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Land Transport NZ
Ikiiki Whenua Aotearoa

land transport road assets

comparison of all territorial authorities

Information as at June 2006

Purpose of this publication

Land Transport New Zealand annually publishes comparative information on the maintenance of local authority roads. The information in this publication is based on financial assistance claimed from Land Transport NZ in 2005/06 and on the annual achievement returns from each local authority's RAMM database.

This enables a comparison to be made between local authorities and their peers. It is also useful as a benchmark for auditing and for reviewing of maintenance funding allocations.

This publication is also available on our website under *Performance of Land Transport* (www.landtransport.govt.nz/information-for/local-transport-authorities.html).

Enquiries

For further information please contact Colin Tubb at Land Transport NZ's National office in Wellington; ph 04 916 4283, or email colin.tubb@landtransport.govt.nz.

Feedback

We are keen to receive your feedback so that improvements can continue to be made. Please contact the manager of performance information at your local Land Transport NZ office.

Northern Region	09 969 9800
Midland Region	07 958 8740
Central Region	04 931 8900
Southern Region	03 964 2866

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Road condition

Smooth Travel Exposure (STE)

The smooth travel exposure section gives the STE results from each territorial authority's annual achievement return, plus the trend over the last five years.

Smooth travel exposure measures the proportion (%) of vehicle kilometres travelled in a year that occurs on 'smooth' sealed roads and indicates the quality of the ride experienced by motorists.

A 'smooth' road is one smoother than a predetermined NAASRA roughness threshold. Thresholds vary with traffic density and road location. Heavily trafficked roads have a lower (smoother) threshold. High volume urban roads have lower roughness thresholds than low volume rural roads.

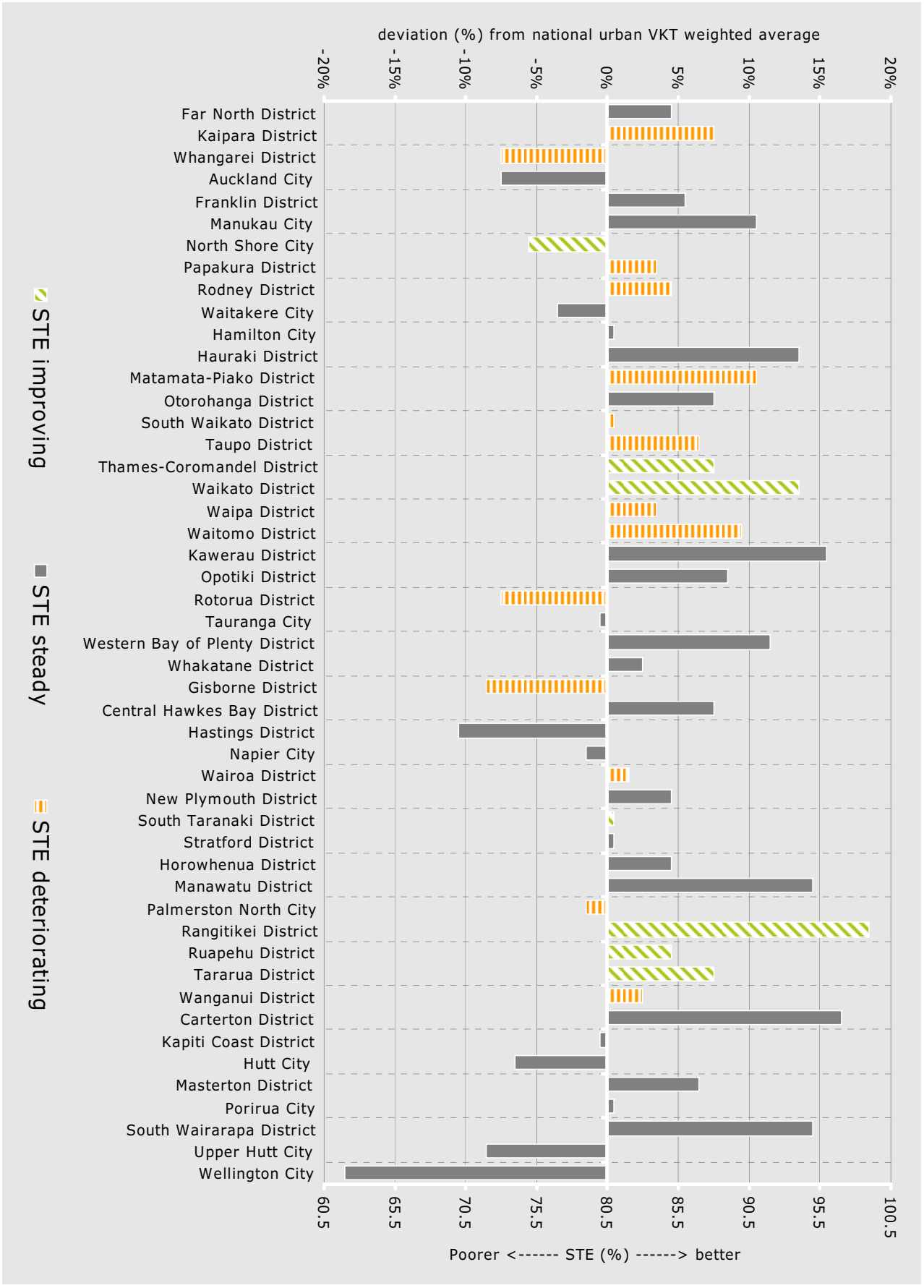
Results for urban roads, rural roads and the completed sealed network are shown separately, as are North Island and South Island results. Urban roads have a speed limit of 70kph or less. The recent trend in this measure is also shown[1]. Where the network is getting rougher the bar is orange, if smoother, lime green. If the network's net smoothness is steady, grey is used.

A deteriorating trend for a particular TA (that is, the value of STE has been reducing over time) does not always indicate that corrective action should be taken. Where the value of STE is already high (that is, the busy roads are generally smooth), the optimal value will probably be less than at present and a deteriorating trend is acceptable. The current value and trend in STE gives a 'snapshot' in time and helps us assess the effectiveness (at least in terms of ride quality experienced by users) of the investment made in sealed road maintenance and pavement smoothing in recent years. However, STE alone does not give us sufficient information to judge whether a territorial authority's pavement maintenance practices, including level of intervention, are optimal.

[1]This trend shows the slope of the linear regression line for the last five years of data. The range of the measured results, across all local authorities, has been examined to establish the limits of a middle band. The middle band includes half of the total travel. This middle band is defined by a range centred around zero change in the measure per annum—that is, within + or—'X' annual change. The value of 'X' has simply been chosen to capture half of the travel and results falling within this middle band have been classified as 'steady'. Establishing which results will fall in the steady classification is thus arbitrary, but the methodology allows us to identify outliers. Individual local authorities are also able to identify whether the measures for their roads, relative to other local authorities, are within the middle band or whether they fall into an outlier group.

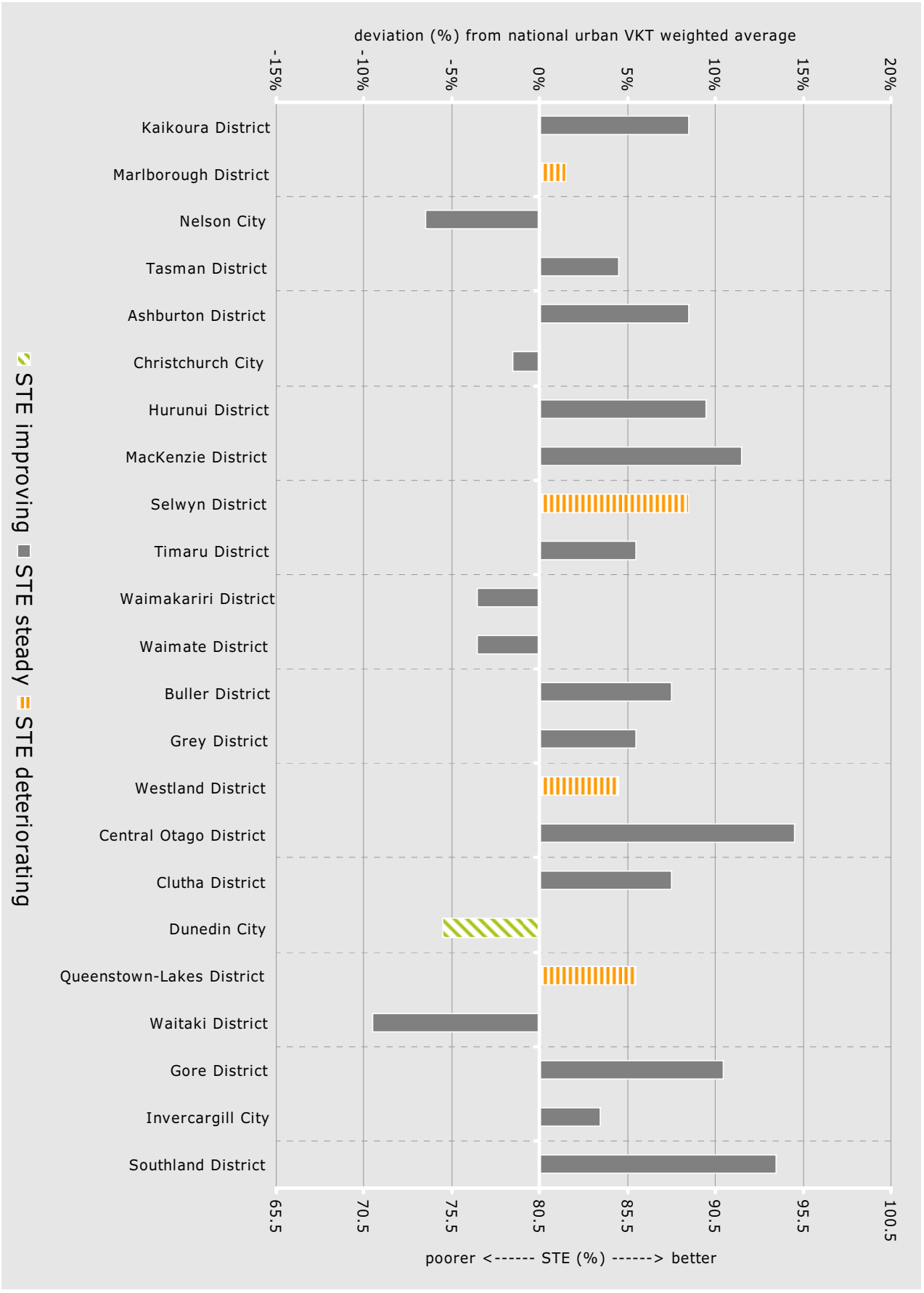
North Island sealed urban network

Smooth travel exposure (STE)



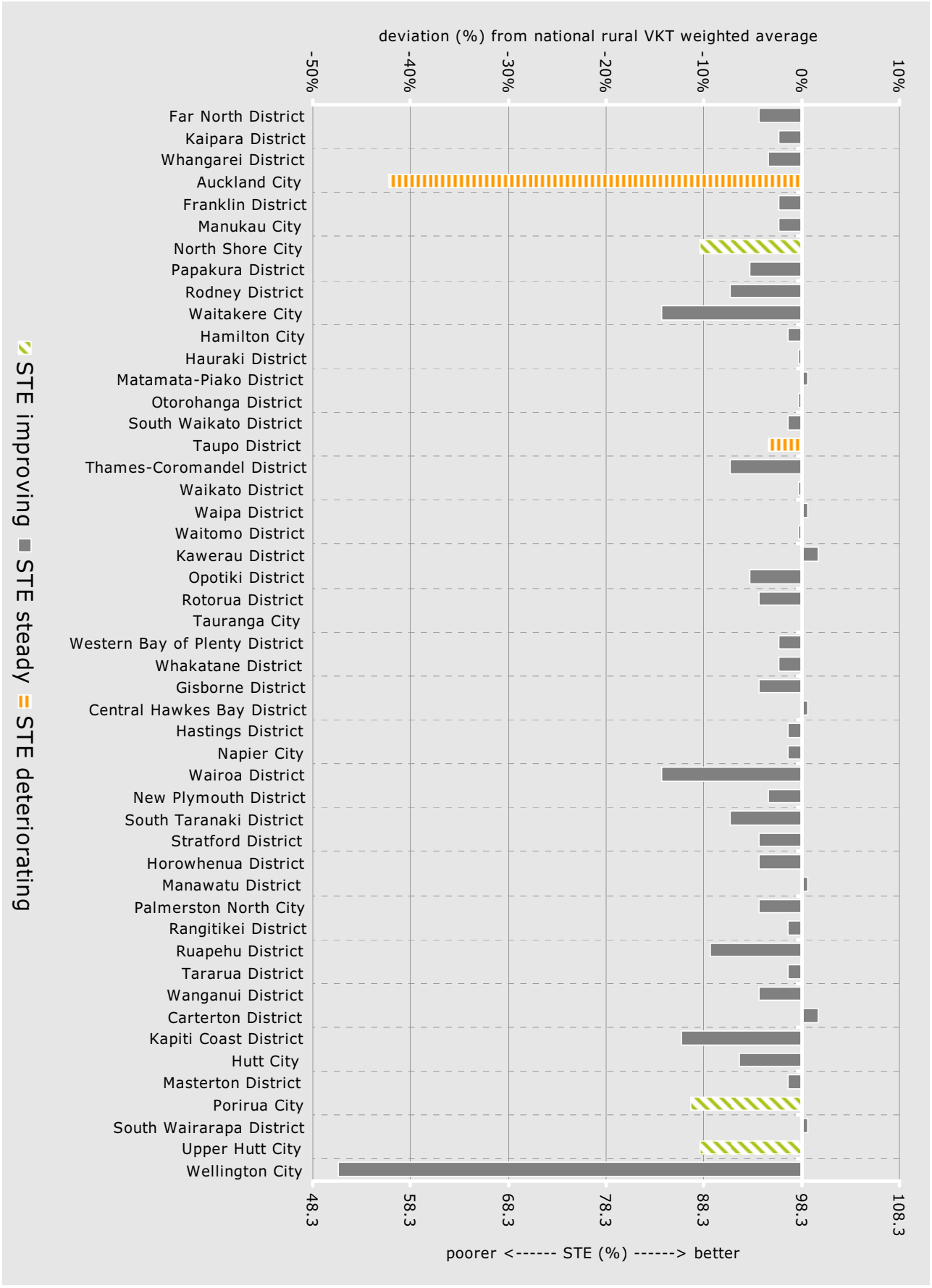
South Island sealed urban network

Smooth travel exposure (STE)



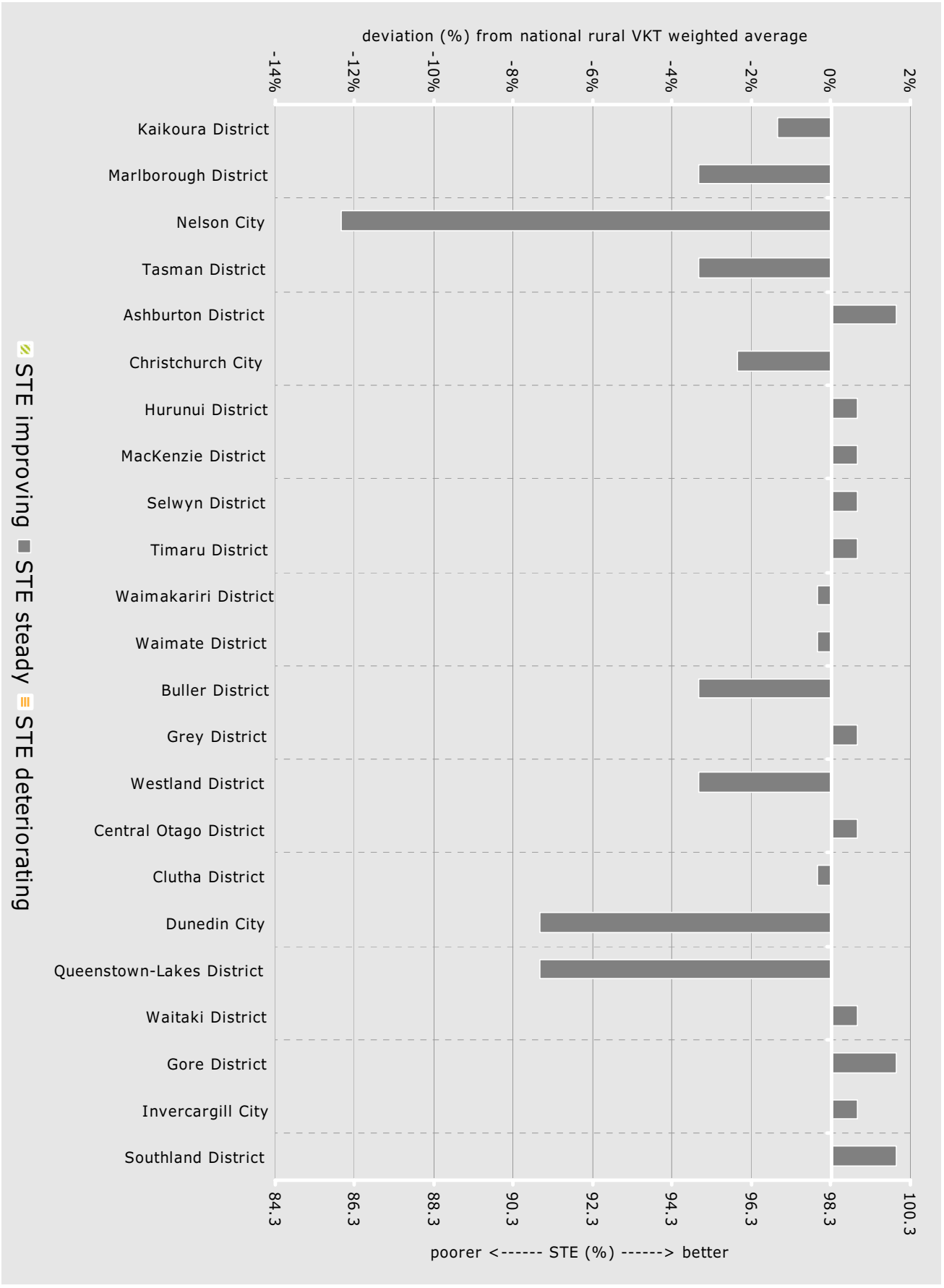
North Island sealed rural network

Smooth travel exposure (STE)



South Island sealed rural network

Smooth travel exposure (STE)

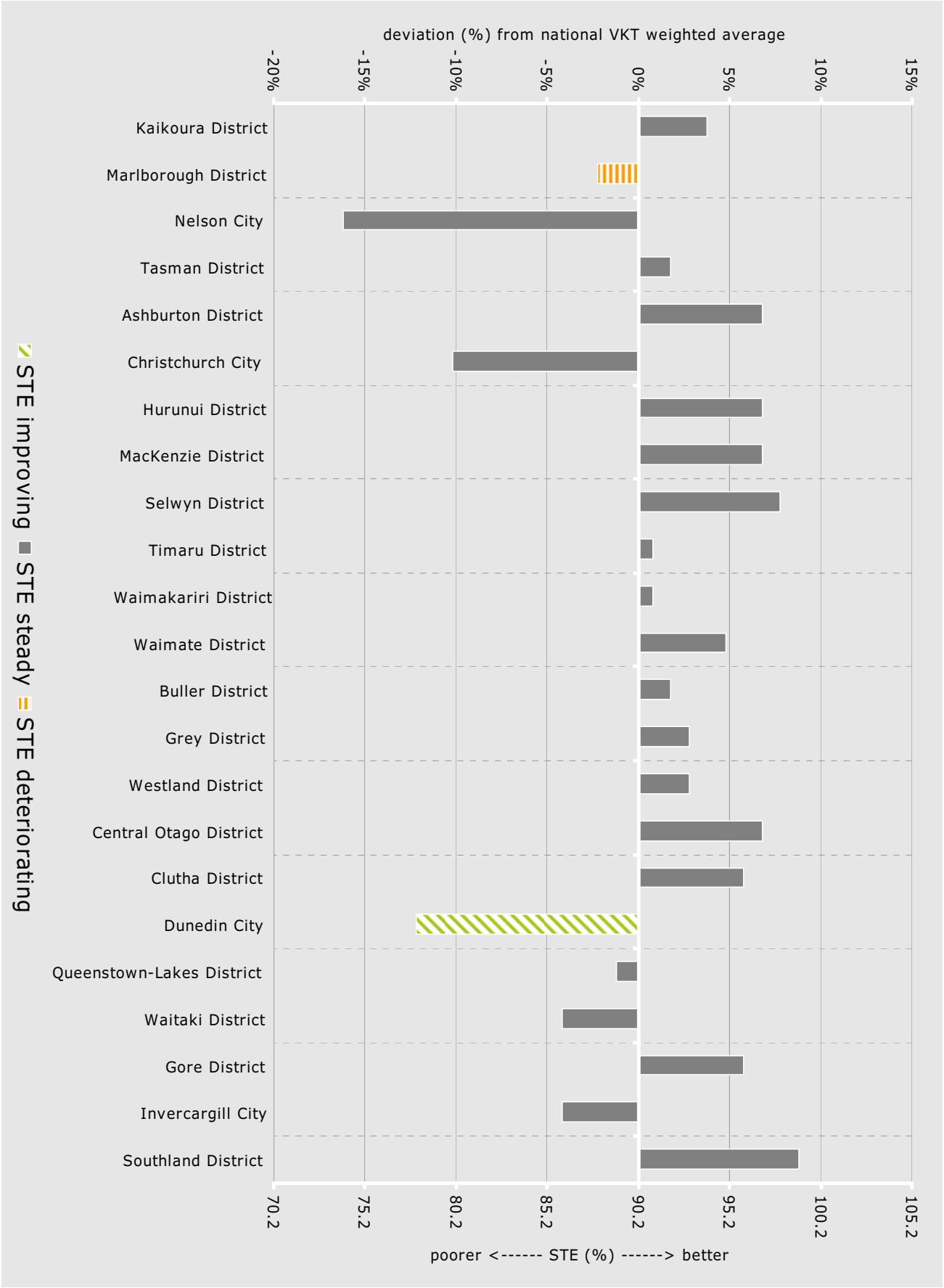


North Island sealed network overall

Smooth travel exposure (STE)

South Island sealed network overall

Smooth travel exposure (STE)



Condition Index (CI)

The Condition Index (CI) is a combined index, a 'weighted sum', of the surface faults in sealed road surfaces. CI combines alligator cracking, scabbing, potholes, pothole patches and flushing.

100 - CI ensures that the higher the number, the better the condition.

