compliance with SS in Licence*** (% of samples)			100	1	98
	24	***Confirmed Sewer Chokes*** (per 100km of main)			123	4	56
	25	***Sewage Overflows*** (per 100 km of main)			37	5	3
	26	***Odour Complaints*** (per 1000 properties)			1	4	0
	26a	***Sewerage Service Complaints*** (per 1000 properties)			1	1	13
	26b	***Customer Dealings Complaints*** (per 1000 properties)			0	1	0
	27	***Customer Interruption Frequency*** (per 1000 properties)					0.5
	28	***Average duration of Interruptions*** (hr)			2	4	2
	29	***Average customer outage time*** (min)			17	5	1
Efficiency	29a	***Operating Cost (OMA) per 100km of Main*** ($)			685	3	880
	30	***Operating Cost (OMA) per property*** ($/property)			219	4	210
	31	***Operating Cost (OMA)*** ($/ML)			677	2	700
	31a	***Management Cost*** ($/property)			43	2	70
	31b	***Treatment Operation & Maintenance Cost*** ($/property)			95	4	60
	31c	***Pumping Operation & Maintenance Cost*** ($/property)			43	4	40
	31d	***Sewer Main Operation & Maintenance Cost*** ($/property)			23	3	25
	31e	***Total Days Lost*** (%)			11	5	2

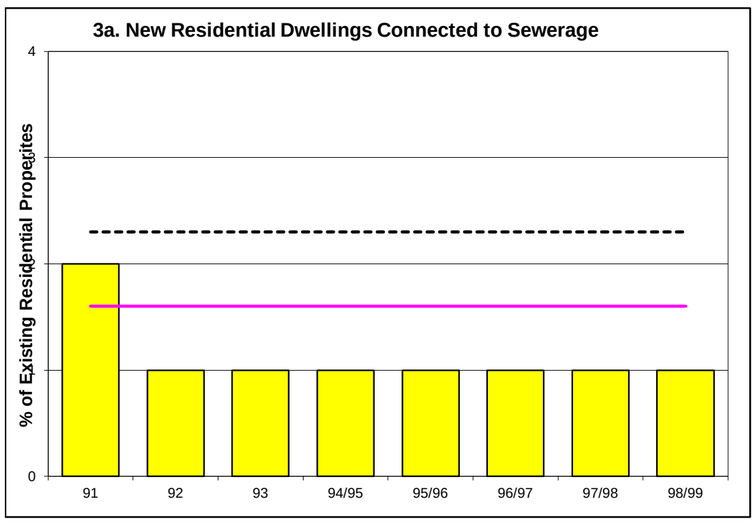
Notes:

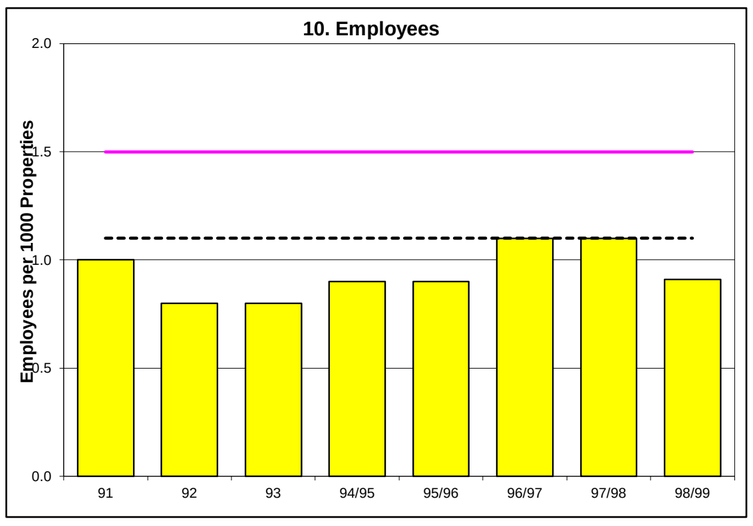
1 *Ranking for each performance indicator is based on dividing the results for all councils into 5 equal divisions of 20%, ie:*