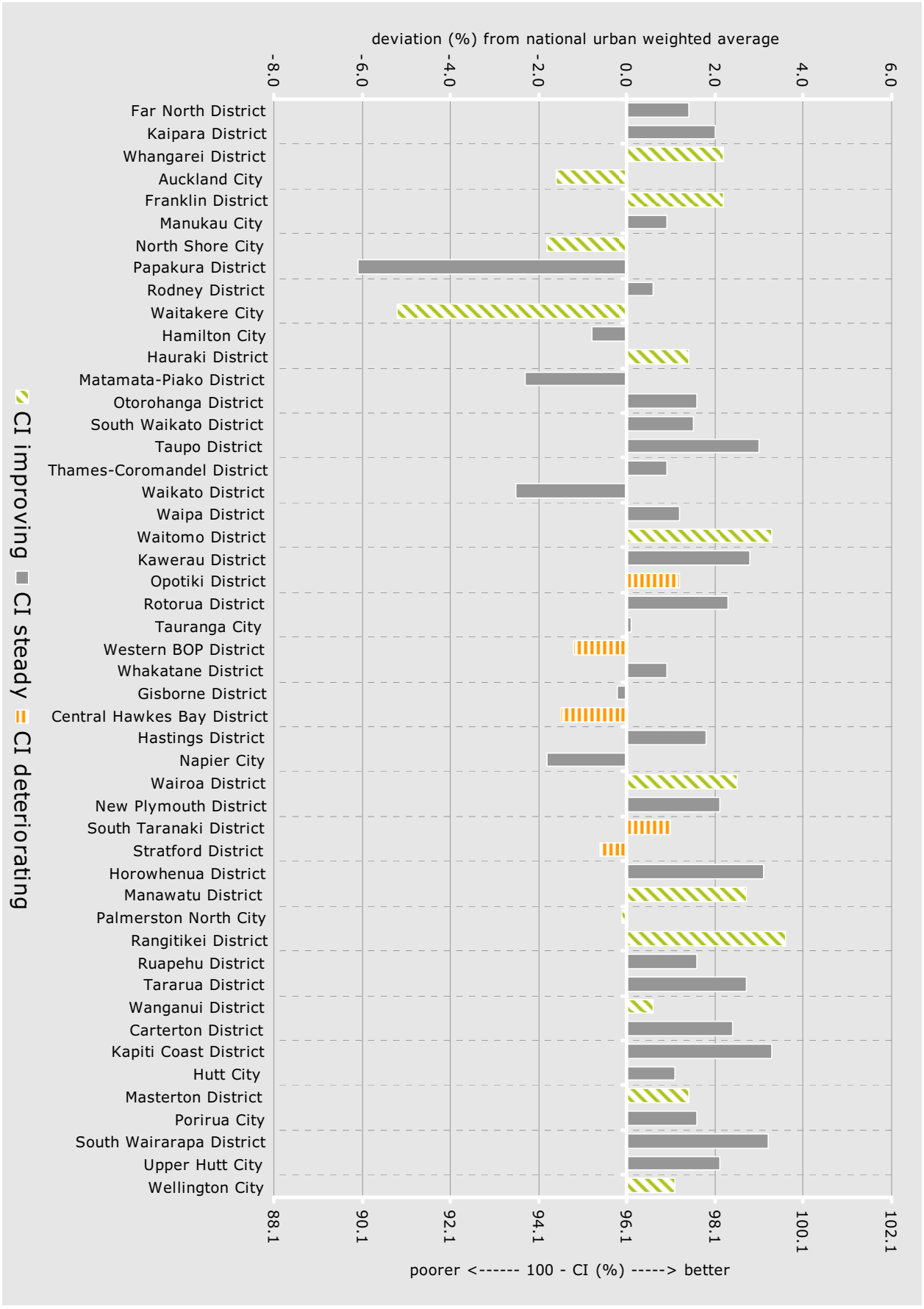
CI and the routine for calculating it using the RAMM software, were introduced in the 2002/03 year.

Results for urban roads, rural roads and the completed sealed network are shown separately, as are North Island and South Island results. Urban roads are defined as having a speed limit of 70kph or less. The recent trend in this measure is also shown[2]. Where the surface condition is deteriorating the bar is orange, if improving, lime green. If the network's surface condition is steady, grey is used.

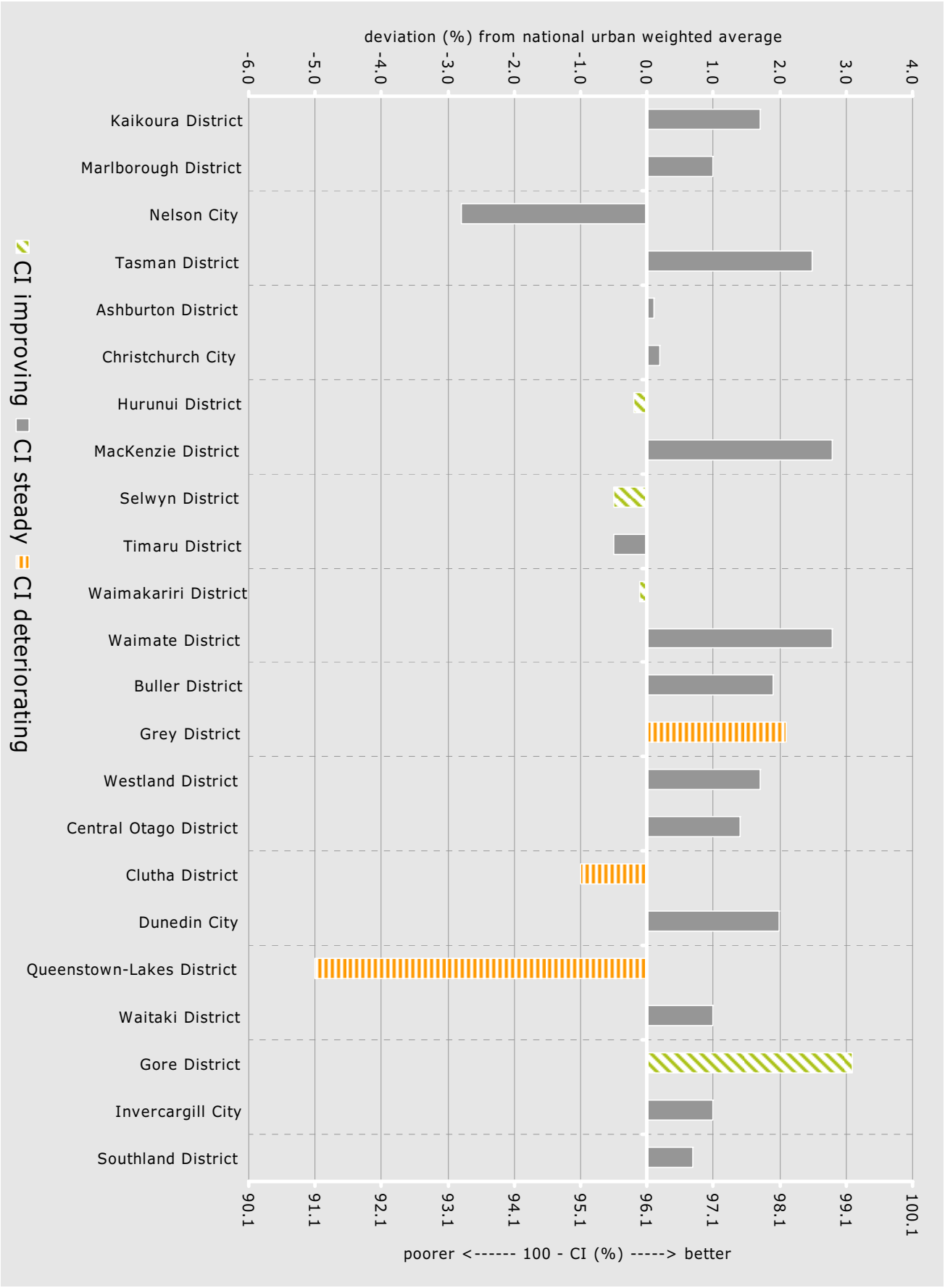
A deteriorating trend for a particular territorial authority (that is, the value of 100 - CI has been decreasing over time) does not always indicate that corrective action should be taken. Where the value of 100 - CI is already high (the surface condition is good) the optimal value will probably be higher than at present and a deteriorating trend is desirable. The current value and trend in 100 - CI give a 'snapshot' in time. Substantially more information (including historical CI data) is needed to judge whether current maintenance practices, including the level of investment, are optimal.

[2]This trend shows the slope of the linear regression line for the last five years of data. The range of the measured results, across all local authorities, has been examined to establish the limits of a middle band. The middle band includes half of the total travel. This middle band is defined by a range centred around zero change in the measure per annum—that is, within + or—'X' annual change. The value of 'X' has simply been chosen to capture half of the travel and results falling within this middle band have been classified as 'steady'. Establishing which results will fall in the steady classification is thus arbitrary, but the methodology allows us to identify outliers. Individual local authorities are also able to identify whether the measures for their roads, relative to other local authorities, are within the middle band or whether they fall into an outlier group.

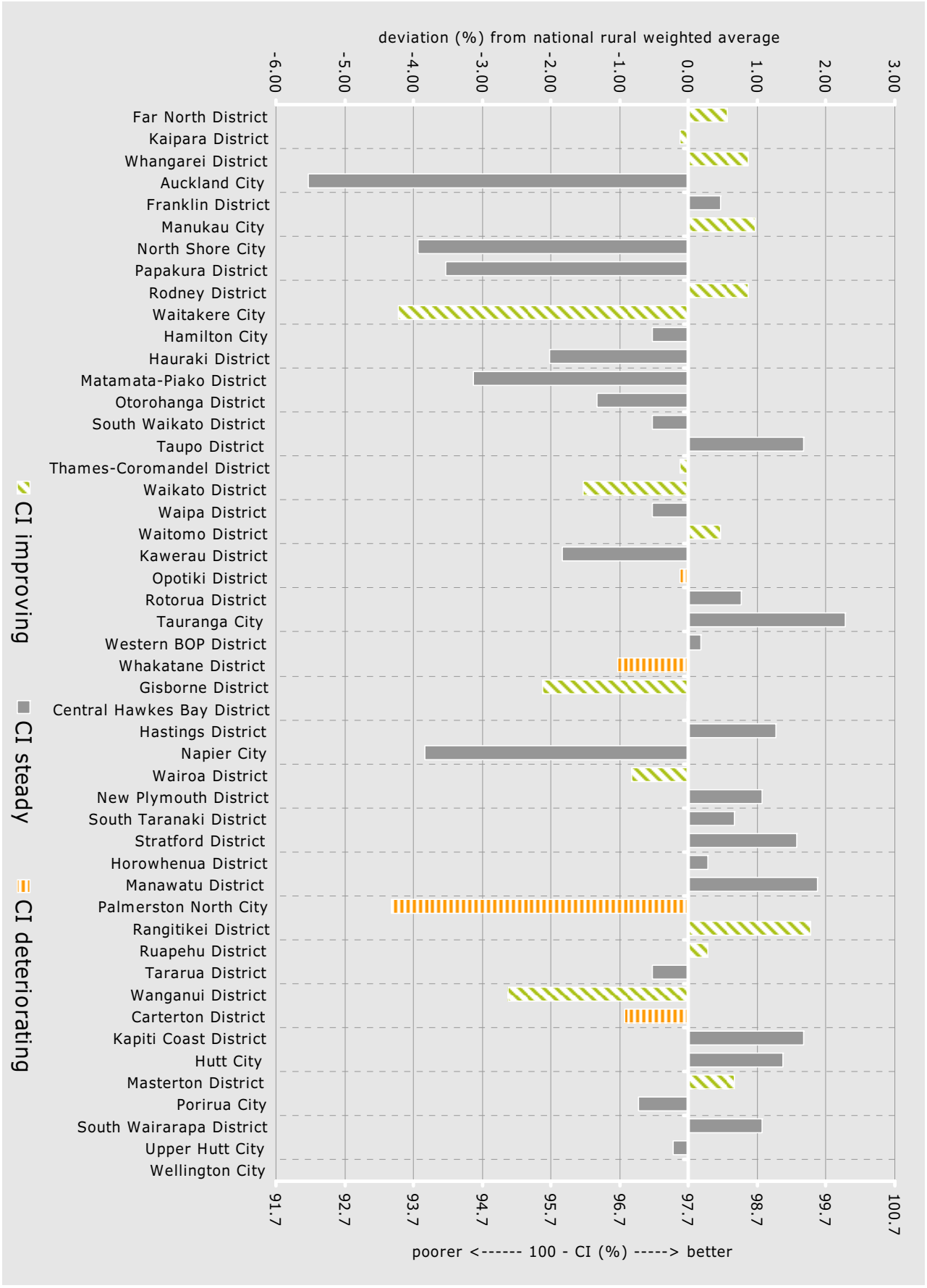
North Island sealed urban networks
2005/06 network surface condition



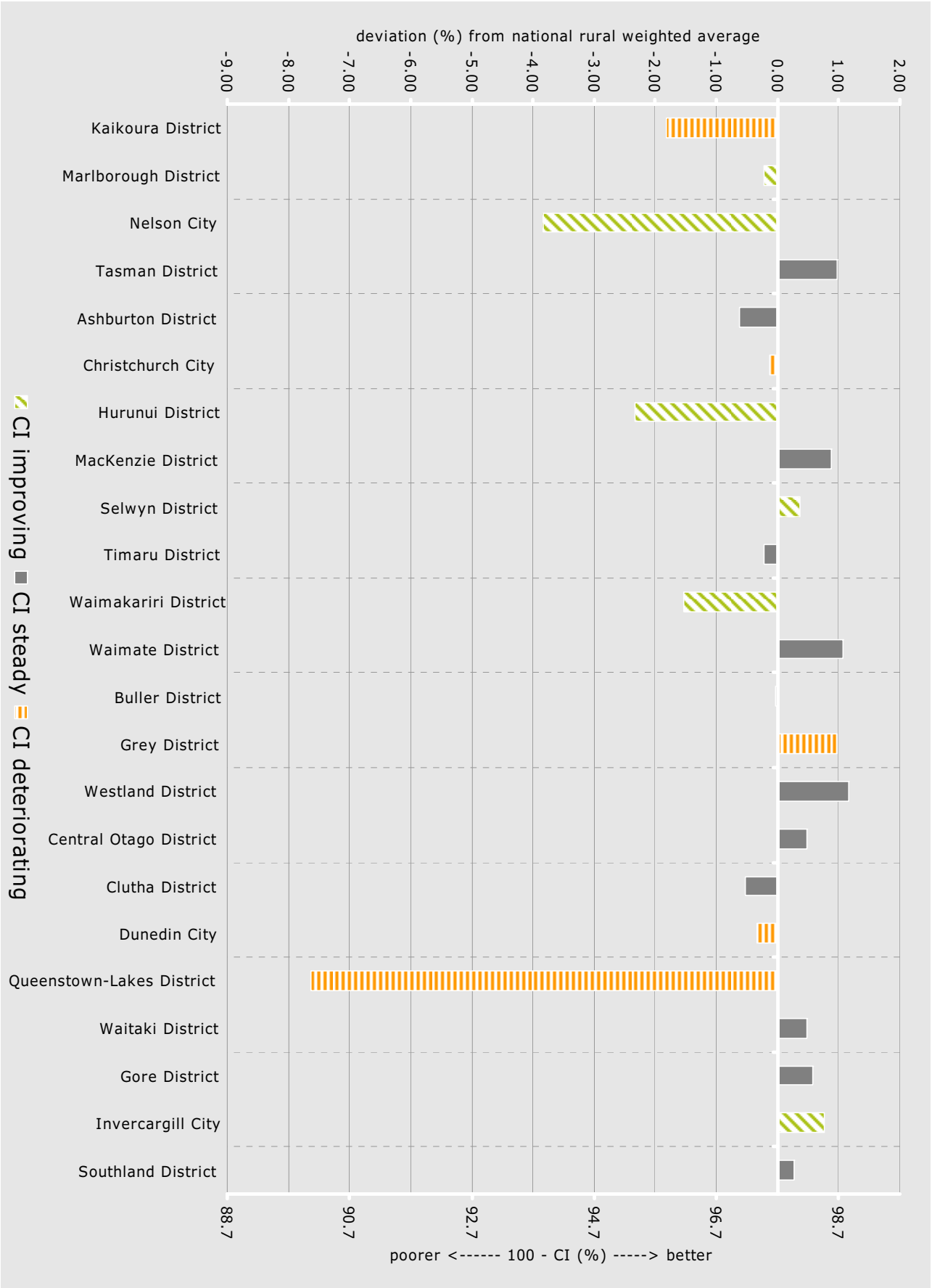
South Island sealed urban networks
2005/06 network surface condition



North Island sealed rural networks
2005/06 surface condition

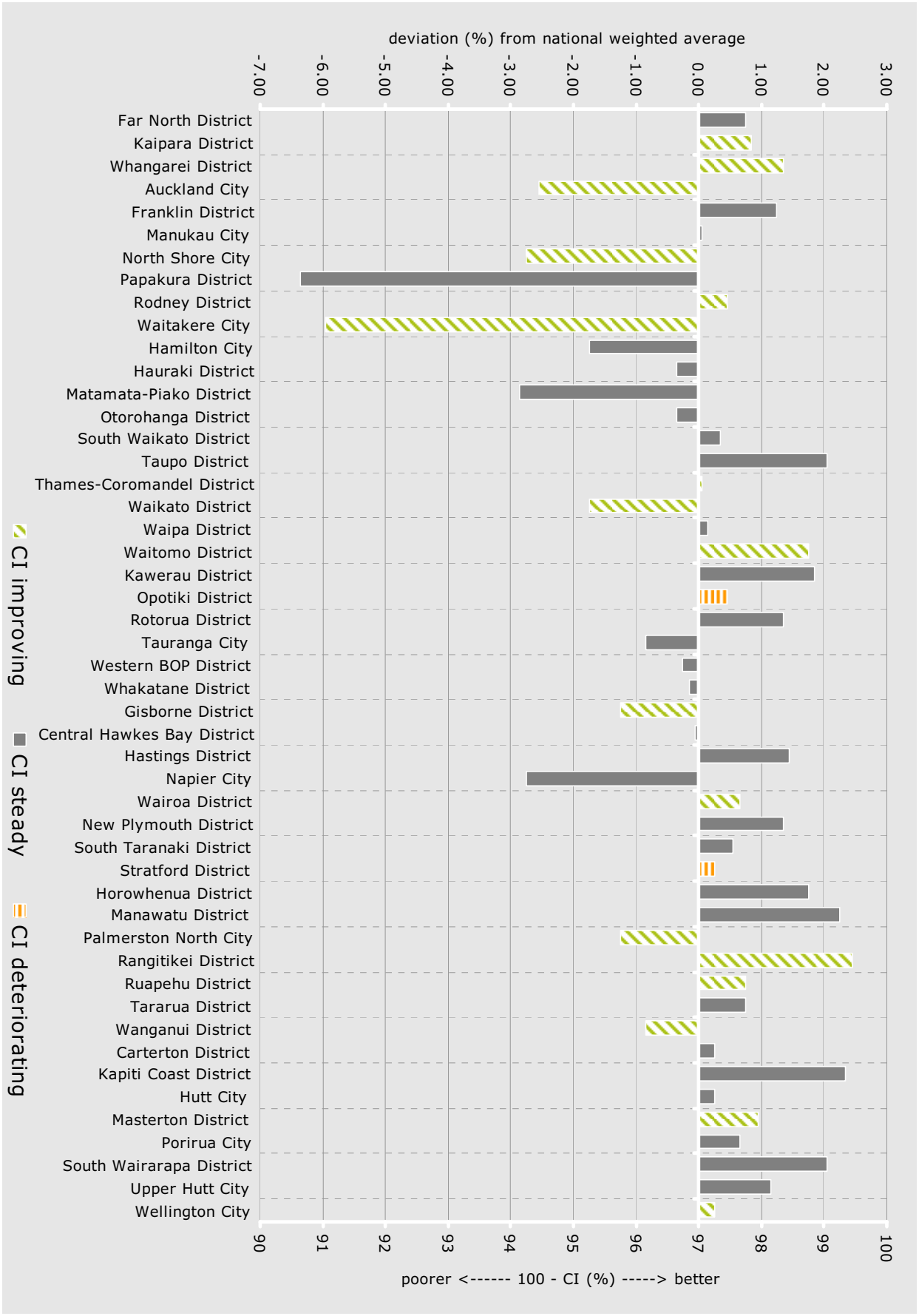


South Island sealed rural networks
2005/06 surface condition



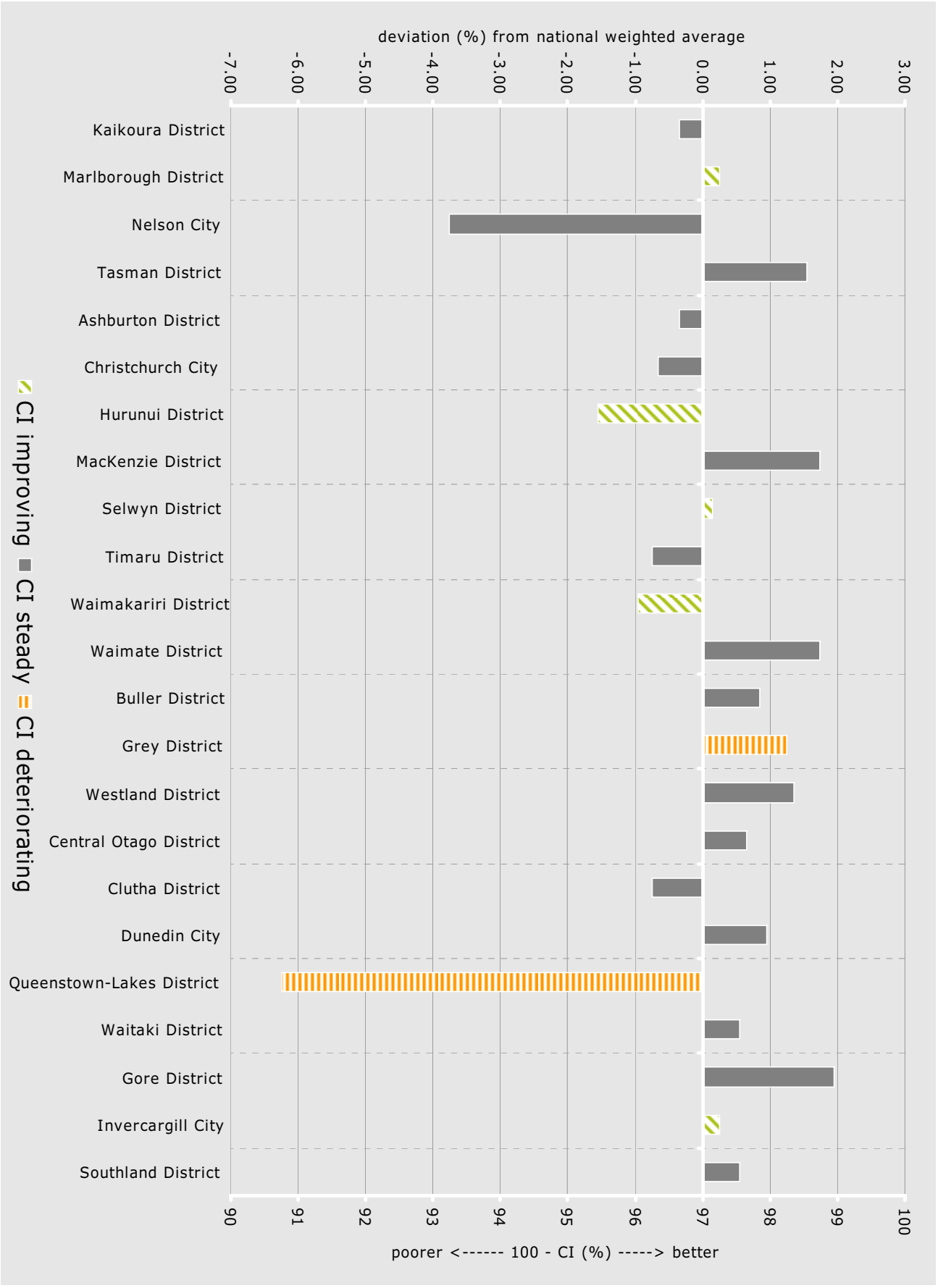
North Island sealed networks overall

2005/06 surface condition



South Island sealed networks overall

2005/06 surface condition



Pavement Integrity Index (PII)

The Pavement Integrity Index (PII) is a combined index of the pavement faults in sealed road surfaces. It is a 'weighted sum' of the pavement defects divided by the total lane length. PII combines surface faults (CI) with rutting and shoving.

100 - PII ensures that the higher the number the greater the pavement integrity.

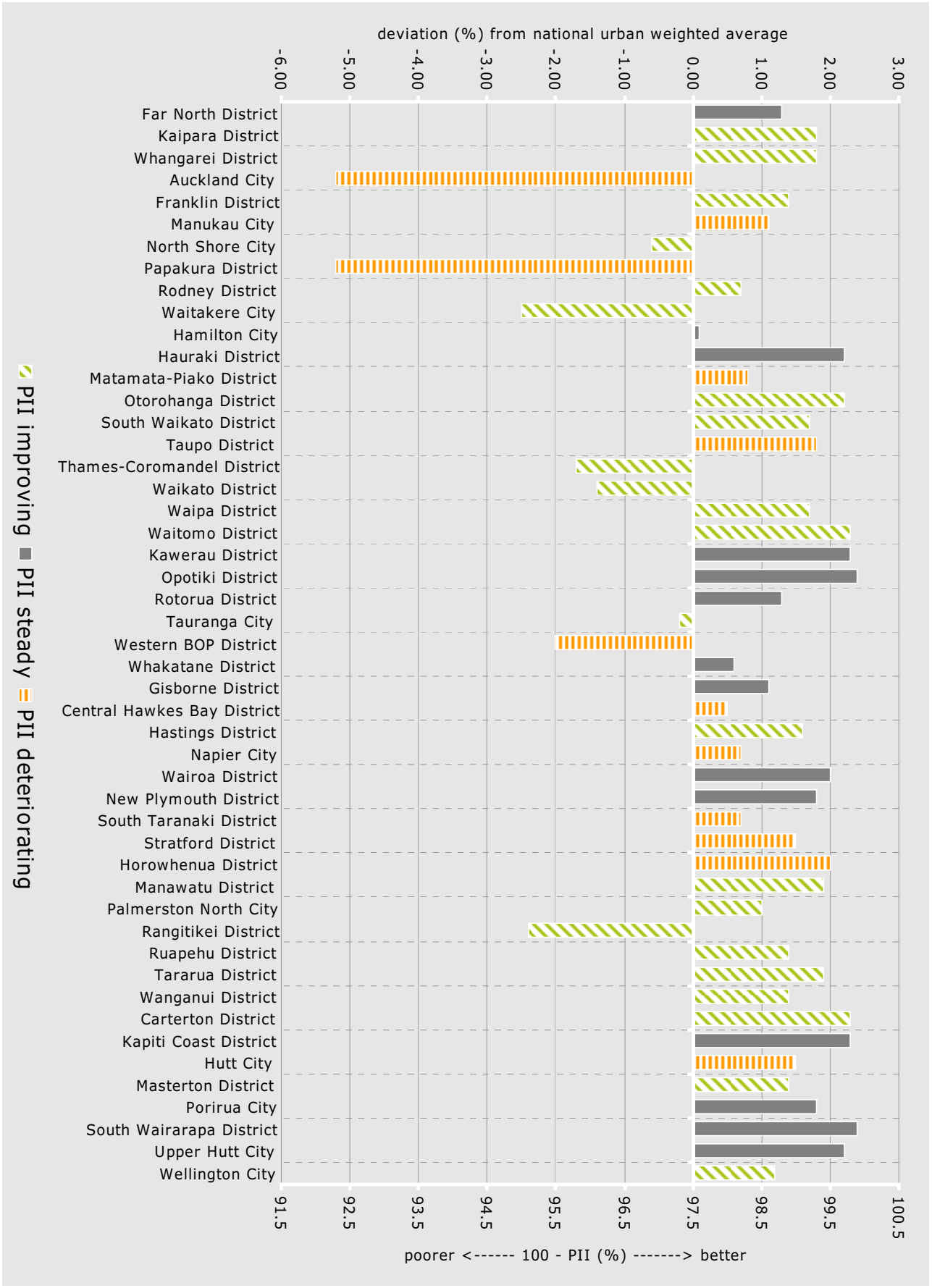
Pavement integrity index (PII) and the routine for calculating it using the RAMM software, was introduced in the 2003/04 year.

Results for urban roads, rural roads and the completed sealed network are shown separately, as are North Island and South Island results. Urban roads have a speed limit of 70kph or less. The recent trend in this measure is also shown[3]. Where the pavement integrity is deteriorating the bar is orange, if improving, lime green. If the network pavement integrity is steady, grey is used.

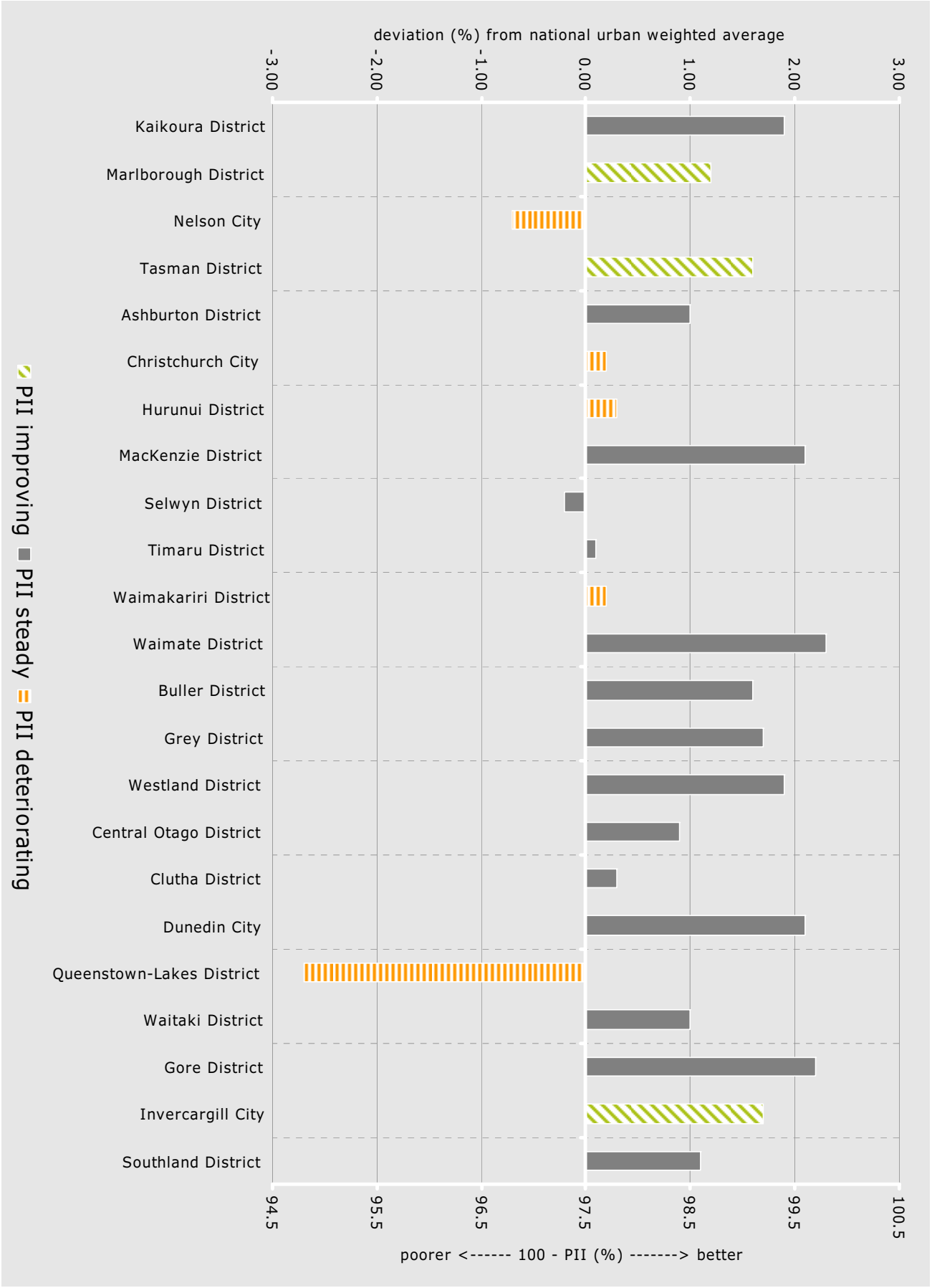
A deteriorating trend for a particular territorial authority (that is, the value of 100 - PII has been decreasing over time) does not always indicate that corrective action should be taken. Where the value of 100 - PII is already high (the pavement integrity is good), the optimal value will probably be higher than at present and a deteriorating trend is desirable. The current value and trend in 100 - PII give a 'snapshot' in time. Substantially more information (including historical PII data) is needed to judge whether current maintenance practices, including the level of investment , are optimal.

[3]This trend shows the slope of the linear regression line for the last five years of data. The range of the measured results, across all local authorities, has then been examined to establish the limits of a middle band. The middle band includes half of the total travel. This middle band is defined by a range centred around zero change in the measure per annum—that is, within + or—'X' annual change. The value of 'X' has simply been chosen to capture half of the road length and results falling within this middle band have been classified as 'steady'. Establishing which results will fall in the steady classification is thus arbitrary, but the methodology allows us to identify outliers. Individual local authorities are also able to identify whether the measures for their roads, relative to other local authorities, are within the middle band or whether they fall into an outlier group.

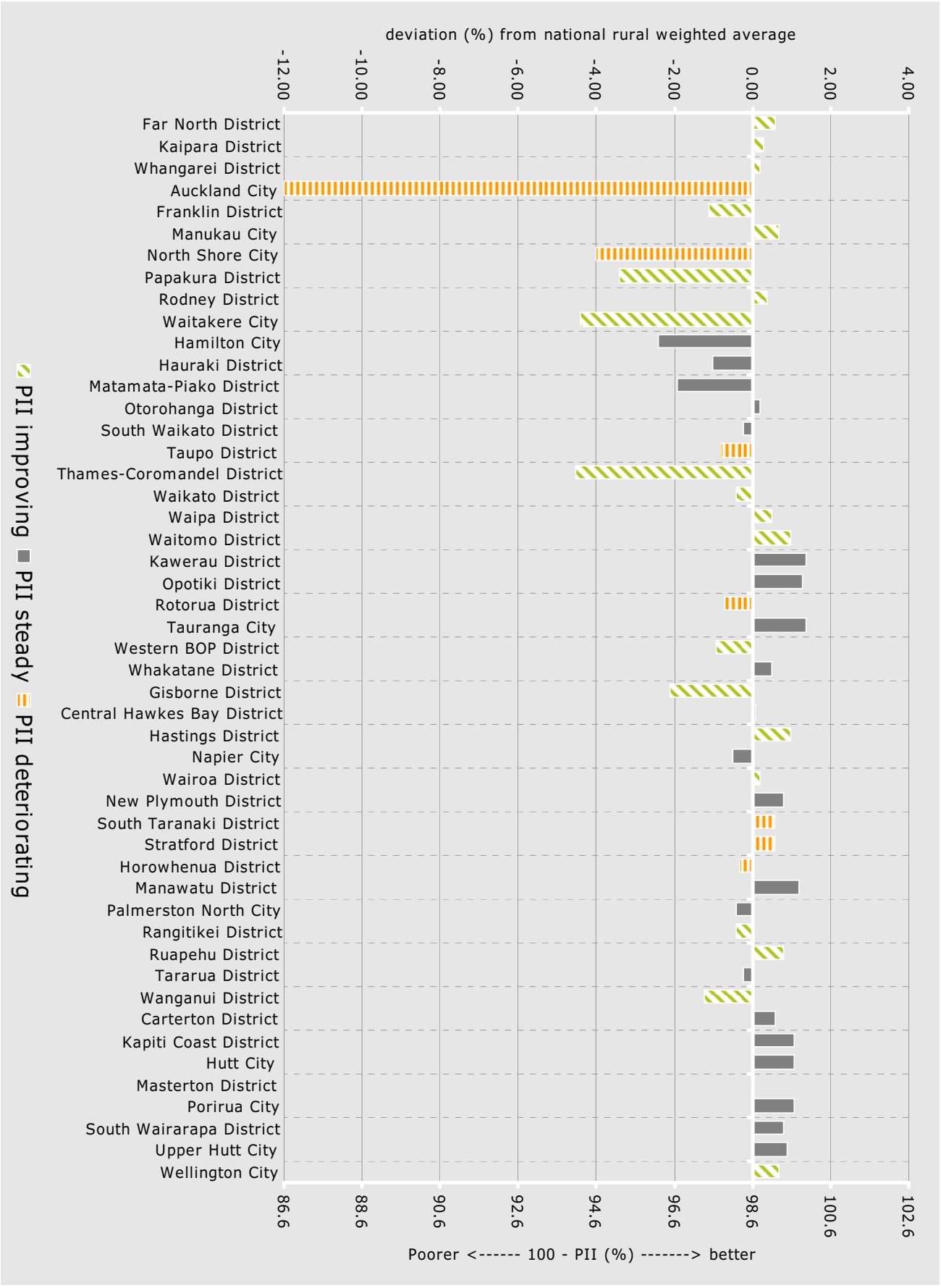
North Island sealed urban network
2005/06 pavement condition



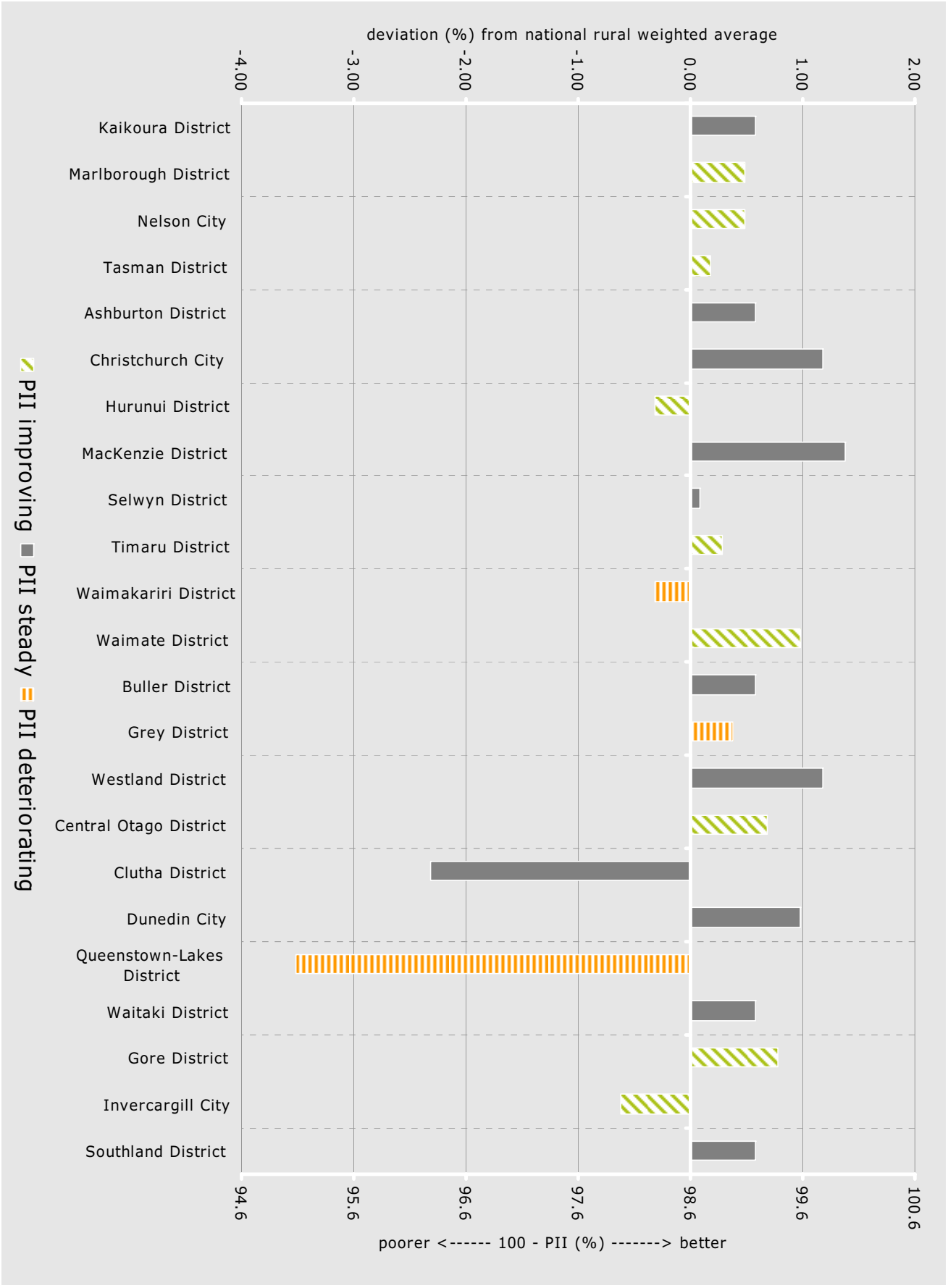
South Island sealed urban network
2005/06 pavement condition



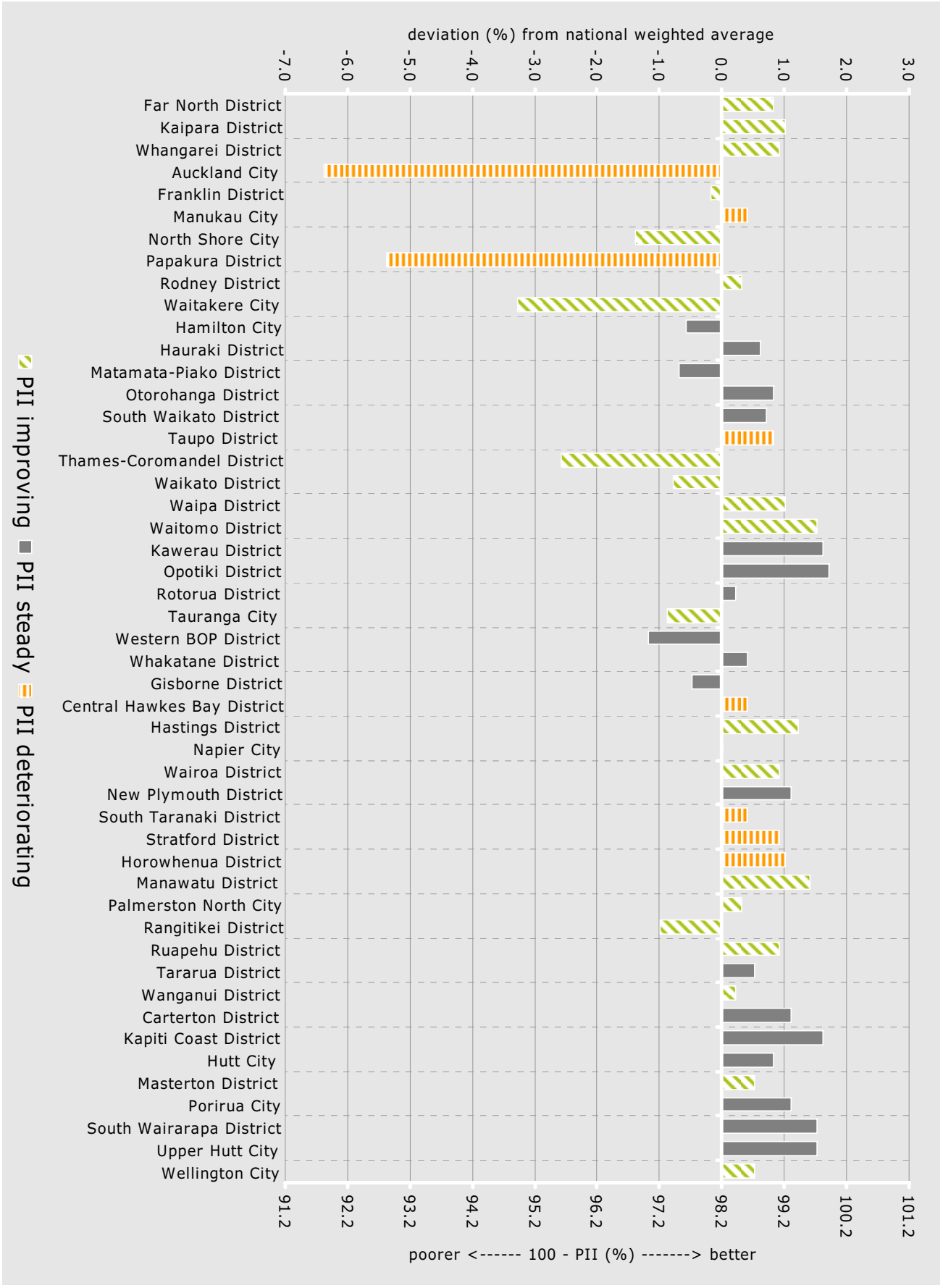
North Island sealed rural network
2005/06 pavement condition