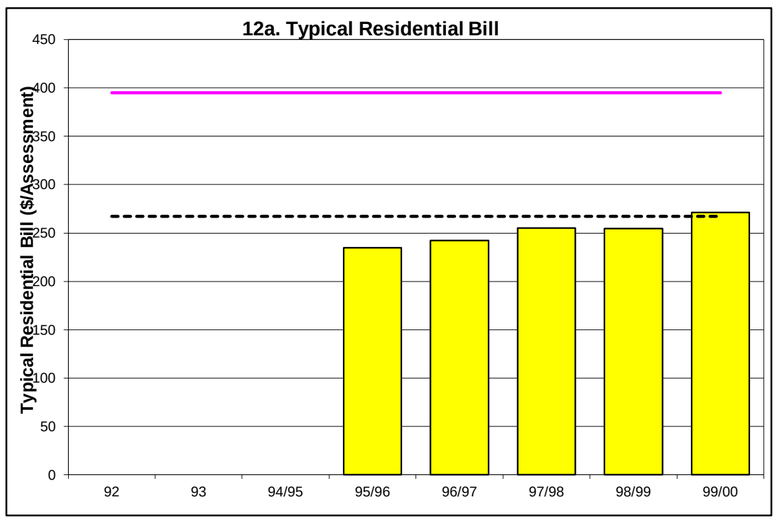
- *a ranking of 1 indicates the Council is in the top 20% of Councils*
- *a ranking of 5 indicates the Council is in the bottom 20% of Councils*

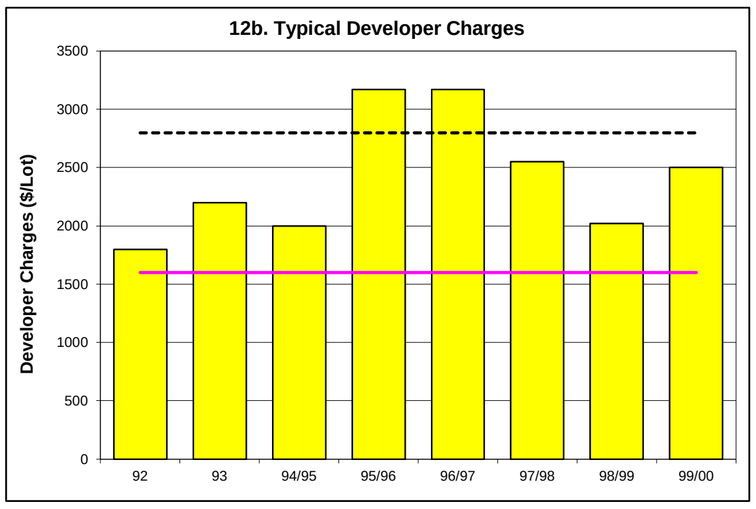
2 *Annual review of the key projections and actions in Council's SBP are required, together with annual updating of Council's financial plan.*

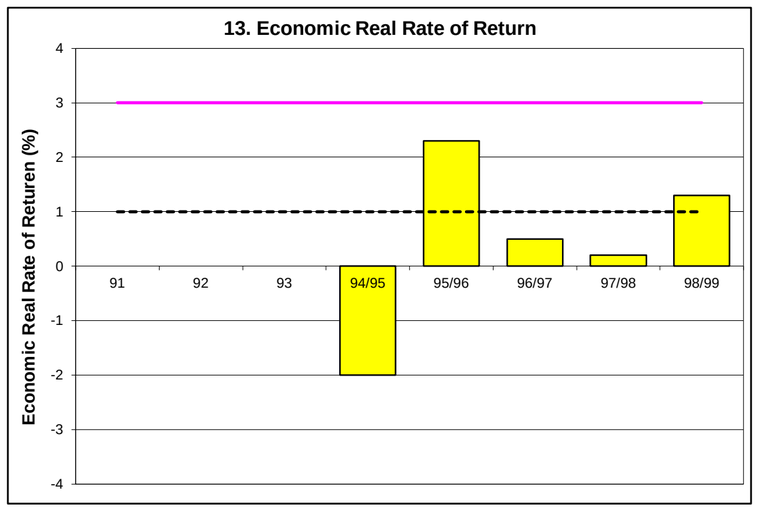
Muswellbrook Council Performance (Results shown for 8 years together with 1998/99 Statewide Median and Top 20%)