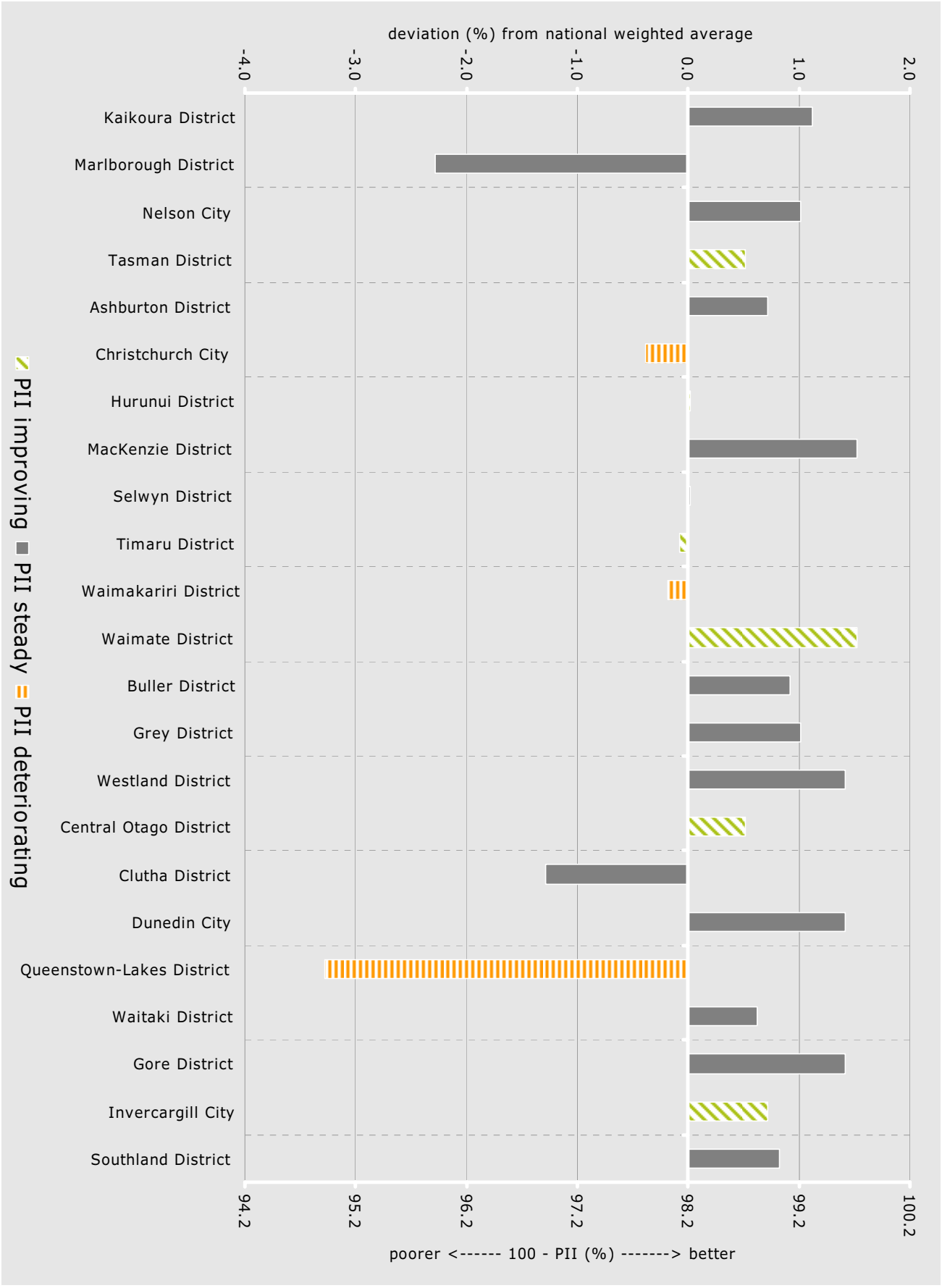
South Island sealed rural network
2005/06 pavement condition



North Island overall network
2005/06 pavement condition



South Island overall network
2005/06 pavement condition

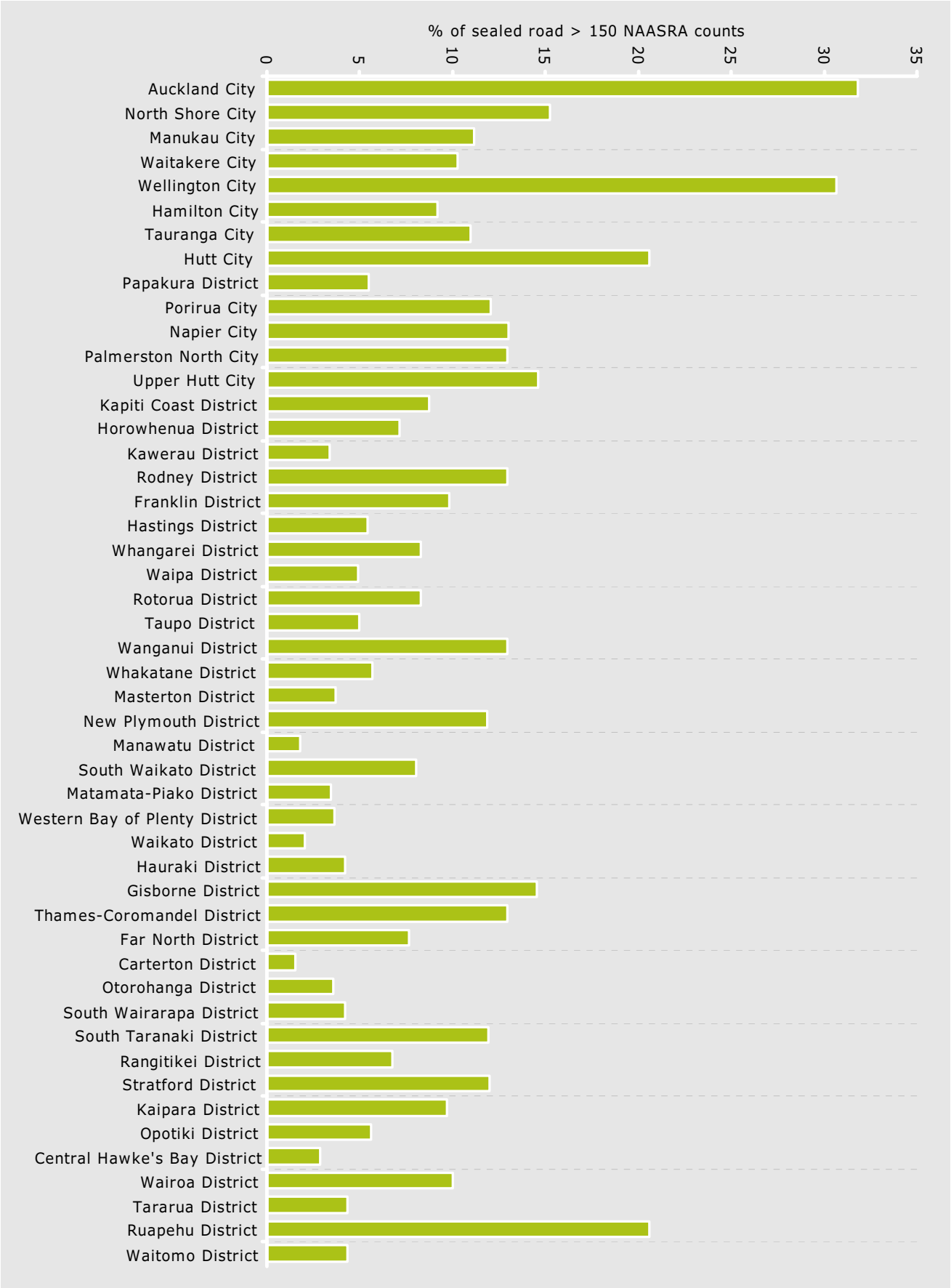


Road Roughness

Road roughness is measured by a system developed by the former National Association of Australian State Roading Authorities (NAASRA). Values are obtained by a special-purpose vehicle travelling down both the outside lanes of a length of road. The rougher the road, the higher the NAASRA counts per lane kilometre.

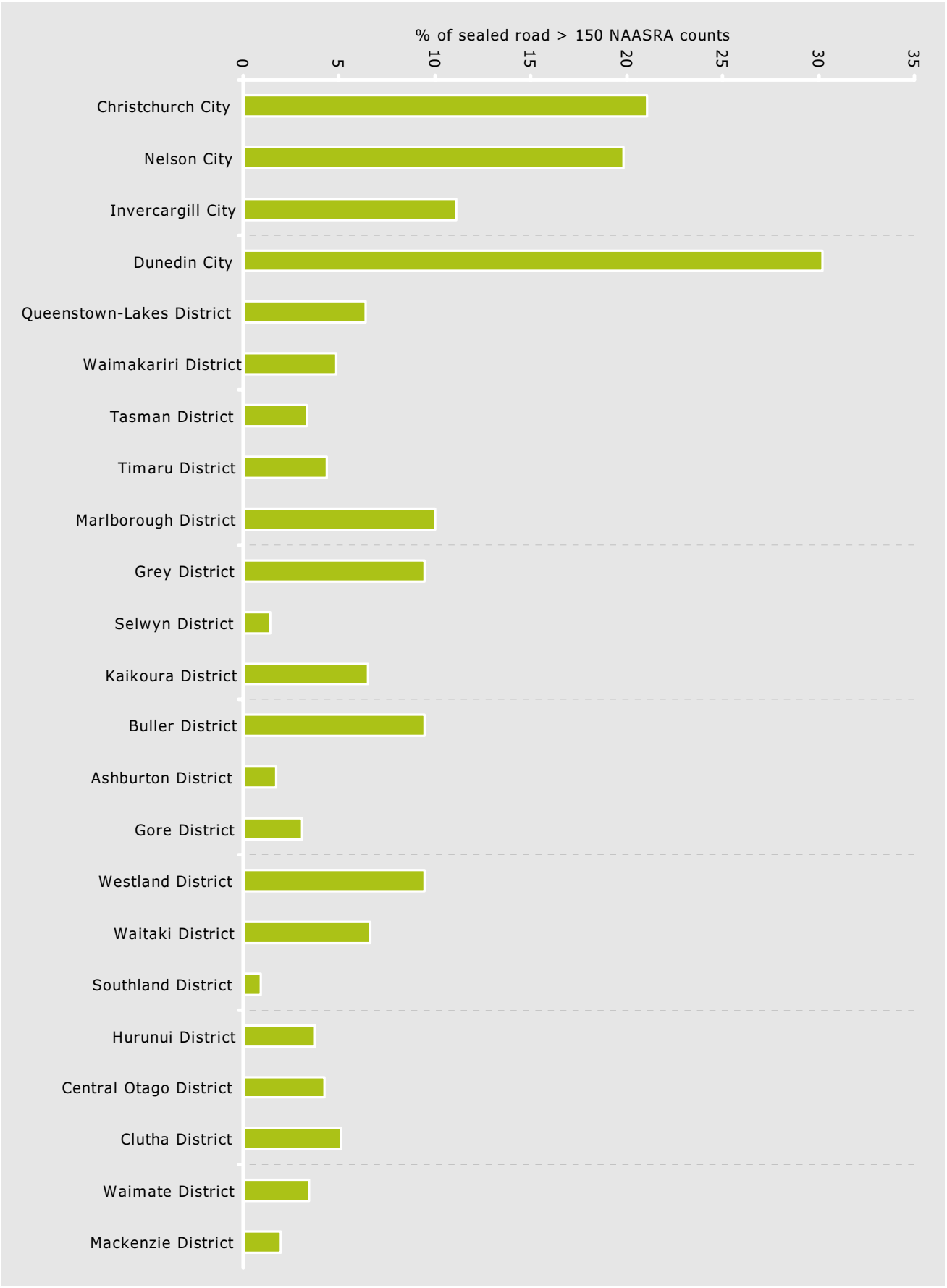
Approved organisations define acceptable levels of service for roughness on their networks. The graphs printed in this document have used a threshold of 150 NAASRA. A NAASRA count of greater than 150 typically indicates a road which is becoming a concern in terms of its roughness and the number of complaints likely to be generated.

Road roughness comparison for North Island authorities for 2005/06



Note 1: Authorities are listed from highest to lowest average traffic density.
Note 2: The higher the percentage the rougher the network.

Road roughness comparison for South Island authorities for 2005/06



Note 1: Authorities are listed from highest to lowest average traffic density.
Note 2: The higher the percentage the rougher the network.

Unit costs based on traffic volume—2005/2006

Pavement costs—North Island

		Total Annual Vehicle Kilometres (VKT 000s)	Average Traffic Density on the network (VPD)	Total Pavement & Drainage Mtce - work categories 1 - 6 & 40 ($000)	Total Pavement & Drainage Mtce - work categories 1 - 6 & 40 (cents/ VKT)	Vehicle kilometres per Unit Pavement Mtce Costs (VKT/ $)
1	Far North District	226,563	245	12,648	5.6	18
2	Kaipara District	81,192	144	8,963	11.0	9
3	Whangarei District	418,574	660	11,036	2.6	38
4	Auckland City	2,783,474	5369	34,487	1.2	81
5	Franklin District	473,684	803	10,325	2.2	46
6	Manukau City	1,689,632	3706	18,992	1.1	89
7	North Shore City	927,135	3731	12,066	1.3	77
8	Papakura District	274,576	2654	3,165	1.2	87
9	Rodney District	521,516	843	21,856	4.2	24
10	Waitakere City	974,001	3302	8,944	0.9	109
11	Hamilton City	617,644	2905	4,077	0.7	151
12	Hauraki District	71,028	329	3,053	4.3	23
13	Matamata-Piako District	144,548	399	5,533	3.8	26
14	Otorohanga District	57,255	196	3,566	6.2	16
15	South Waikato District	68,456	406	3,379	4.9	20
16	Taupo District	146,905	539	2,673	1.8	55
17	Thames-Coromandel District	77,009	314	4,680	6.1	16
18	Waikato District	237,073	390	10,602	4.5	22
19	Waipa District	231,540	602	6,096	2.6	38
20	Waitomo District	42,473	115	6,869	16.2	6
21	Kawerau District	13,566	897	196	1.4	69
22	Opotiki District	16,891	133	1,364	8.1	12
23	Rotorua District	216,875	600	4,669	2.2	46
24	Tauranga City	521,392	2883	3,773	0.7	138
25	Western BOP District	149,499	398	8,314	5.6	18
26	Whakatane District	175,179	500	4,214	2.4	42
27	Gisborne District	216,883	320	11,563	5.3	19
28	Central Hawkes Bay District	58,279	126	5,455	9.4	11
29	Hastings District	441,768	745	8,237	1.9	54
30	Napier City	255,349	2003	2,935	1.1	87
31	Wairoa District	40,166	126	4,285	10.7	9
32	New Plymouth District	201,497	436	6,383	3.2	32
33	South Taranaki District	108,504	184	7,302	6.7	15
34	Stratford District	31,816	146	1,736	5.5	18
35	Horowhenua District	211,745	1032	2,365	1.1	90
36	Manawatu District	215,600	413	6,597	3.1	33
37	Palmerston North City	307,142	1817	3,889	1.3	79
38	Rangitikei District	71,138	159	8,212	11.5	9
39	Ruapehu District	55,864	115	4,768	8.5	12
40	Tararua District	86,137	121	8,260	9.6	10
41	Wanganui District	162,502	531	5,231	3.2	31
42	Carterton District	32,993	209	1,348	4.1	24
43	Kapiti Coast District	145,854	1046	2,024	1.4	72
44	Hutt City	498,154	2869	5,780	1.2	86
45	Masterton District	132,052	453	4,042	3.1	33
46	Porirua City	195,935	2302	1,273	0.6	154
47	South Wairarapa District	44,298	186	2,748	6.2	16
48	Upper Hutt City	128,802	1508	1,207	0.9	107
49	Wellington City	732,645	2960	9,831	1.3	75

Pavement costs—South Island

		Total Annual Vehicle Kilometres (VKT 000s)	Average Traffic Density on the network (VPD)	Total Pavement & Drainage Mtce - work categories 1 - 6 & 40 ($000)	Total Pavement & Drainage Mtce - work categories 1 - 6 & 40 (cents/ VKT)	Vehicle kilometres per Unit Pavement Mtce Costs (VKT/ $)
50	Kaikoura District	14,004	191	502	3.6	28
51	Marlborough District	137,336	244	5,487	4.0	25
52	Nelson City	123,147	1348	1,588	1.3	78
53	Tasman District	215,584	351	6,425	3.0	34
54	Ashburton District	163,910	171	5,449	3.3	30
56	Christchurch City	1,950,942	2354	21,080	1.1	93
57	Hurunui District	61,583	115	2,790	4.5	22
58	MacKenzie District	18,544	72	970	5.2	19
59	Selwyn District	174,276	195	4,356	2.5	40
60	Timaru District	180,100	289	6,297	3.5	29
61	Waimakariri District	211,934	396	3,967	1.9	53
62	Waimate District	36,176	74	1,795	5.0	20
63	Buller District	37,496	175	1,895	5.1	20
64	Grey District	46,801	208	2,344	5.0	20
65	Westland District	41,557	161	1,780	4.3	23
66	Central Otago District	70,212	104	2,839	4.0	25
67	Clutha District	95,744	89	8,485	8.9	11
68	Dunedin City	442,308	693	12,864	2.9	34
69	Queenstown-Lakes District	166,161	529	5,600	3.4	30
70	Waitaki District	92,232	139	3,483	3.8	26
71	Gore District	55,104	169	2,209	4.0	25
72	Invercargill City	206,877	956	4,125	2.0	50
73	Southland District	216,177	119	13,952	6.5	15

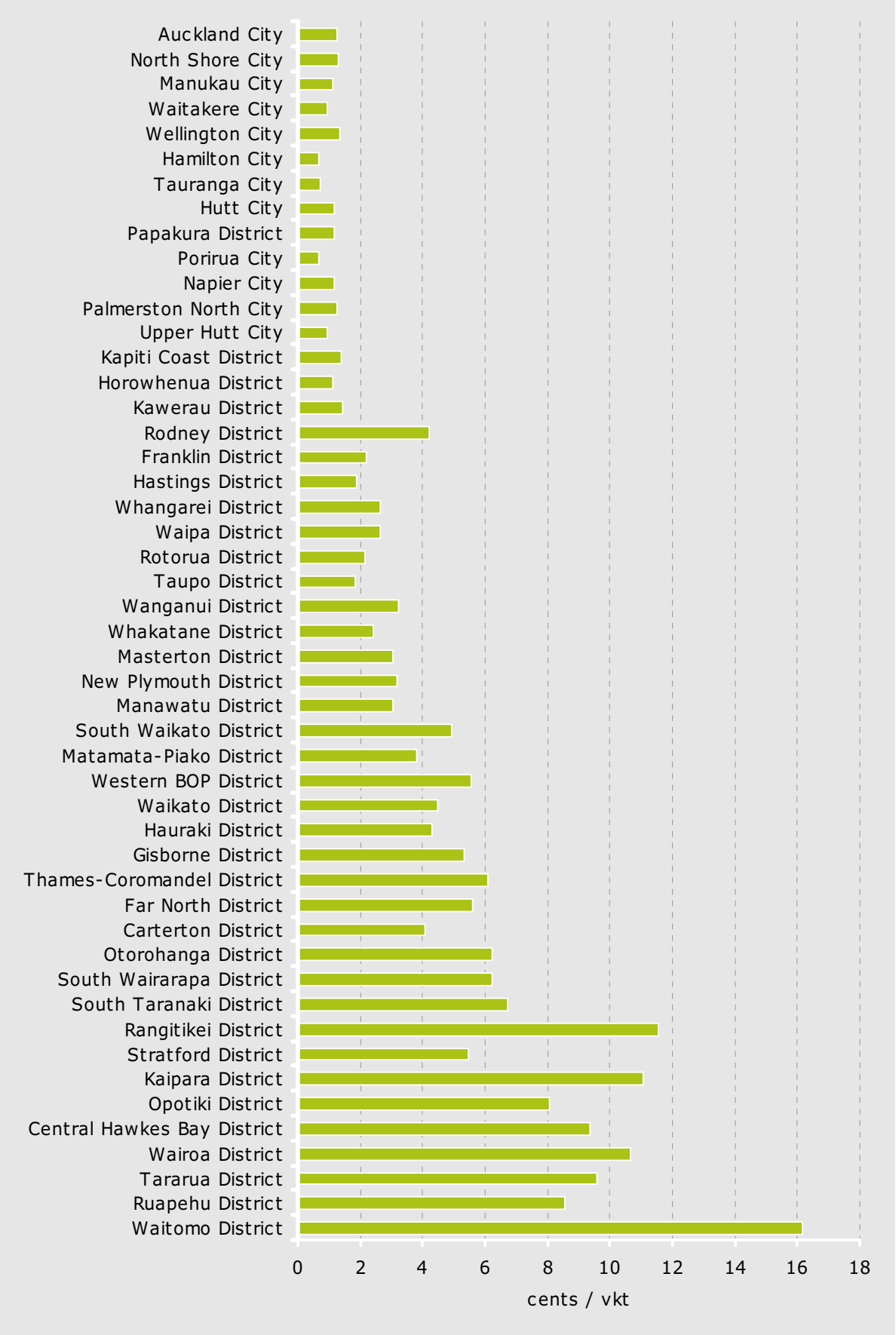
VPD (Vehicles per day) - The number of vehicles observed passing a point on the road in both directions for 24 hours.

Work categories - Land Transport New Zealand has divided road asset work into activity types called work categories. Claims for funding are allocated to work categories. For further explanation of individual work categories please refer to the Land Transport New Zealand 'Programme and Funding Manual' on our website
http://www.landtransport.govt.nz/funding/programme-and-funding-manual/index.html

Vehicle kilometres travelled (VKT) - Total annual vehicle kilometres travelled in an area. This is calculated from the number of vehicles crossing a point in both directions in a 24 hour period, times the length of the road being travelled. Individual road VKT is added to give a value for the whole road network in that area.