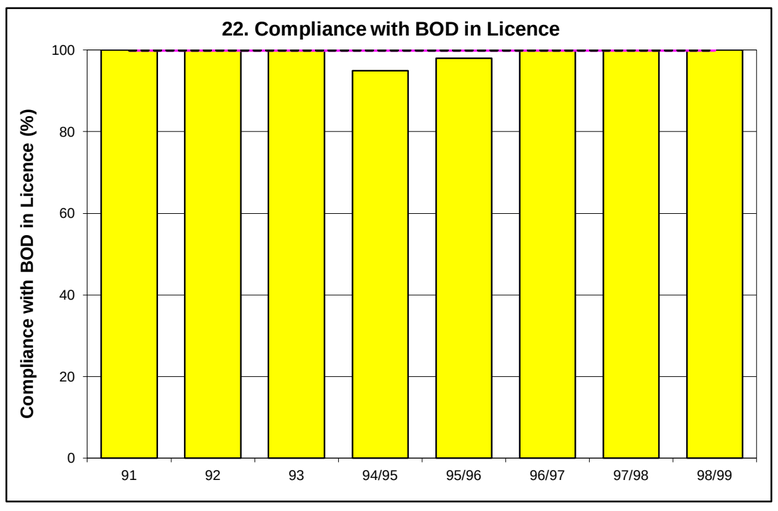


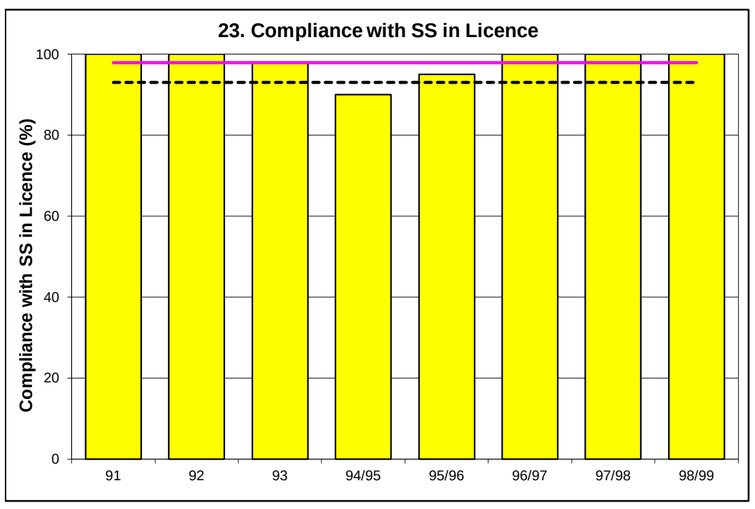


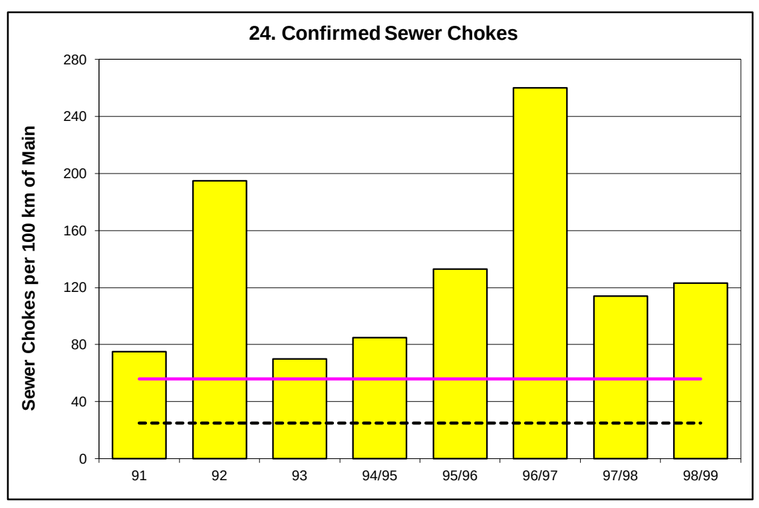


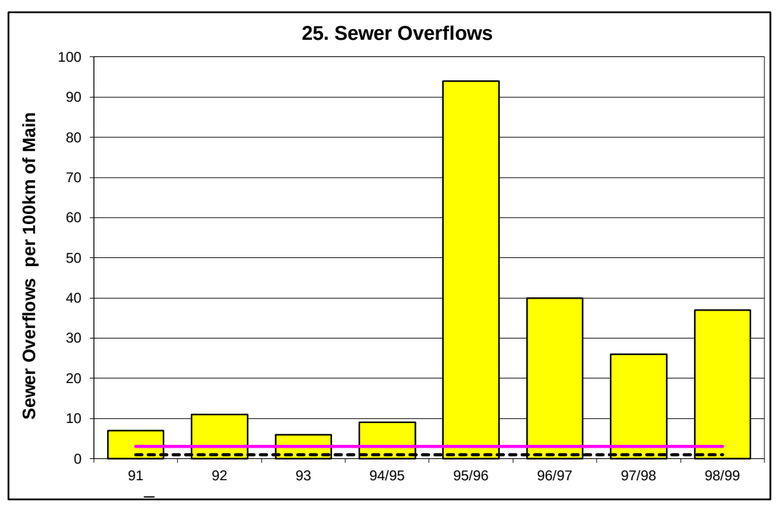


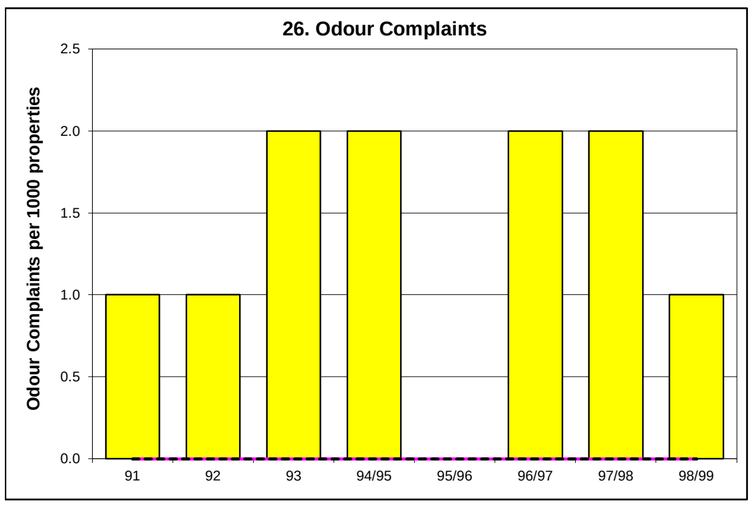


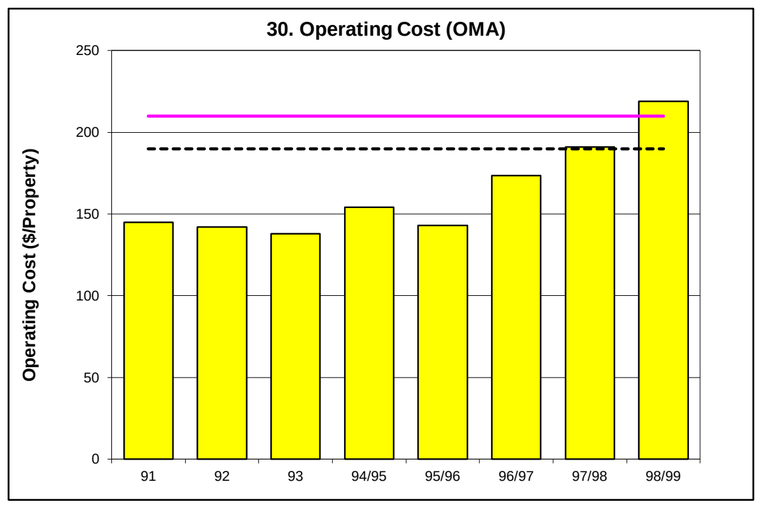


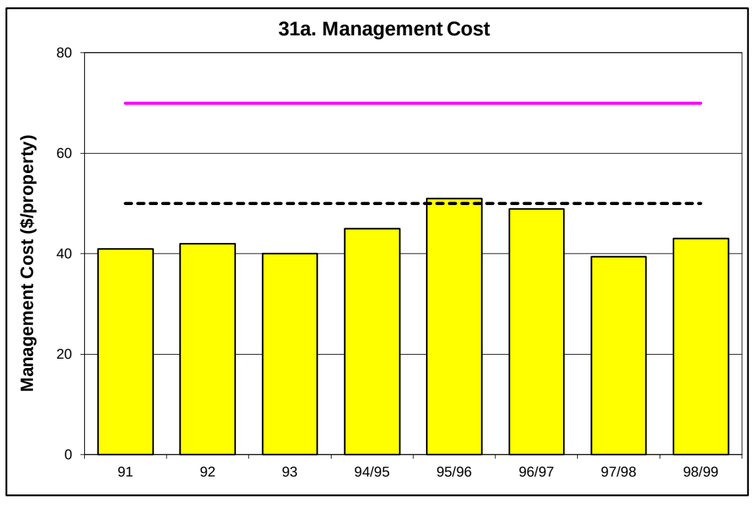


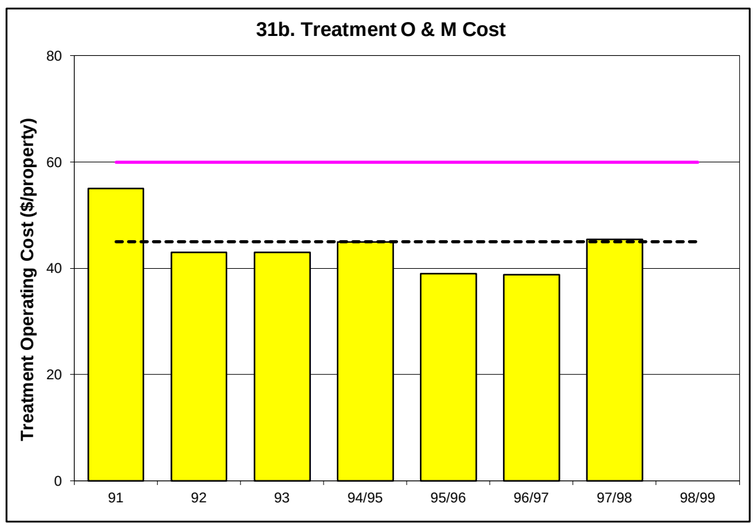


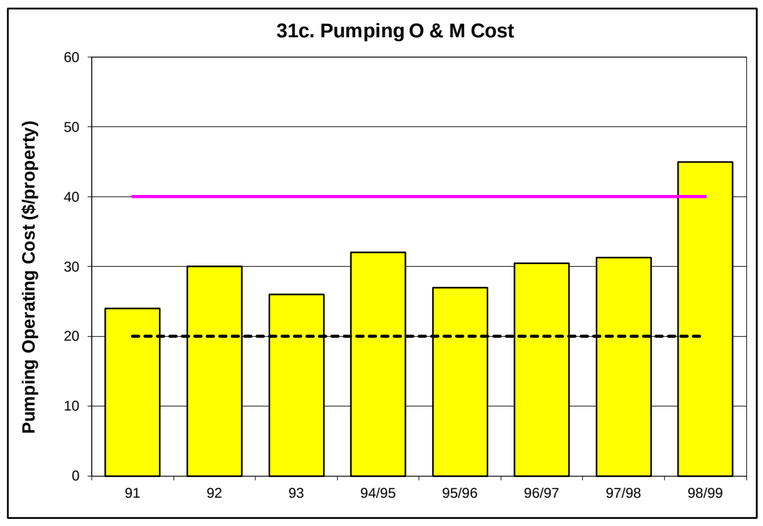


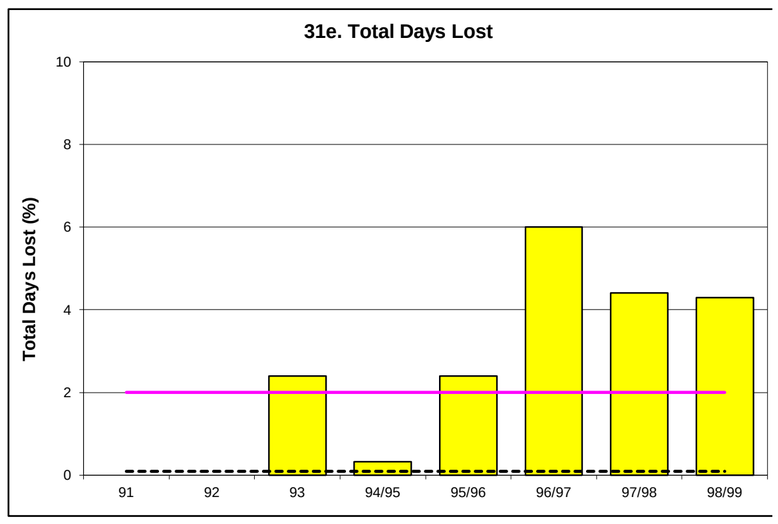












Costs are in 1999$.

LEGEND

1998/99 State Median

1998/99 Top 20%

1998/99 Water Supply Performance Percentiles on a % of Councils Basis

	20%	40%	Median (50%)	60%	80%
BUSINESS CHARACTERISTICS					
Urban Properties without Reticulated Public Water Supply (%)	0	2	4.5	6	11
Residential Connections (% of total)	88	90	91	92	93
New Residential Dwellings Connected to Water Supply (%)	1.8	1.0	0.8	0.5	0.2
Properties Served per km of Main	35	28	25	22	16