Total pavement and drainage maintenance (work categories 1—6 & 40) costs / vkt

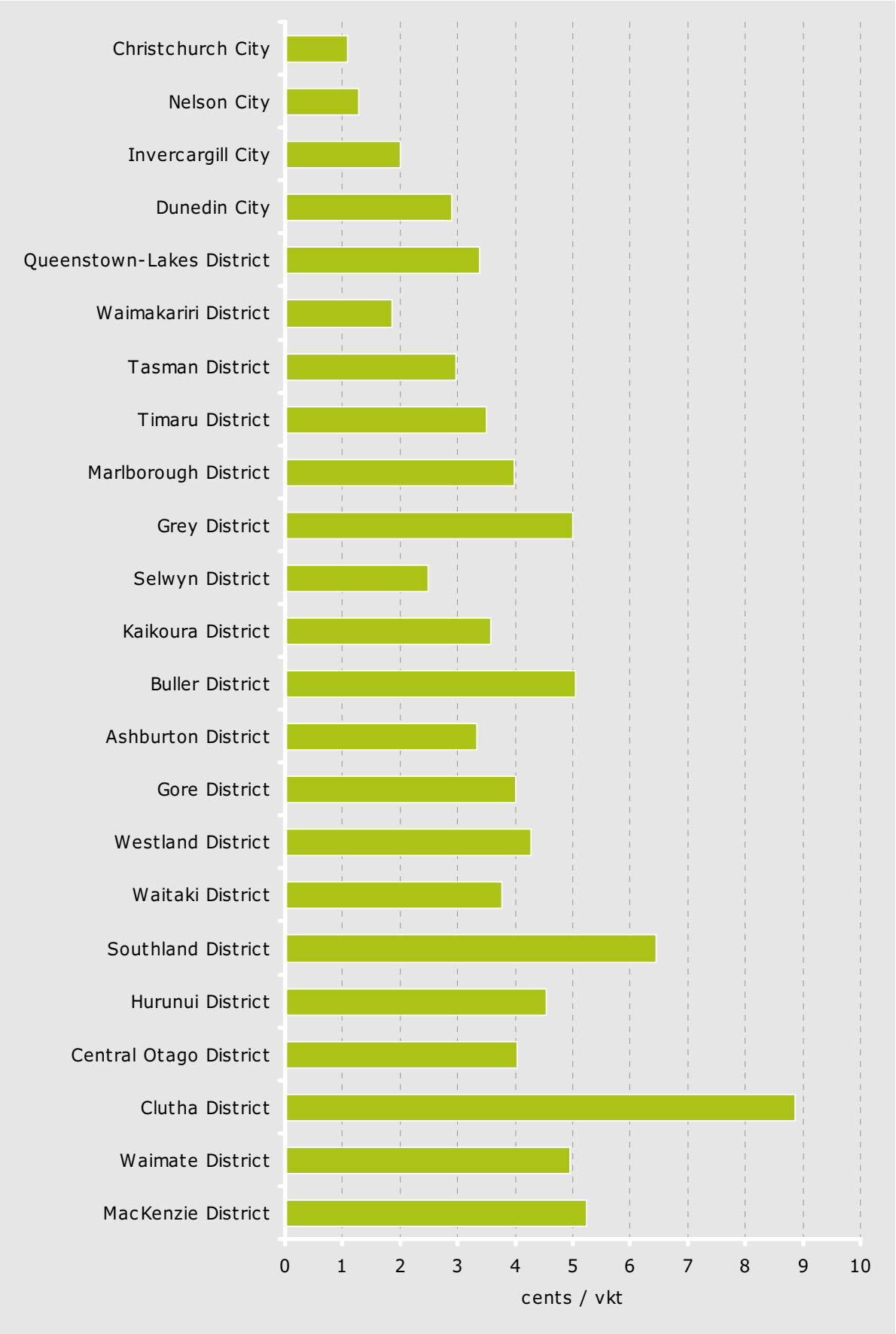
North Island



Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total pavement and drainage maintenance (work categories 1—6 & 40) costs / vkt

South Island



Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Corridor costs—North Island

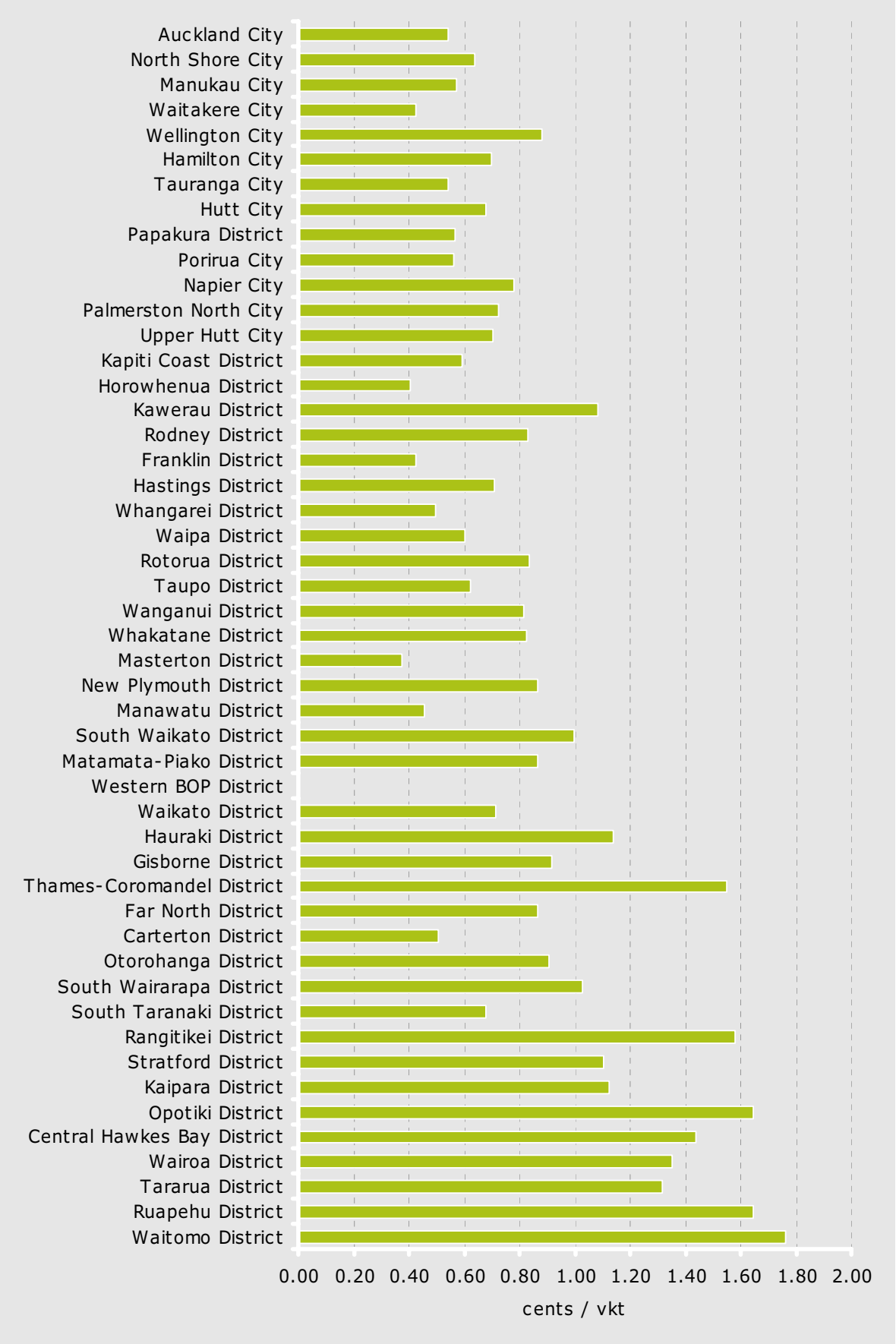
		Total Annual Vehicle Kilometres (VKT 000s)	Average Traffic Density on the network (VPD)	Total Corridor Mtce - work categories 10 - 13 ($000)	Total Corridor Mtce - work categories 10 - 13 (cents/ VKT)	Vehicle kilometres per Unit Corridor Mtce Costs (VKT/ $)
1	Far North District	226,563	245	1,960	0.87	116
2	Kaipara District	81,192	144	915	1.13	89
3	Whangarei District	418,574	660	2,083	0.50	201
4	Auckland City	2,783,474	5369	15,015	0.54	185
5	Franklin District	473,684	803	2,018	0.43	235
6	Manukau City	1,689,632	3706	9,691	0.57	174
7	North Shore City	927,135	3731	5,902	0.64	157
8	Papakura District	274,576	2654	1,551	0.56	177
9	Rodney District	521,516	843	4,330	0.83	120
10	Waitakere City	974,001	3302	4,119	0.42	236
11	Hamilton City	617,644	2905	4,317	0.70	143
12	Hauraki District	71,028	329	809	1.14	88
13	Matamata-Piako District	144,548	399	1,250	0.87	116
14	Otorohanga District	57,255	196	520	0.91	110
15	South Waikato District	68,456	406	684	1.00	100
16	Taupo District	146,905	539	918	0.63	160
17	Thames-Coromandel District	77,009	314	1,191	1.55	65
18	Waikato District	237,073	390	1,689	0.71	140
19	Waipa District	231,540	602	1,400	0.60	165
20	Waitomo District	42,473	115	748	1.76	57
21	Kawerau District	13,566	897	147	1.08	92
22	Opotiki District	16,891	133	278	1.65	61
23	Rotorua District	216,875	600	1,816	0.84	119
24	Tauranga City	521,392	2883	2,828	0.54	184
25	Western BOP District	149,499	398	0	0.00	-
26	Whakatane District	175,179	500	1,450	0.83	121
27	Gisborne District	216,883	320	1,985	0.92	109
28	Central Hawkes Bay District	58,279	126	838	1.44	70
29	Hastings District	441,768	745	3,121	0.71	142
30	Napier City	255,349	2003	1,988	0.78	128
31	Wairoa District	40,166	126	543	1.35	74
32	New Plymouth District	201,497	436	1,745	0.87	115
33	South Taranaki District	108,504	184	738	0.68	147
34	Stratford District	31,816	146	351	1.10	91
35	Horowhenua District	211,745	1032	854	0.40	248
36	Manawatu District	215,600	413	980	0.45	220
37	Palmerston North City	307,142	1817	2,227	0.73	138
38	Rangitikei District	71,138	159	1,125	1.58	63
39	Ruapehu District	55,864	115	918	1.64	61
40	Tararua District	86,137	121	1,132	1.31	76
41	Wanganui District	162,502	531	1,322	0.81	123
42	Carterton District	32,993	209	167	0.51	197
43	Kapiti Coast District	145,854	1046	865	0.59	169
44	Hutt City	498,154	2869	3,386	0.68	147
45	Masterton District	132,052	453	493	0.37	268
46	Porirua City	195,935	2302	1,103	0.56	178
47	South Wairarapa District	44,298	186	456	1.03	97
48	Upper Hutt City	128,802	1508	904	0.70	142
49	Wellington City	732,645	2960	6,470	0.88	113

Corridor costs—South Island

		Total Annual Vehicle Kilometres (VKT 000s)	Average Traffic Density on the network (VPD)	Total Corridor Mtce - work categories 10 - 13 ($000)	Total Corridor Mtce - work categories 10 - 13 (cents/ VKT)	Vehicle kilometres per Unit Corridor Mtce Costs (VKT/ $)
50	Kaikoura District	14,004	191	109	0.78	129
51	Marlborough District	137,336	244	1,209	0.88	114
52	Nelson City	123,147	1348	1,028	0.83	120
53	Tasman District	215,584	351	1,477	0.69	146
54	Ashburton District	163,910	171	1,592	0.97	103
56	Christchurch City	1,950,942	2354	11,029	0.57	177
57	Hurunui District	61,583	115	558	0.91	110
58	MacKenzie District	18,544	72	390	2.10	48
59	Selwyn District	174,276	195	1,264	0.73	138
60	Timaru District	180,100	289	1,259	0.70	143
61	Waimakariri District	211,934	396	1,225	0.58	173
62	Waimate District	36,176	74	255	0.71	142
63	Buller District	37,496	175	800	2.13	47
64	Grey District	46,801	208	698	1.49	67
65	Westland District	41,557	161	445	1.07	93
66	Central Otago District	70,212	104	978	1.39	72
67	Clutha District	95,744	89	919	0.96	104
68	Dunedin City	442,308	693	4,345	0.98	102
69	Queenstown-Lakes District	166,161	529	1,823	1.10	91
70	Waitaki District	92,232	139	721	0.78	128
71	Gore District	55,104	169	323	0.59	170
72	Invercargill City	206,877	956	1,210	0.58	171
73	Southland District	216,177	119	1,385	0.64	156

Total corridor maintenance (work categories 10—13) costs / vkt

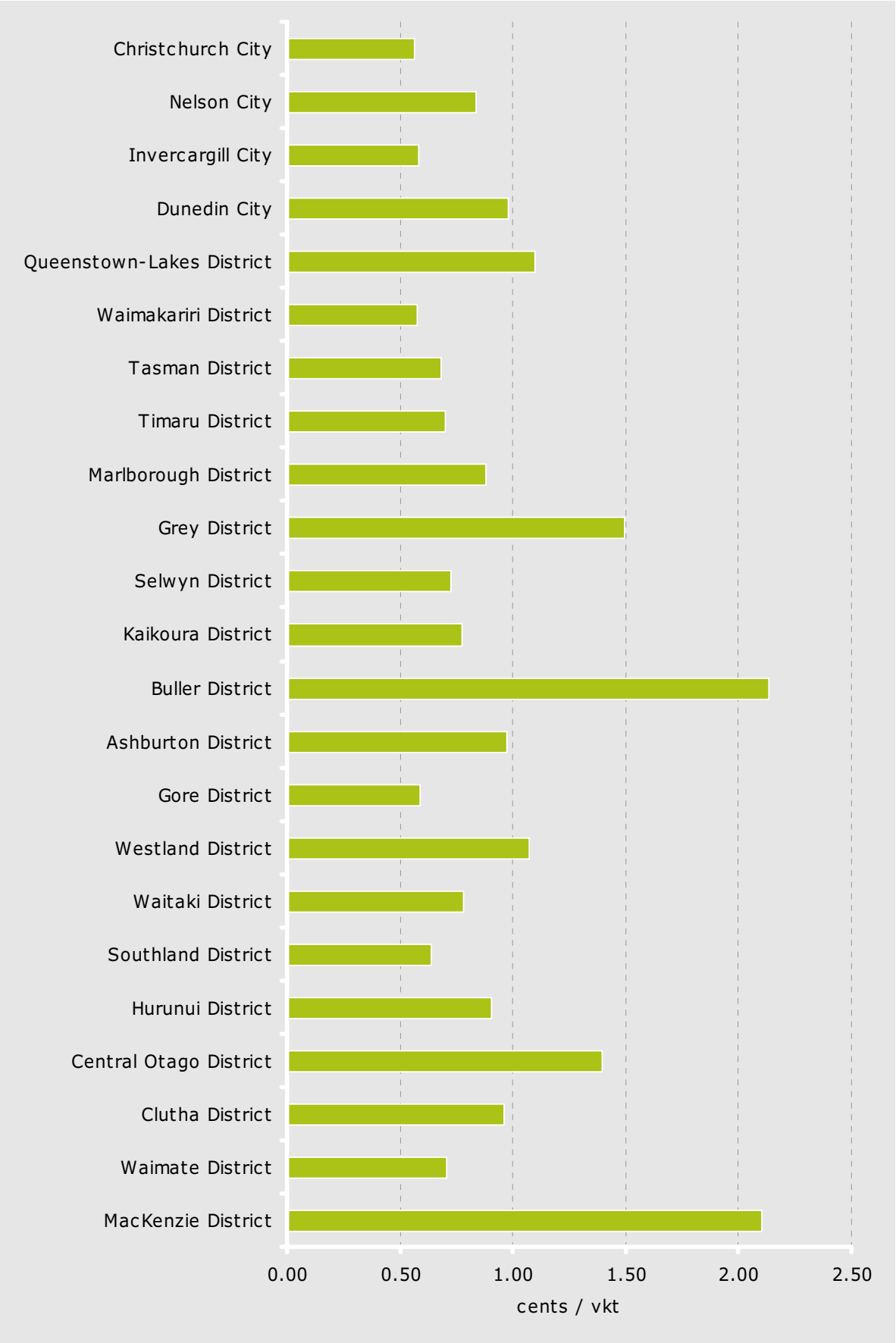
North Island



Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total corridor maintenance (work categories 10—13) costs / vkt

South Island



Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Unit costs based on network length—2005/06

		Maintenance (Output 1)	%Urban Physical	Rural % Sealed	Pavement Mtce	Area-wide Pavement Treatment	Major Drainage Control	Reseals	Bridge Mtce	Total Structural Mtce	Amenity /Safety Mtce	Street Cleaning	Traffic Services	Carriageway Lighting	Cycleway Mtce	Total Corridor Mtce	Professional Services	Pavement Smoothing	Total Pavement and Drainage Mtce	Professional Services
	Work Categories	1 - 30			1	2	3	4 - 6	7	1 - 7	10	11	12	13	14	10 - 13	17	40	1 - 6 & 40	17
Code	Authority Name	$k	%[1]	%[2]	$k/km [3]	$k/km [3]	$k/km [3]	$k/km [4]	$/m [5]	$k/km [3]	$k/km [3]	$k/km [6]	$k/km [3]	$k/km [6]	$k[7]	$k/km [3]	%[8]	$k/km [3]	$k/km [3]	$k/km [3]
1	Far North Dist	17,543	8	27	2.62	1.58	0.12	2.18	78.53	5.30	0.25	0.29	0.32	2.17	0.00	0.78	8.6%	0.00	5.01	0.57
2	Kaipara Dist	11,571	6	21	3.12	1.79	0.51	1.56	31.36	5.90	0.19	0.58	0.31	1.05	0.00	0.59	7.1%	0.00	5.81	0.49
3	Whangarei Dist	14,935	14	49	2.95	1.32	0.14	2.49	45.27	5.96	0.38	0.81	0.51	1.45	0.00	1.20	10.2%	0.57	6.36	0.81
4	Auckland City	47,208	89	36	5.34	2.71	3.79	6.75	211.31	19.25	0.06	3.17	4.66	3.44	41.12	10.58	9.4%	6.23	24.30	3.10
5	Franklin Dist	14,532	13	82	2.49	1.92	0.12	2.19	92.18	6.55	0.59	0.47	0.38	1.63	0.00	1.25	9.0%	0.00	6.39	0.77
6	Manukau City	30,647	80	93	3.00	4.48	0.91	5.75	146.31	14.38	0.97	1.53	3.11	3.11	10.00	7.76	8.2%	1.15	15.21	1.98
7	North Shore City	17,554	94	95	4.31	3.77	0.87	6.17	528.57	15.55	0.96	1.33	3.64	3.00	0.00	8.68	6.1%	2.63	17.74	1.58
8	Papakura Dist	4,788	61	97	2.82	1.95	0.83	3.93	171.72	9.86	1.24	1.54	1.60	2.79	21.00	5.48	8.6%	1.68	11.18	1.46
9	Rodney Dist	27,401	18	47	3.74	6.20	0.04	2.75	63.81	11.70	1.19	1.29	0.72	2.25	3.00	2.56	5.9%	1.38	12.91	0.90
10	Waitakere City	15,324	74	82	3.84	1.10	1.22	5.18	318.75	11.61	0.46	0.74	2.31	2.43	10.31	5.10	8.8%	0.00	11.07	1.62
11	Hamilton City	9,783	92	95	1.60	0.53	0.54	4.35	55.36	7.16	0.85	1.42	2.21	3.33	2.66	7.41	13.2%	0.00	7.00	2.22
12	Hauraki Dist	5,467	18	77	1.94	0.85	0.40	2.45	125.60	5.51	0.61	0.02	0.43	1.76	0.00	1.37	12.4%	0.00	5.17	0.97
13	Matamata-Piako Dist	7,625	13	93	2.46	1.57	0.02	1.63	54.36	5.79	0.53	0.54	0.40	2.10	0.00	1.26	7.5%	0.00	5.58	0.58
14	Otorohanga Dist	4,248	4	63	2.26	0.36	0.03	1.95	36.36	4.01	0.37	1.22	0.17	1.87	0.00	0.65	10.1%	0.54	4.45	0.52
15	South Waikato Dist	3,453	24	96	2.59	0.44	0.12	2.05	58.41	5.23	0.23	1.30	0.46	2.01	0.00	1.48	10.0%	2.17	7.32	0.75
16	Taupo Dist	3,952	29	82	1.92	0.53	0.06	1.23	42.20	3.61	0.37	0.42	0.34	1.38	4.05	1.23	8.4%	0.00	3.58	0.44
17	Thames-Coromandel Dist	8,147	40	39	3.56	1.62	0.12	2.67	79.41	7.24	0.59	0.30	0.46	1.51	0.00	1.77	11.5%	0.00	6.97	1.18
18	Waikato Dist	14,406	9	70	3.02	2.09	0.06	1.67	77.13	6.66	0.35	0.42	0.52	1.28	0.00	1.02	9.3%	0.00	6.37	0.79
19	Waipa Dist	7,215	16	91	2.21	1.23	0.12	1.59	22.56	5.07	0.35	1.30	0.57	1.35	0.00	1.33	6.6%	0.77	5.79	0.45
20	Waitomo Dist	6,770	5	42	2.97	0.60	0.17	2.74	55.66	5.11	0.26	0.77	0.29	3.09	0.00	0.74	6.6%	1.85	6.80	0.42
21	Kawerau Dist	364	95	35	2.05	0.44	0.31	2.00	0.00	4.74	0.12	0.45	0.41	2.73	0.00	3.55	5.6%	0.00	4.74	0.49
22	Opotiki Dist	1,864	8	38	2.93	0.29	0.09	1.46	46.46	4.07	0.32	1.50	0.23	1.71	0.00	0.80	7.2%	0.00	3.93	0.38
23	Rotorua Dist	7,292	24	74	2.44	0.65	0.08	1.92	76.70	4.82	0.26	0.72	0.54	3.50	0.00	1.83	7.7%	0.00	4.72	0.56
24	Tauranga Dist	7,577	100	n/a	2.72	1.42	0.07	3.42	34.19	7.72	1.11	0.40	1.82	2.39	0.00	5.71	5.7%	0.00	7.62	0.81
25	Western BoP Dist	9,076	13	69	8.08	0.00	0.00	0.00	28.51	8.12	0.00	0.00	0.00	0.00	0.00	0.00	0.9%	0.00	8.08	0.07
26	Whakatane Dist	12,977	13	73	2.20	0.61	0.45	1.46	15.32	4.36	0.68	1.33	0.34	2.42	0.00	1.51	9.0%	0.08	4.40	0.58
27	Gisborne Dist	19,934	12	35	4.08	1.06	0.00	2.61	53.02	6.50	0.32	1.02	0.31	2.58	0.00	1.07	10.4%	0.00	6.24	0.88
28	Central Hawke's Bay Dist	8,257	5	66	2.10	1.36	0.06	1.18	33.02	4.46	0.32	0.93	0.22	1.31	0.00	0.66	10.9%	0.00	4.32	0.62
29	Hastings Dist	12,468	17	68	2.21	0.52	0.00	1.65	34.91	4.06	0.69	0.50	0.78	2.17	0.00	1.92	18.2%	1.14	5.07	1.33
30	Napier City	5,405	83	100	2.08	1.85	0.78	3.71	23.05	8.44	0.78	1.26	1.10	3.31	1.54	5.70	8.6%	0.00	8.41	1.33
31	Wairoa Dist	9,807	7	27	3.62	0.54	0.19	1.88	101.31	5.47	0.13	0.73	0.26	2.77	0.00	0.62	13.3%	0.00	4.92	0.93
32	New Plymouth Dist	10,086	24	81	2.28	0.63	0.21	2.25	118.14	5.41	0.28	0.77	0.50	1.76	0.00	1.38	12.3%	0.00	5.05	0.96
33	South Taranaki Dist	9,261	8	81	1.78	1.08	0.10	1.90	13.01	4.55	0.07	0.07	0.30	0.90	25.30	0.46	9.8%	0.00	4.53	0.55
34	Stratford Dist	2,740	7	56	1.72	0.44	0.00	1.26	101.17	3.30	0.24	0.21	0.18	2.18	0.00	0.59	8.7%	0.00	2.91	0.37
35	Horowhenua Dist	3,466	29	85	1.21	0.87	0.00	2.39	93.80	4.35	0.33	0.85	0.41	1.89	0.00	1.52	2.6%	0.00	4.21	0.16
36	Manawatu Dist	16,764	10	70	1.46	1.96	0.04	1.60	95.80	4.87	0.21	0.52	0.28	1.50	0.00	0.69	11.6%	0.00	4.62	0.73
37	Palmerston North City	9,853	67	77	2.35	1.65	1.33	2.42	7.76	7.58	0.23	1.37	1.76	2.85	20.54	4.81	10.9%	0.84	8.40	1.53
38	Rangitikei Dist	17,295	8	60	1.64	3.87	0.05	1.84	29.89	6.81	0.49	1.18	0.19	1.98	0.00	0.92	6.9%	0.00	6.72	0.57
39	Ruapehu Dist	8,071	8	28	2.18	0.38	0.27	2.25	37.35	3.75	0.30	0.56	0.24	1.36	0.00	0.69	12.8%	0.00	3.60	0.65
40	Tararua Dist	17,528	4	58	2.06	1.08	0.16	1.58	53.75	4.49	0.22	1.43	0.23	1.65	0.00	0.58	7.4%	0.00	4.24	0.41

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		Maintenance (Output 1)	%Urban Physical	Rural % Sealed	Pavement Mtce	Area-wide Pavement Treatment	Major Drainage Control	Reseals	Bridge Mtce	Total Structural Mtce	Amenity /Safety Mtce	Street Cleaning	Traffic Services	Carriageway Lighting	Cycleway Mtce	Total Corridor Mtce	Professional Services	Pavement Smoothing	Total Pavement and Drainage Mtce	Professional Services
	Work Categories	1 - 30			1	2	3	4 - 6	7	1 - 7	10	11	12	13	14	10 - 13	17	40	1 - 6 & 40	17
Code	Authority Name	$k	%[1]	%[2]	$k/km [3]	$k/km [3]	$k/km [3]	$k/km [4]	$/m [5]	$k/km [3]	$k/km [3]	$k/km [6]	$k/km [3]	$k/km [6]	$k[7]	$k/km [3]	%[8]	$k/km [3]	$k/km [3]	$k/km [3]
41	Wanganui Dist	14,150	27	53	2.72	0.99	0.92	2.48	148.84	6.70	0.33	0.96	0.38	2.32	4.76	1.58	16.9%	0.00	6.25	1.69
42	Carterton Dist	1,663	6	62	1.77	0.46	0.22	1.06	6.31	3.15	0.15	1.08	0.11	0.97	0.00	0.39	8.2%	0.00	3.13	0.31
43	Kapiti Coast Dist	3,263	60	89	2.28	0.39	0.33	1.86	55.88	4.90	0.27	0.54	0.70	1.63	0.00	2.27	15.9%	0.52	5.30	1.36
44	Hutt City	10,484	94	100	2.44	0.78	0.00	8.37	59.96	11.81	0.78	1.48	1.59	3.59	1.49	7.12	11.5%	0.58	12.16	2.47
45	Masterton Dist	5,385	14	59	2.30	1.78	0.06	1.43	18.28	5.16	0.13	0.96	0.20	1.09	0.00	0.62	6.8%	0.00	5.07	0.42
46	Porirua City	3,224	82	98	2.04	0.51	0.06	2.45	75.67	5.24	0.62	0.74	1.21	2.78	3.05	4.74	14.0%	0.42	5.46	1.64
47	South Wairarapa Dist	3,813	8	52	3.24	0.41	0.05	0.91	16.82	4.30	0.21	0.50	0.34	1.33	0.00	0.70	7.0%	0.00	4.22	0.38
48	Upper Hutt City	2,938	65	98	2.26	0.00	1.05	1.86	79.56	5.47	0.30	1.29	1.13	2.46	0.76	3.87	7.0%	0.00	5.16	0.72
49	Wellington City	18,945	92	99	4.35	0.48	2.26	3.34	1012.25	12.61	0.96	1.82	3.70	3.50	22.18	9.55	14.8%	4.08	14.51	3.84
50	Kaikoura Dist	681	10	44	1.42	0.00	0.58	1.03	8.54	2.55	0.22	0.56	0.15	1.18	0.00	0.54	8.9%	0.00	2.50	0.30
51	Marlborough Dist	7,348	11	50	1.61	0.40	0.09	2.60	25.94	3.66	0.28	0.72	0.20	1.98	2.76	0.79	6.5%	0.00	3.56	0.31
52	Nelson City	2,988	82	65	2.09	1.31	0.80	2.29	88.93	6.61	0.38	0.81	1.30	2.14	21.00	4.11	9.5%	0.00	6.35	1.14
53	Tasman Dist	9,701	10	49	1.66	0.85	0.24	1.98	79.35	4.16	0.48	0.32	0.25	1.20	22.42	0.88	11.2%	0.00	3.82	0.64
54	Ashburton Dist	7,492	6	53	0.71	0.26	0.20	1.56	24.58	2.08	0.30	1.80	0.11	1.56	0.00	0.61	5.7%	0.04	2.08	0.16
56	Christchurch City	35,201	67	54	2.66	0.43	3.02	3.32	190.87	9.11	0.44	2.22	1.21	2.55	82.97	4.86	9.5%	0.40	9.29	1.47
57	Hurunui Dist	3,897	5	38	1.31	0.07	0.01	1.23	25.05	2.00	0.19	0.74	0.13	0.71	0.00	0.38	10.0%	0.00	1.90	0.27
58	Mackenzie Dist	1,487	7	23	1.03	0.12	0.00	0.83	18.69	1.43	0.28	1.09	0.15	0.70	0.00	0.55	6.2%	0.00	1.38	0.13
59	Selwyn Dist	6,188	6	51	1.22	0.02	0.02	0.97	35.19	1.81	0.19	0.94	0.20	1.25	0.00	0.52	7.7%	0.00	1.78	0.20
60	Timaru Dist	7,074	13	47	1.01	0.42	0.18	1.56	22.11	2.52	0.15	1.01	0.23	1.73	3.30	0.74	10.2%	1.24	3.69	0.37
61	Waimakariri Dist	6,218	11	47	1.13	0.45	0.24	1.70	21.35	2.76	0.28	0.98	0.29	1.44	0.00	0.84	15.2%	0.00	2.71	0.65
62	Waimate Dist	2,373	3	46	0.77	0.09	0.02	0.97	15.40	1.38	0.10	0.09	0.08	0.28	0.00	0.19	10.8%	0.00	1.34	0.19
63	Buller Dist	3,358	17	36	2.24	0.04	0.18	1.49	46.64	3.47	0.70	1.02	0.33	1.08	0.00	1.36	9.4%	0.00	3.22	0.50
64	Grey Dist	3,920	20	51	1.58	0.37	0.08	2.65	58.44	3.89	0.44	0.52	0.23	1.82	0.00	1.13	9.6%	0.24	3.80	0.54
65	Westland Dist	3,002	7	51	1.66	0.00	0.09	1.34	78.63	2.94	0.22	1.35	0.20	1.88	0.00	0.63	11.6%	0.00	2.52	0.47
66	Central Otago Dist	4,629	7	19	0.95	0.12	0.00	1.86	38.62	1.61	0.27	0.99	0.11	1.16	0.00	0.53	14.6%	0.00	1.53	0.36
67	Clutha Dist	11,174	5	24	1.41	0.94	0.05	1.70	92.83	3.05	0.13	0.81	0.12	0.85	0.00	0.31	11.4%	0.00	2.88	0.43
68	Dunedin City	18,874	39	36	3.10	1.43	0.16	2.46	174.62	6.51	0.87	1.21	0.73	1.10	10.00	2.49	12.6%	1.22	7.36	1.30
69	Queenstown-Lakes Dist	8,178	22	43	3.09	1.19	0.07	3.73	40.19	6.62	0.91	0.96	0.76	1.15	0.00	2.12	7.9%	0.00	6.51	0.75
70	Waitaki Dist	5,089	9	35	0.94	0.23	0.12	1.59	76.06	2.03	0.10	0.93	0.11	1.21	0.35	0.40	13.0%	0.00	1.92	0.36
71	Gore Dist	2,960	9	34	0.97	0.23	0.24	2.63	42.96	2.54	0.13	0.55	0.12	0.73	0.00	0.36	12.3%	0.00	2.47	0.41
72	Invercargill City	5,968	49	58	1.62	0.77	1.01	4.55	91.91	7.19	0.13	0.75	0.71	1.71	9.45	2.04	8.0%	0.00	6.97	0.80
73	Southland Dist	17,683	5	37	1.45	0.58	0.02	1.98	30.43	2.89	0.06	0.81	0.16	0.58	0.00	0.28	11.1%	0.00	2.82	0.40
74	Chatham Islands	1,861	4	3	6.26	2.45	0.32	0.00	426.47	9.55	0.09	4.07	0.41	0.77	0.00	0.66	3.8%	0.00	9.03	0.40

[1] Proportion of network length classed as urban in %.

[2] Proportion of the rural network length that is sealed in %.

[3] $000 per kilometre of road.

[4] $000 per kilometre of sealed roads.

[5] $ per metre of bridge.

[6] $000 per kilometre of urban sealed network.

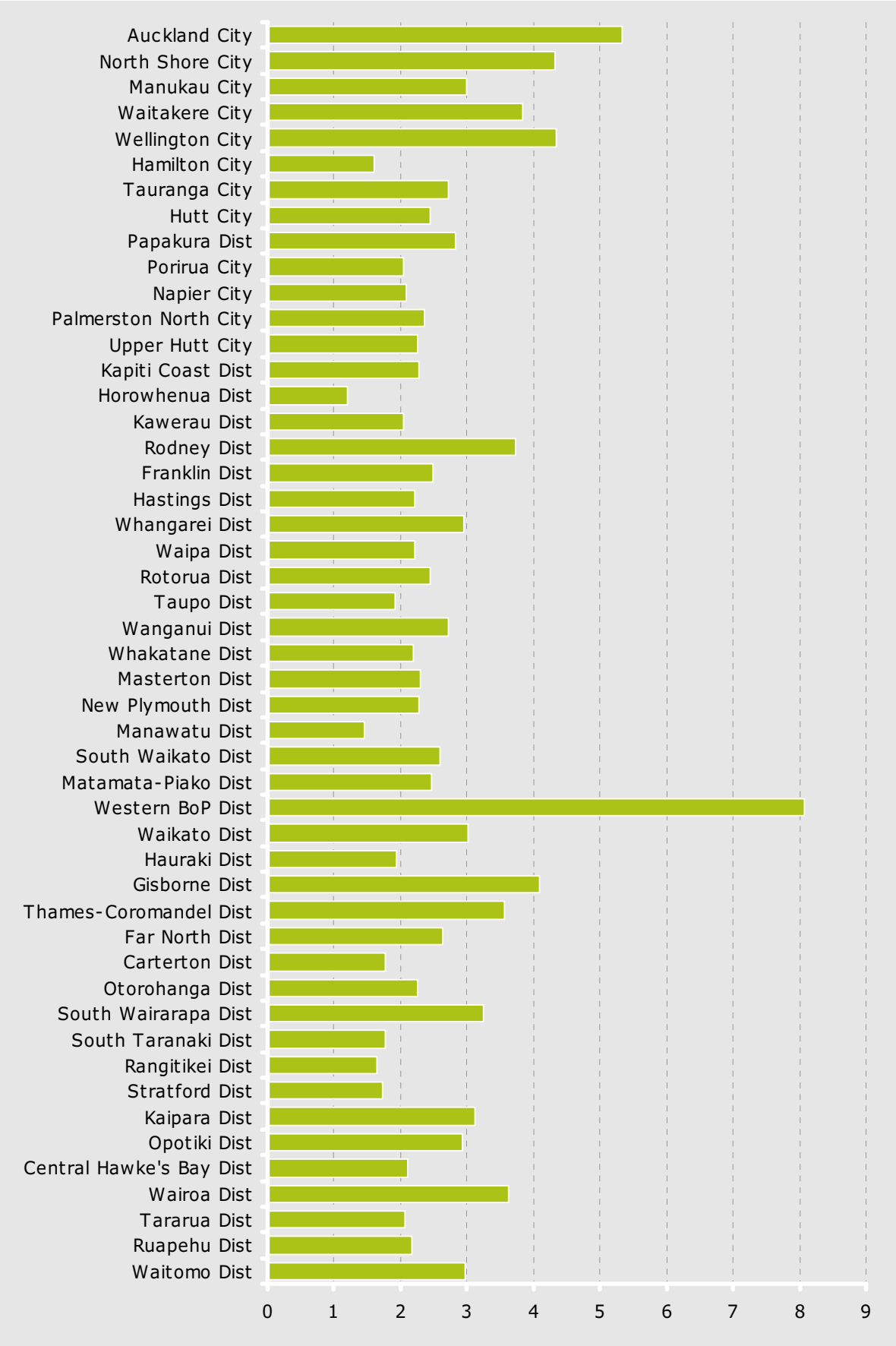
[7] $000

[8] % of total maintenance block allocation (WCs 1 –17)

Pavement maintenance - work category 1

Actual expenditure per kilometre of road ($000/ km)

North Island

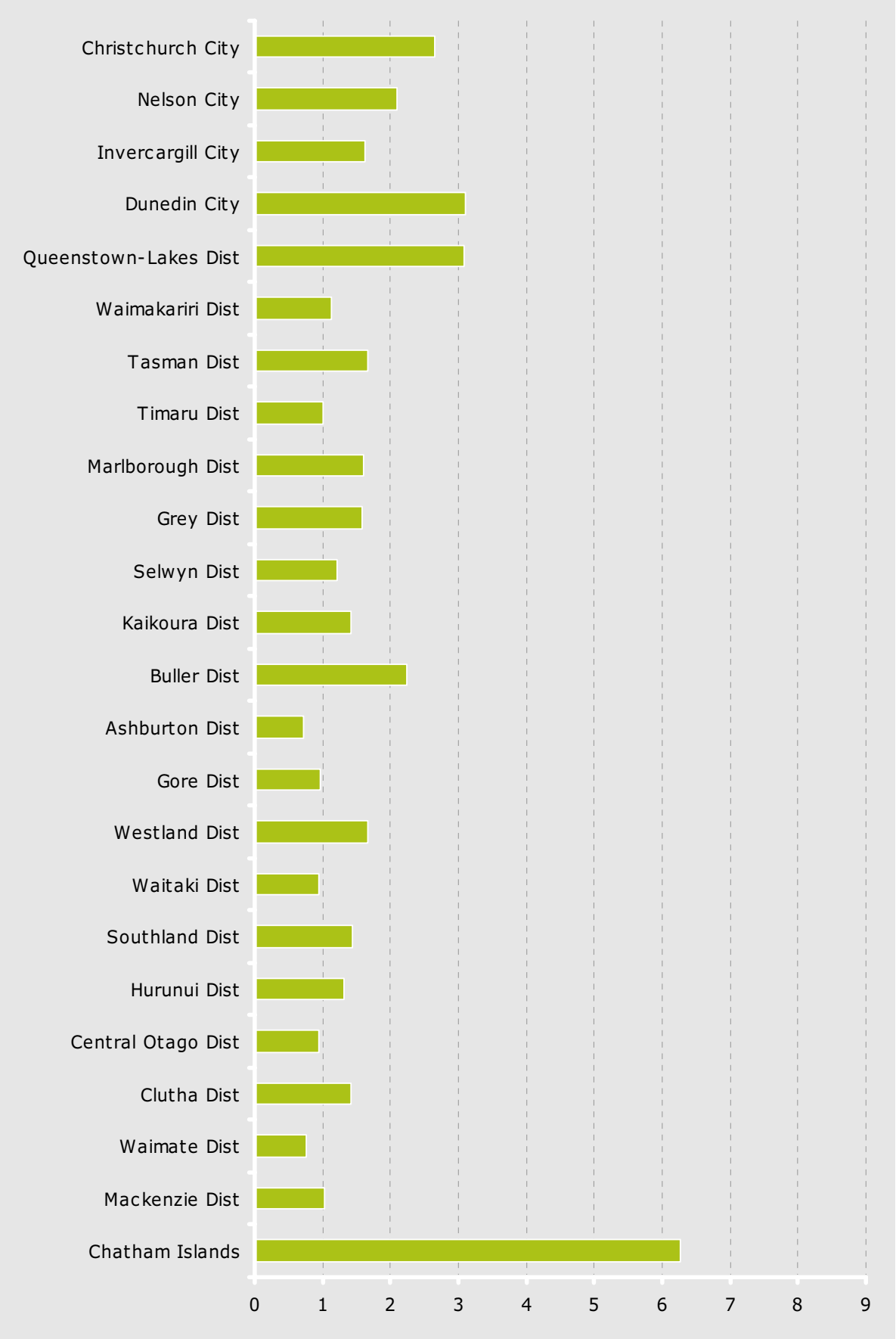


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Pavement maintenance - work category 1

Actual expenditure per kilometre of road ($000/ km)

South Island



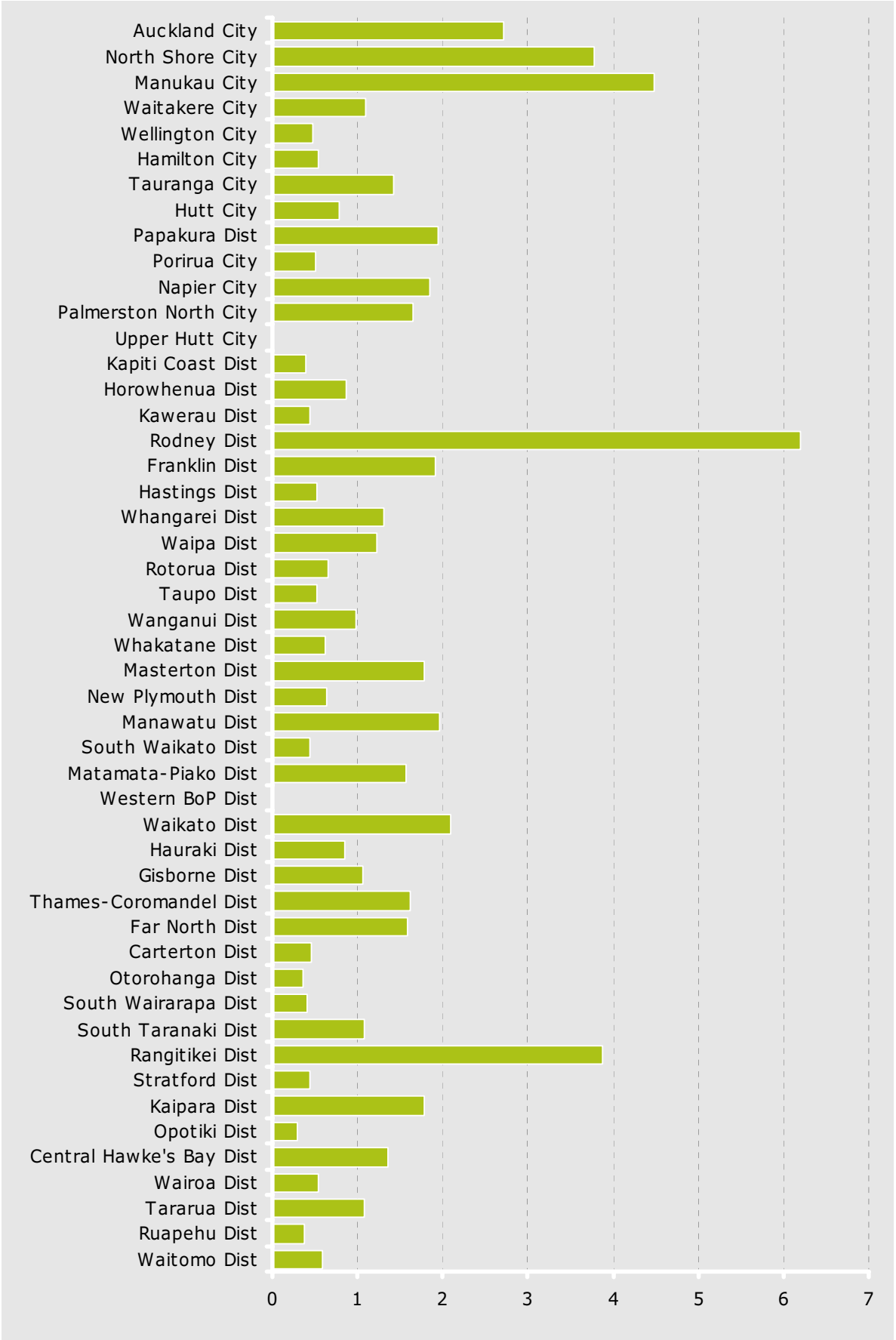
Note 1: Authorities are listed from highest to lowest average traffic density

Note 2 : Expenditure taken from final claim

Area wide pavement treatment - work category 2

Actual expenditure per kilometre of road ($000/ km)