Annual Total Consumption (at Master Meters - ML)	4300	2200	1500	800	400
Average Annual Residential Consumption (kL/property)	210	270	290	340	440
Peak Day to Average Consumption (%)	170	230	250	265	370
Unnacounted for Water (including leakage %)	11	15	16	17	21
Energy Consumption (kWh/ML)	0.0	0.1	0.3	0.5	0.7
Energy Consumption (kWh/property)	0.0	0.0	0.1	0.1	0.3
Renewals Expenditure (% of current replacement cost of system assets)	0.2	0.0	0.0	0.0	0.0
Employees (per 1000 properties)	1.1	1.5	1.6	1.9	2.8
1999/2000 CHARGES					
Water Usage Charge (c/kL)	85	70	65	60	45
Annual Water Allowance (kL/assessment)	0	0	150	250	350
Access Charge ($/assessment)	180	220	230	280	360
Typical Residential Bill ($/assessment)	300	330	350	380	450
Typical Developer Charge($/equivalent tenement)	2800	2000	1700	1200	700
1998/99 BILLS					
Average Residential Bill ($/per connected property)	280	320	350	380	430
Bill for Residential Customer using 200 kL/a ($/assessment)	250	290	310	300	410
Real increase over previous year's Bill for Residential Customer using 200 kL/a (%)	-2	-2	-2	0	2
FINANCIAL					
Revenue from Usage Charges (% of total)	42	27	23	19	11
Revenue from Access Charges (% of total)	39	53	58	63	75
Revenue from Other (% of total)	8	11	14	16	24
Economic Real Rate of Return (%)	3.1	1.8	1.4	1.1	-0.3
Return on Assets (%)	3.2	2.4	1.9	1.5	0.3
Debt to Equity (%)	10	5	4	2	0
Interest Cover (%)	>500	480	410	290	120
Loan Payment ($/property)	160	80	60	45	5
LEVELS OF SERVICE					
Physical and Chemical Water Quality Compliance (%)	100	100	98	95	70
Microbiological Water Quality Compliance (%)	100	100	99	97	90
Water Quality Complaints (per 1000 properties)	1	3	4	6	12
Service Complaints (per 1000 properties)	0	5	9	15	35
Customer Dealings Complaints (per 1000 properties)	0.0	0.0	0.0	0.0	0.3
Customer Interruption Frequency (per 1000 properties)	0	0	4	12	60
Average Duration of Interruption (hr)	1	2	2	3	4
Average Customer Outage Time (hr)	0	0	0	0	0
Number of Main Breaks (per 100 km of main)	7	14	17	24	40
Drought Water Restrictions (% of time)	0	0	0	0	6
EFFICIENCY					
Operating Cost (OMA) per 100 km of Main ($'000)	320	480	550	600	840
Operating Cost (OMA) ($/property)	150	185	210	240	280
Operating Cost (OMA) ($/ML)	320	440	480	550	730
Management Cost ($/property)	40	55	75	85	100
Treatment Cost ($/property)	5	20	30	55	90
Pumping Cost ($/property)	15	23	30	40	60
Water Main Cost ($/property)	30	40	45	55	70
Total Days Lost (%)	0	0	0	1	3

Notes:

1. ***20%*** ***top 20% of councils***
   Median (50%) median of councils
   80% bottom 20% of councils

2. The above performance indicators are on a ***percentage of councils*** basis which is relevant for ***comparing*** the performance of ***one council with other councils*** (refer also to Notes 1 to 3 on page xxiii).