North Island

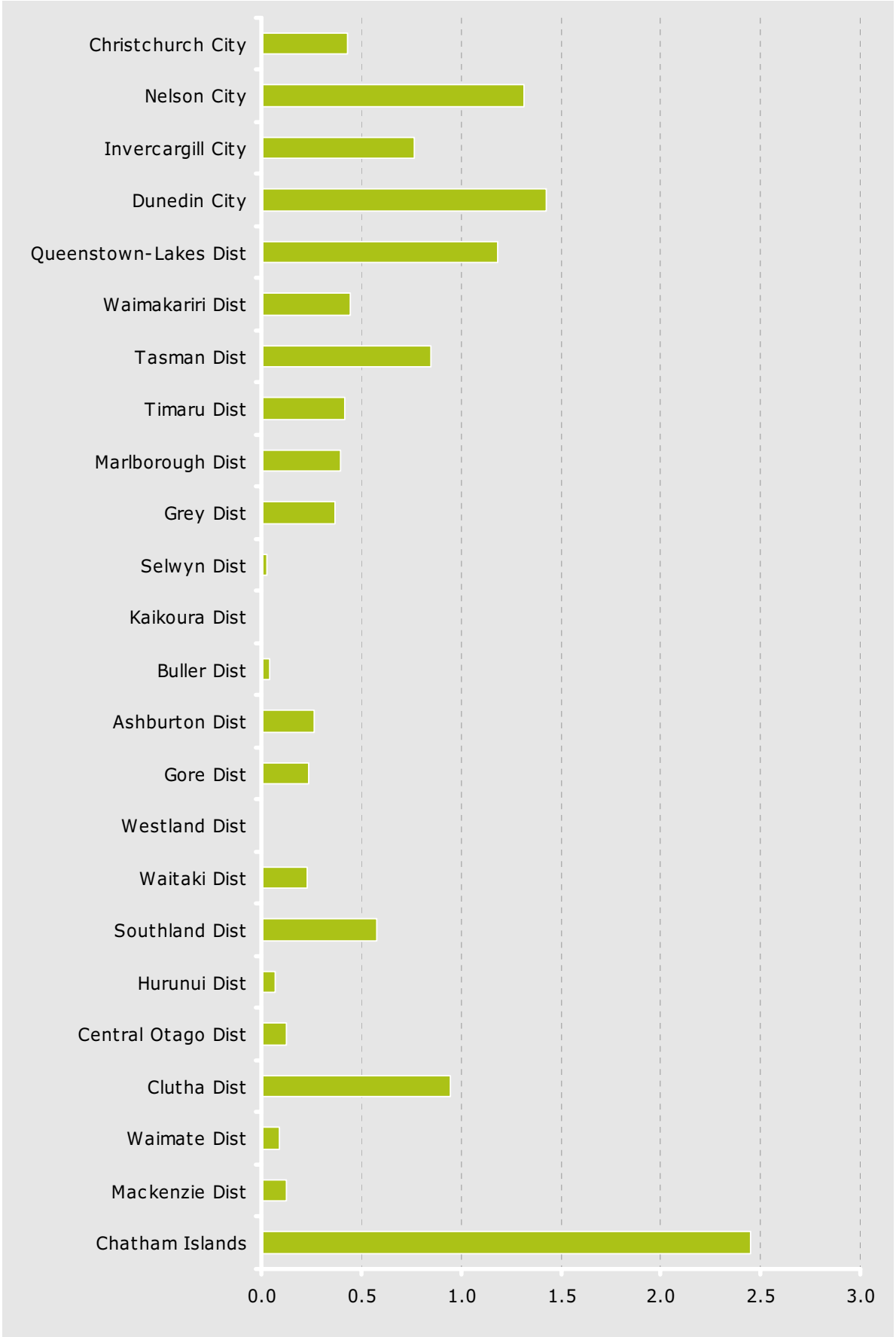


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Area wide pavement treatment - work category 2

Actual expenditure per kilometre of road ($000/ km)

South Island



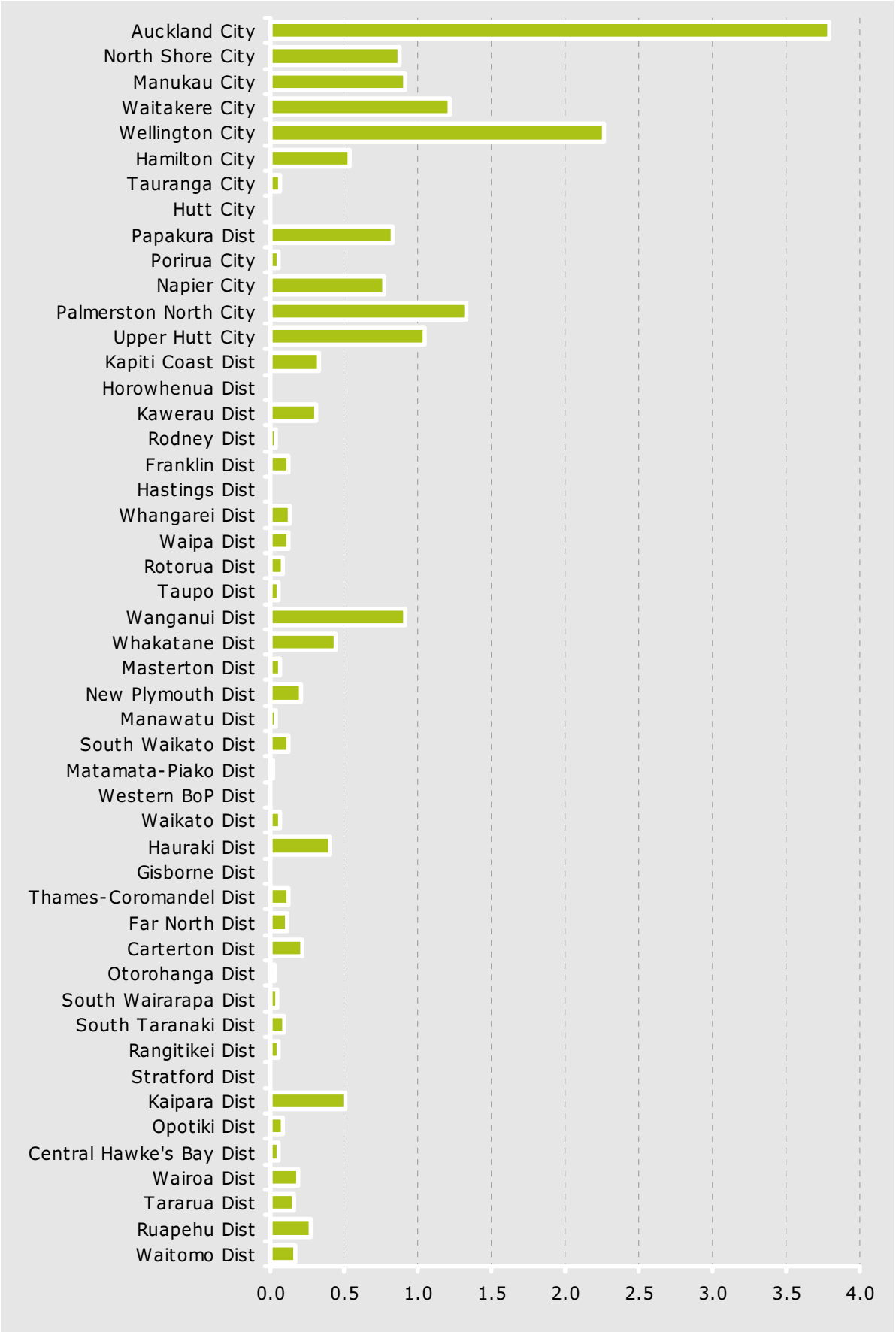
Note 1: Authorities are listed from highest to lowest average traffic density

Note 2 : Expenditure taken from final claim

Major drainage control - work category 3

Actual expenditure per kilometre of road ($000/ km)

North Island

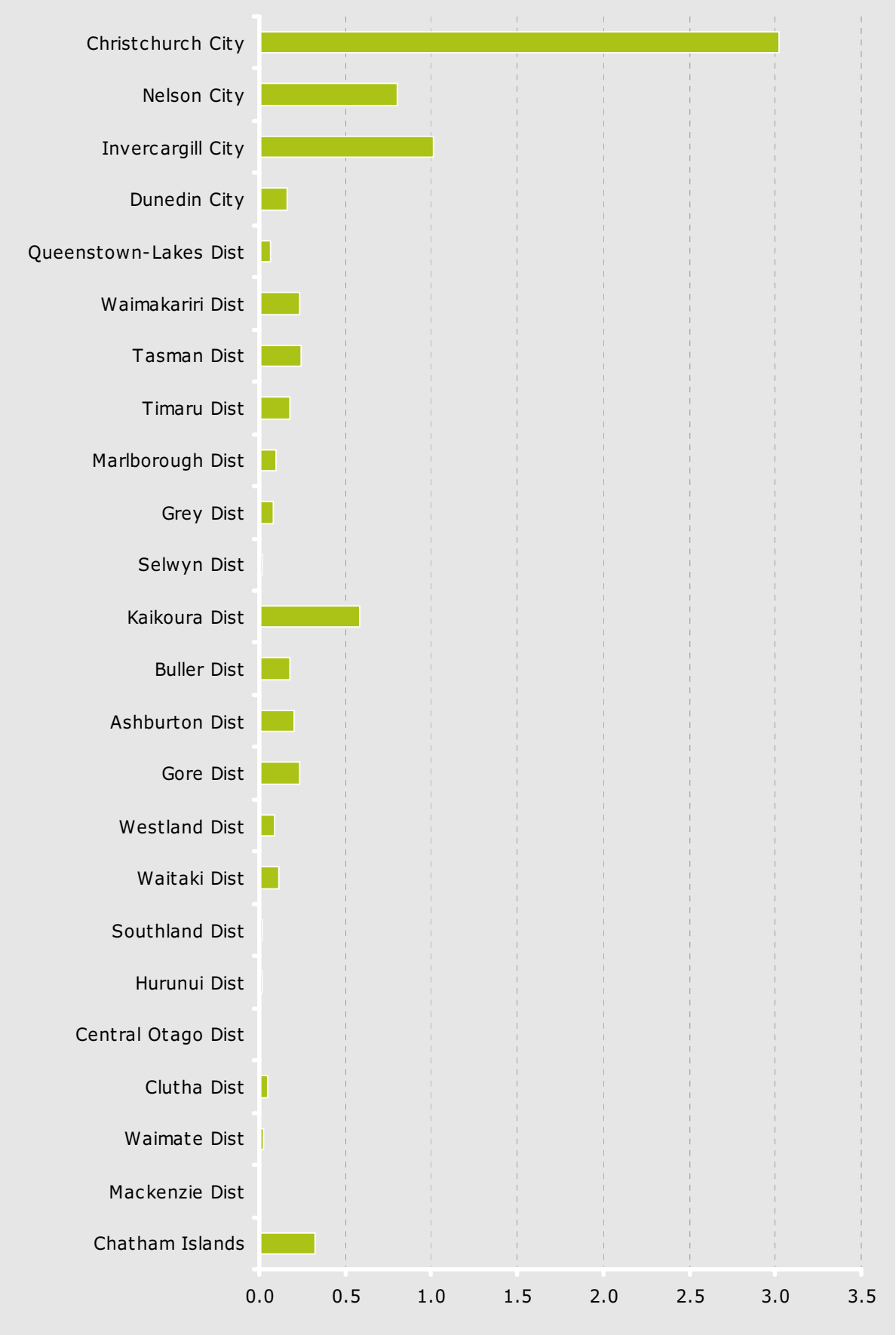


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Major drainage control - work category 3

Actual expenditure per kilometre of road ($000/ km)

South Island

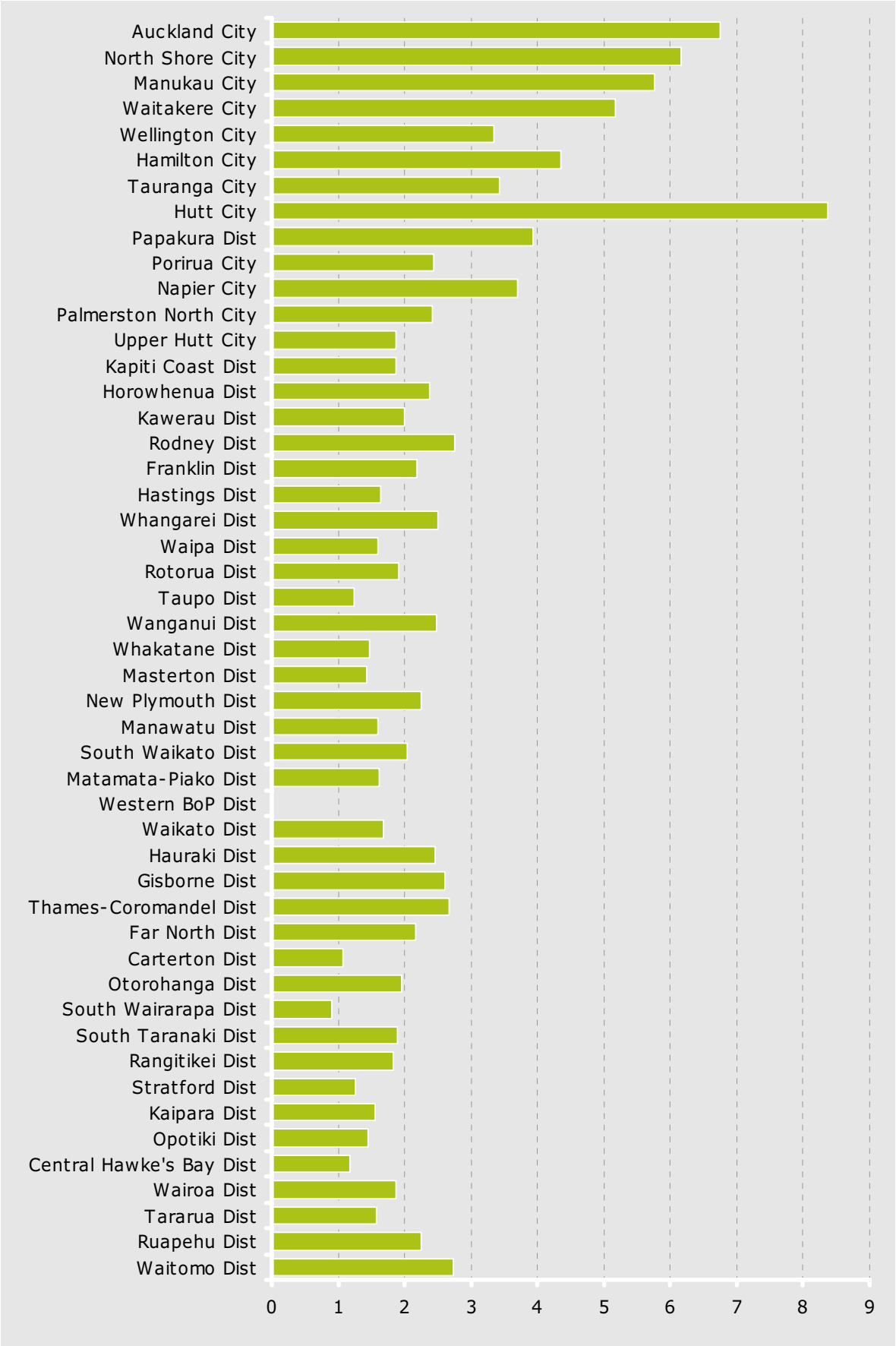


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Reseals - work categories 4 - 6

Actual expenditure per kilometre of sealed road ($000/ km)

North Island

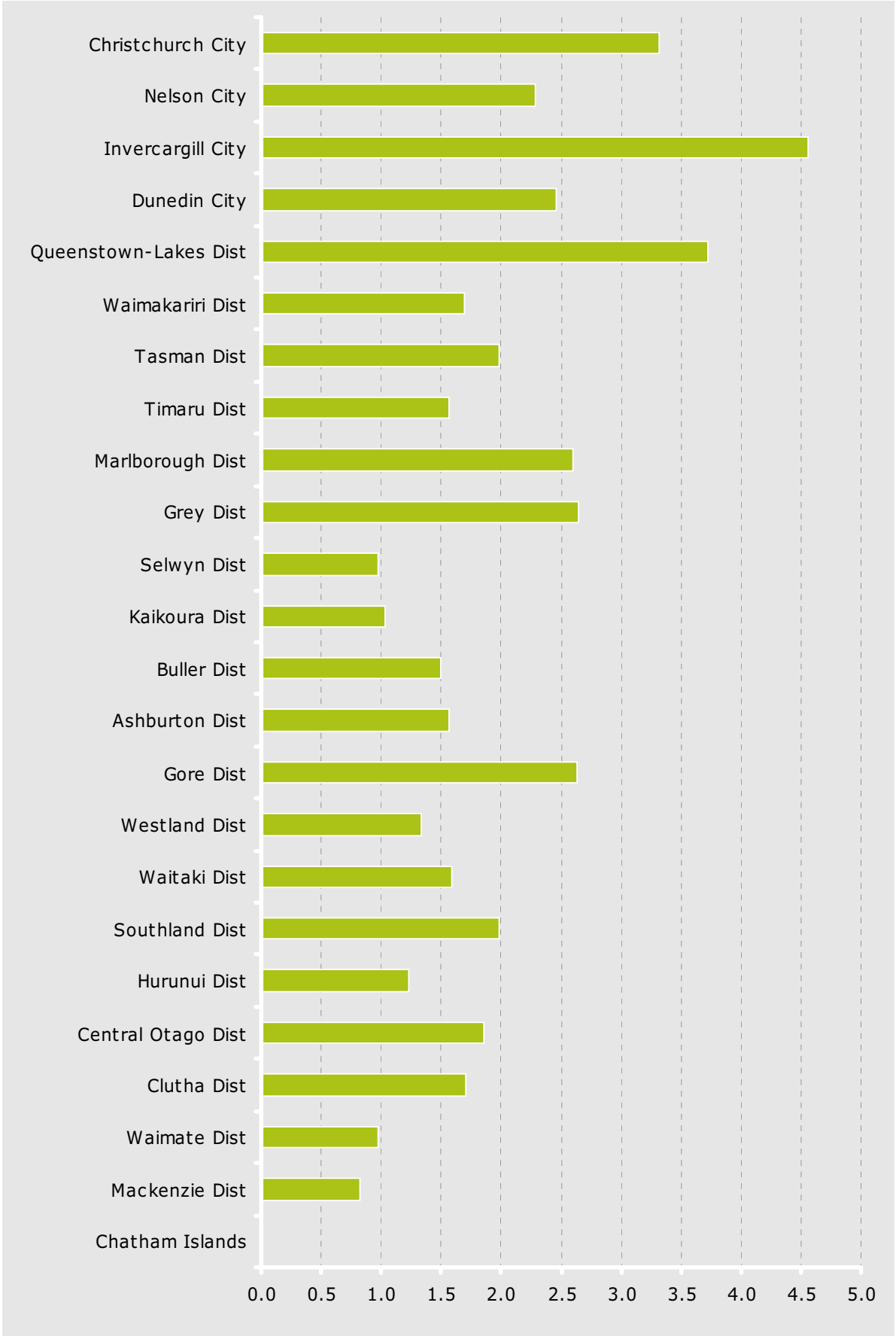


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Reseals - work categories 4 - 6

Actual expenditure per kilometre of sealed road ($000/ km)

South Island

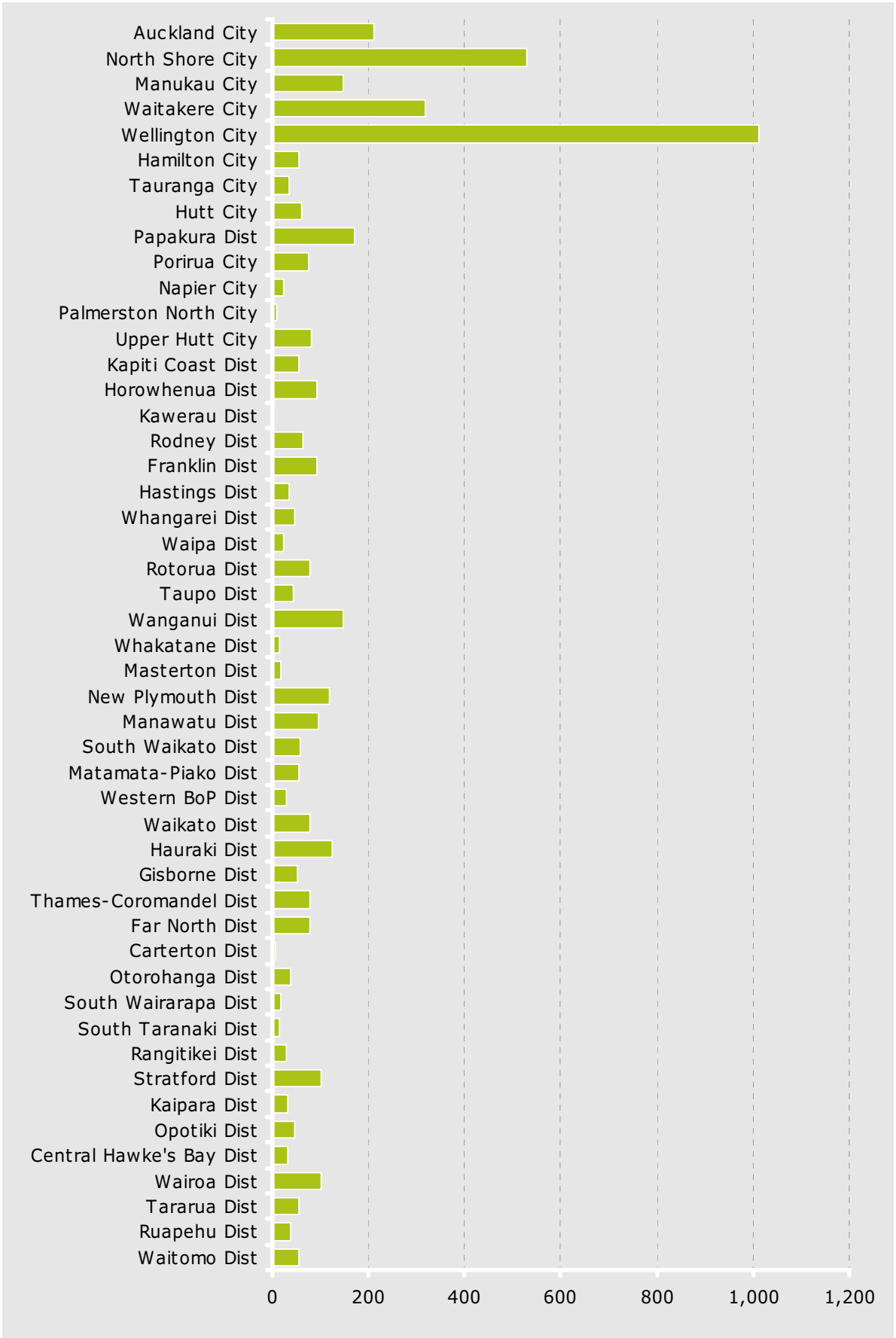


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Bridge maintenance - work category 7

Actual expenditure per metre of bridge ($/ m)