1998/99 Sewerage Performance Percentiles on a % of Councils Basis

	20%	40%	Median (50%)	60%	80%
BUSINESS CHARACTERISTICS					
Urban Properties without Reticulated Sewerage (%)	2	7	9	13	20
Residential Connections (% of total)	88	90	91	92	93
New Residential Dwellings Connected to Sewerage (%)	2.1	1.0	0.7	0.5	0.1
Properties Served per km of Main	42	36	34	32	27
Volume of Sewage Treated per property (kL/a)	170	240	280	300	370
Energy Consumption (kWh/ML)	180	350	430	490	780
Energy Consumption (kWh/property)	50	80	110	120	220
Reclaimed Water (% of effluent reclaimed)	42	6	0	0	0
Biosolids Reuse (%)	0	0	0	0	0
Renewals Expenditure (% of current cost of system assets)	0.0	0.0	0.0	0.0	0.0
Employees (per 1000 properties)	1.1	1.4	1.6	1.8	2.3
1999/2000 CHARGES/BILLS					
Access Charge ($/assessment)	210	270	310	330	390
Typical Residential Bill ($/assessment)	220	280	310	330	390
Typical Developer Charge ($/equivalent tenement)	2500	1800	1600	1200	800
1998/99 BILLS					
Average Residential Bill ($/connected property)	230	290	320	340	390
Real Increase over Previous Year's Average Residential Bill (%)	-7	0	1	2	10
FINANCIAL					
Revenue from Access Charges (% of total)	90	86	82	79	72
Revenue from Trade Waste Charges (% of total)	0.6	0.0	0.0	0.0	0.0
Revenue from Other (% of total)	10	13	16	18	28
Economic Real Rate of Return (%)	3.8	2.2	3.3	0.2	-1.4
Return on Assets (%)	3.0	1.6	0.8	0.1	-1.4
Debt to Equity (%)	17	8	5	3	0.1
Interest Cover (%)	>500	300	200	150	-100
Loan Payment ($/property)	160	70	50	35	0
LEVELS OF SERVICE					
Compliance with BOD in Licence (%)	100	100	100	100	92
Compliance with SS in Licence (%)	100	99	96	92	80
Confirmed Sewer Chokes (per 100 km of main)	23	45	60	85	140
Sewage Overflows (per 100 km of main)	0	2	3	5	20
Confirmed Sewer Chokes attended to within 5 hours (%)	100	100	100	100	100
Odour Complaints (per 1000 properties)	0	0	0	0	1
Service Complaints (per 1000 properties)	3	12	20	27	50
Customer Dealings Complaints (per 1000 properties)	0	0	0	0	0.1
Customer Interruption Frequency (per 1000 properties)	0	0	2	10	30
Average Duration of Interruptions (hr)	1.0	1.5	1.5	2	2
Average Customer Outage Time (hr)	0	0	0.4	1	3
EFFICIENCY					
Operating Cost (OMA) per 100 km of Main ($'000)	480	660	720	770	980
Operating Cost (OMA) ($/property)	160	190	210	220	270
Operating Cost (OMA) ($/ML)	550	690	770	870	1140
Management Cost ($/property)	30	50	55	65	90
Treatment Cost ($/property)	50	60	65	75	95
Pumping Cost ($/property)	20	25	30	35	45
Sewer Main Cost ($/property)	10	20	23	25	35
Total Days Lost (%)	0	0.7	1.6	2	4

Notes:

1. ***20%*** ***top 20% of councils***
   Median (50%) median of councils
   80% bottom 20% of councils

2. The above performance indicators are on a ***percentage of councils*** basis which is relevant for ***comparing*** the performance of ***one council with other councils*** (refer also to Notes 1 to 3 on page xxiii).