North Island

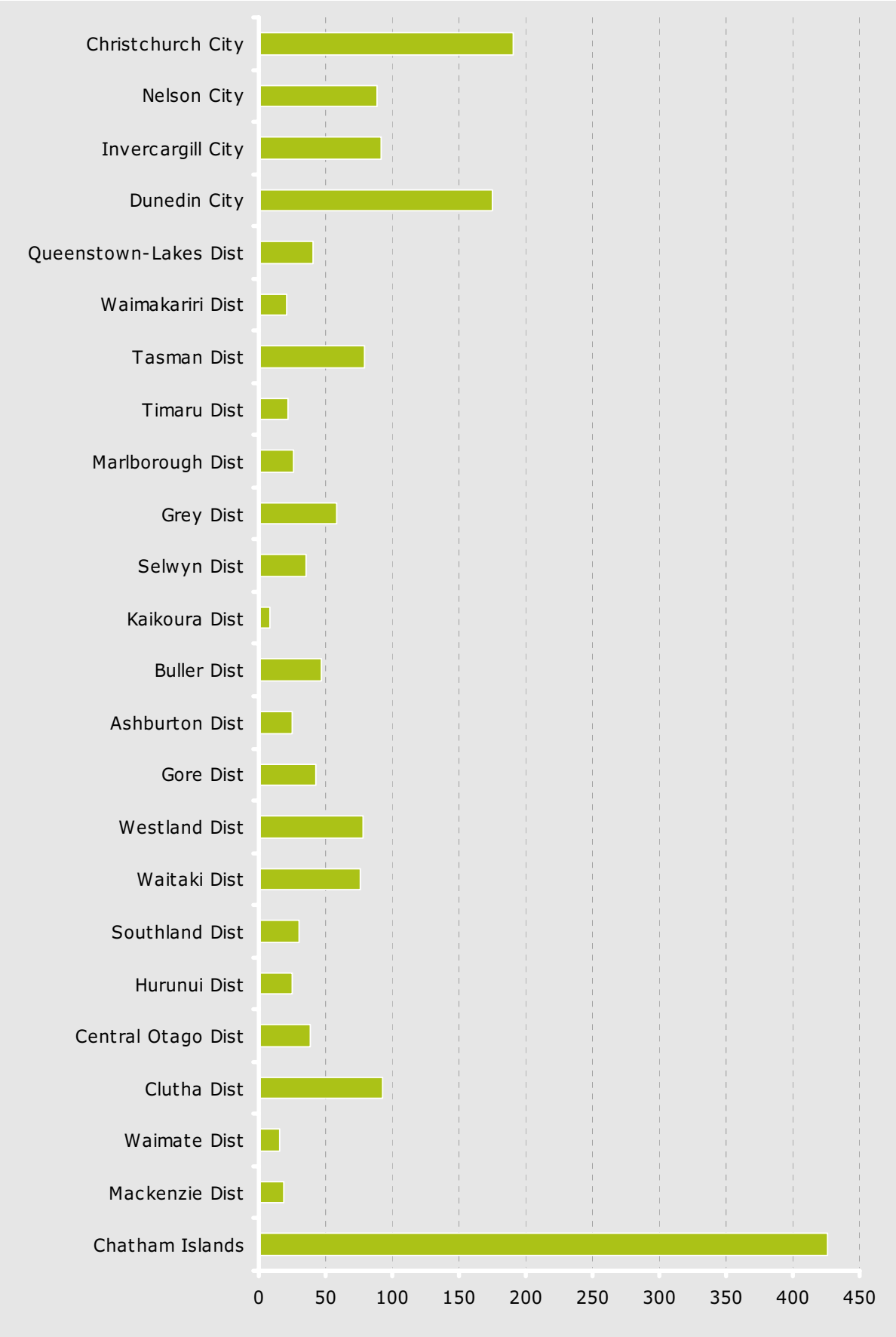


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Bridge maintenance - work category 7

Actual expenditure per metre of bridge ($/ m)

South Island

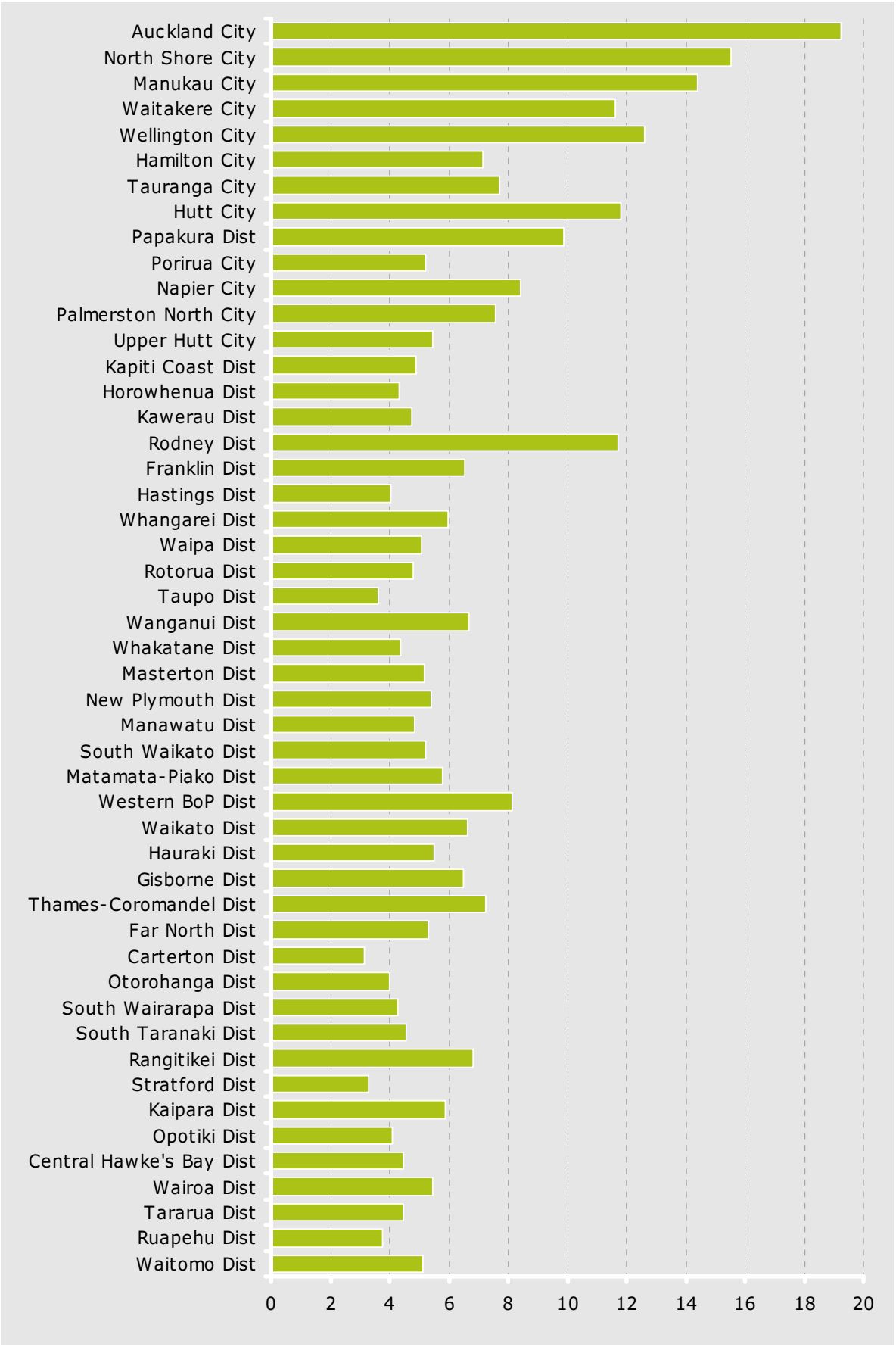


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total structural maintenance - work categories 1—7

Actual expenditure per kilometre of road ($000/ km)

North Island

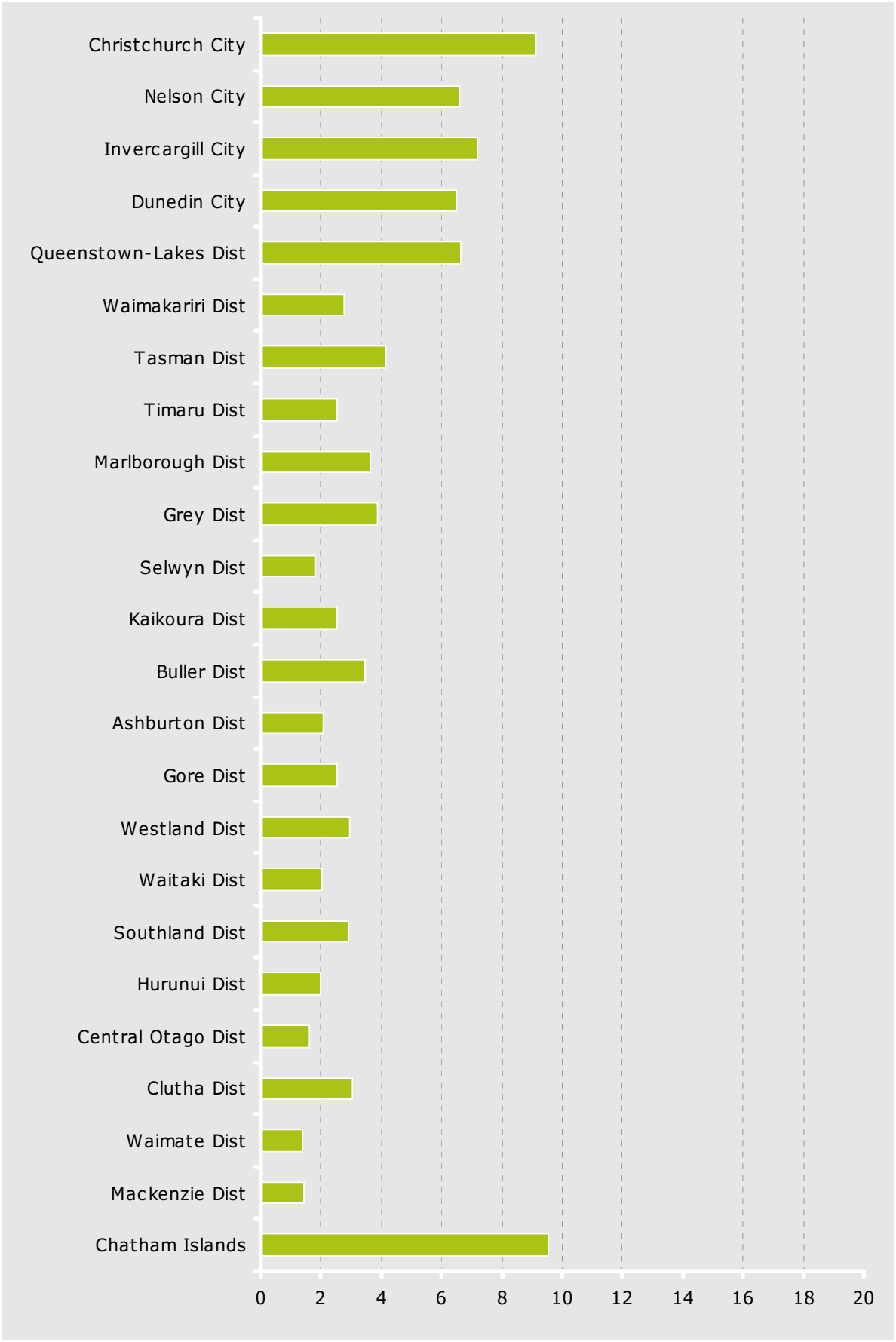


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total structural maintenance - work categories 1—7

Actual expenditure per kilometre of road ($000/ km)

South Island

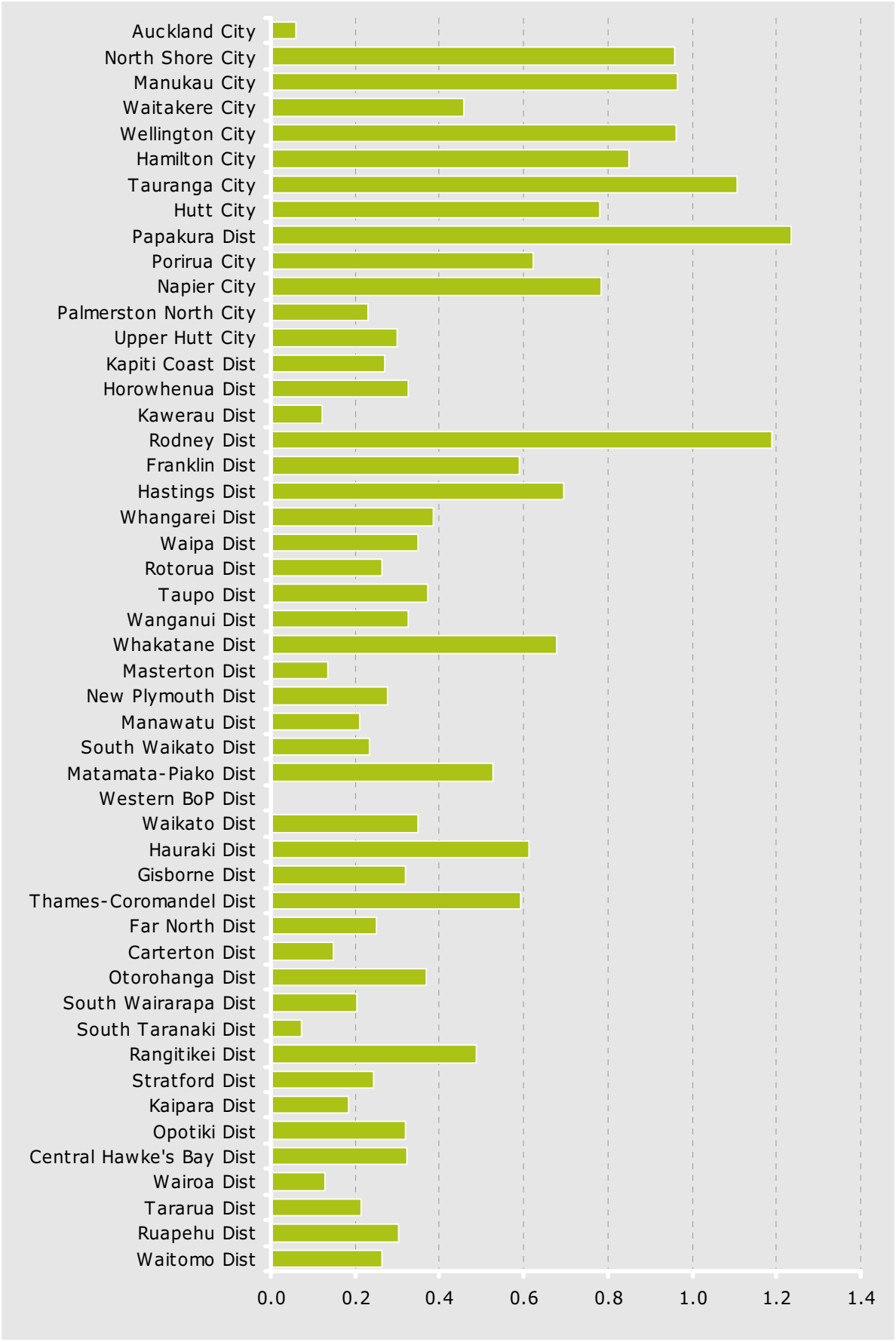


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Amenity/Safety Maintenance - work category 10

Actual expenditure per kilometre of road ($000/ km)

North Island

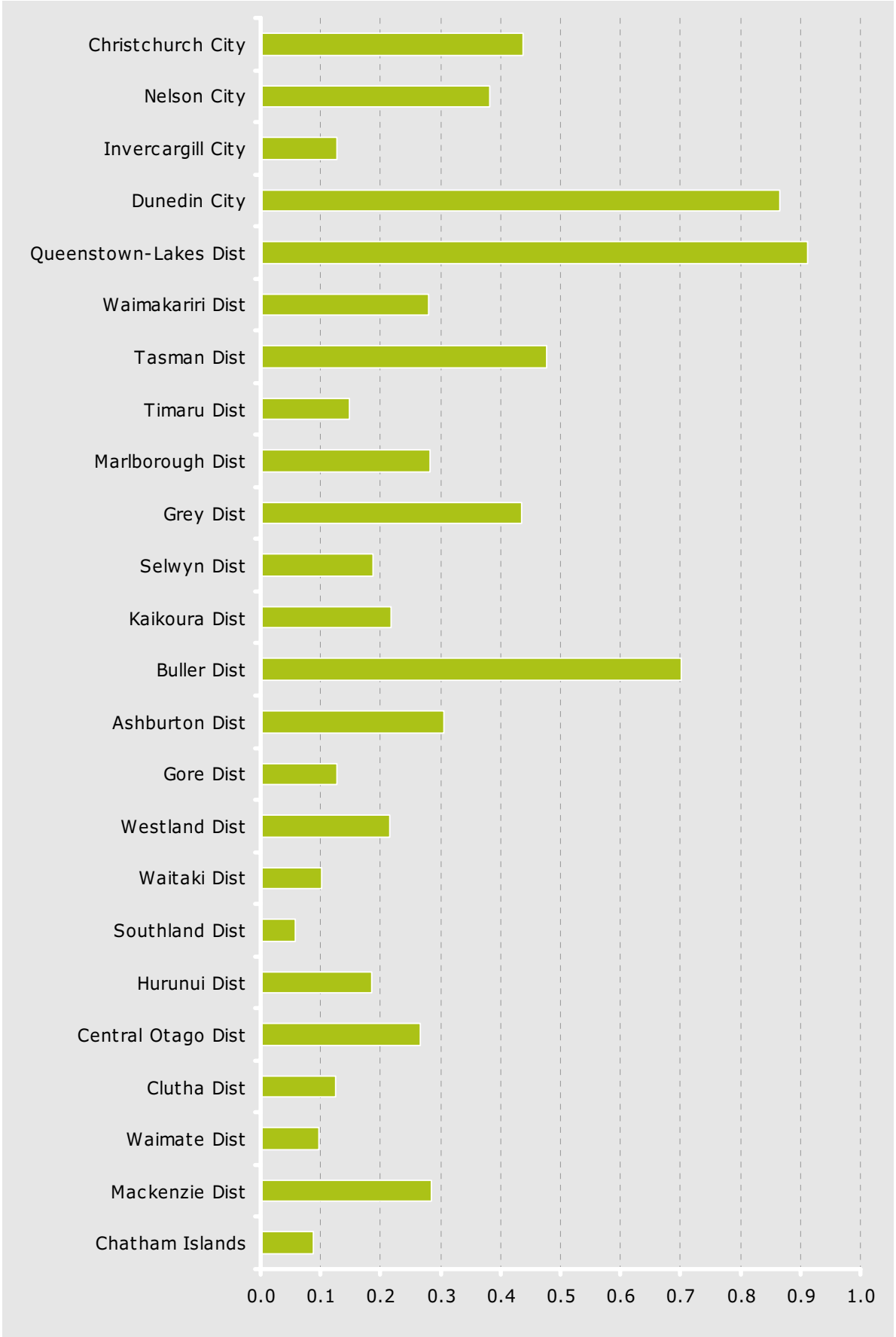


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Amenity/Safety Maintenance - work category 10

Actual expenditure per kilometre of road ($000/ km)

South Island

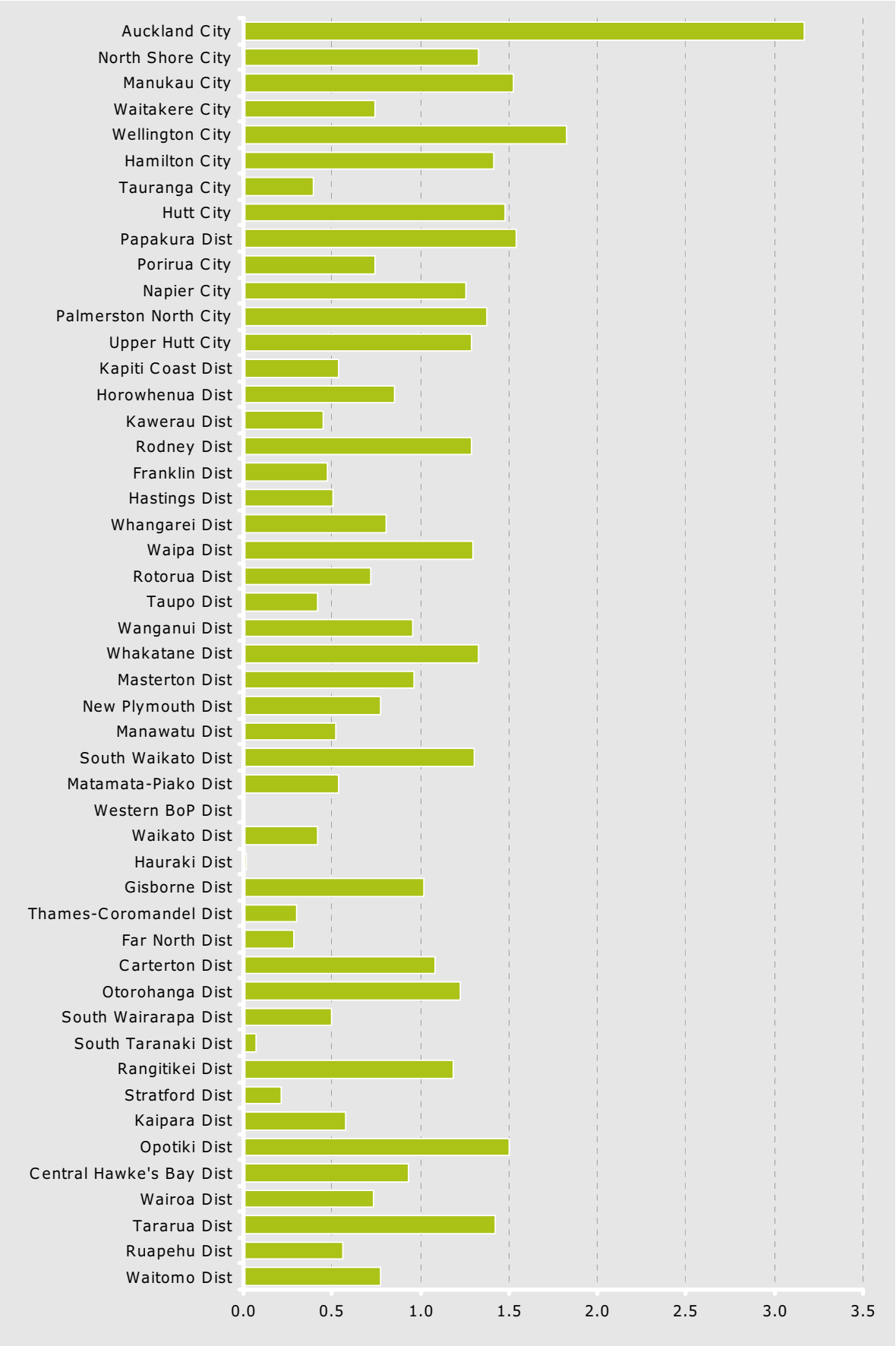


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Street Cleaning - work category 11

Actual expenditure per kilometre of urban sealed road ($000/ km)

North Island

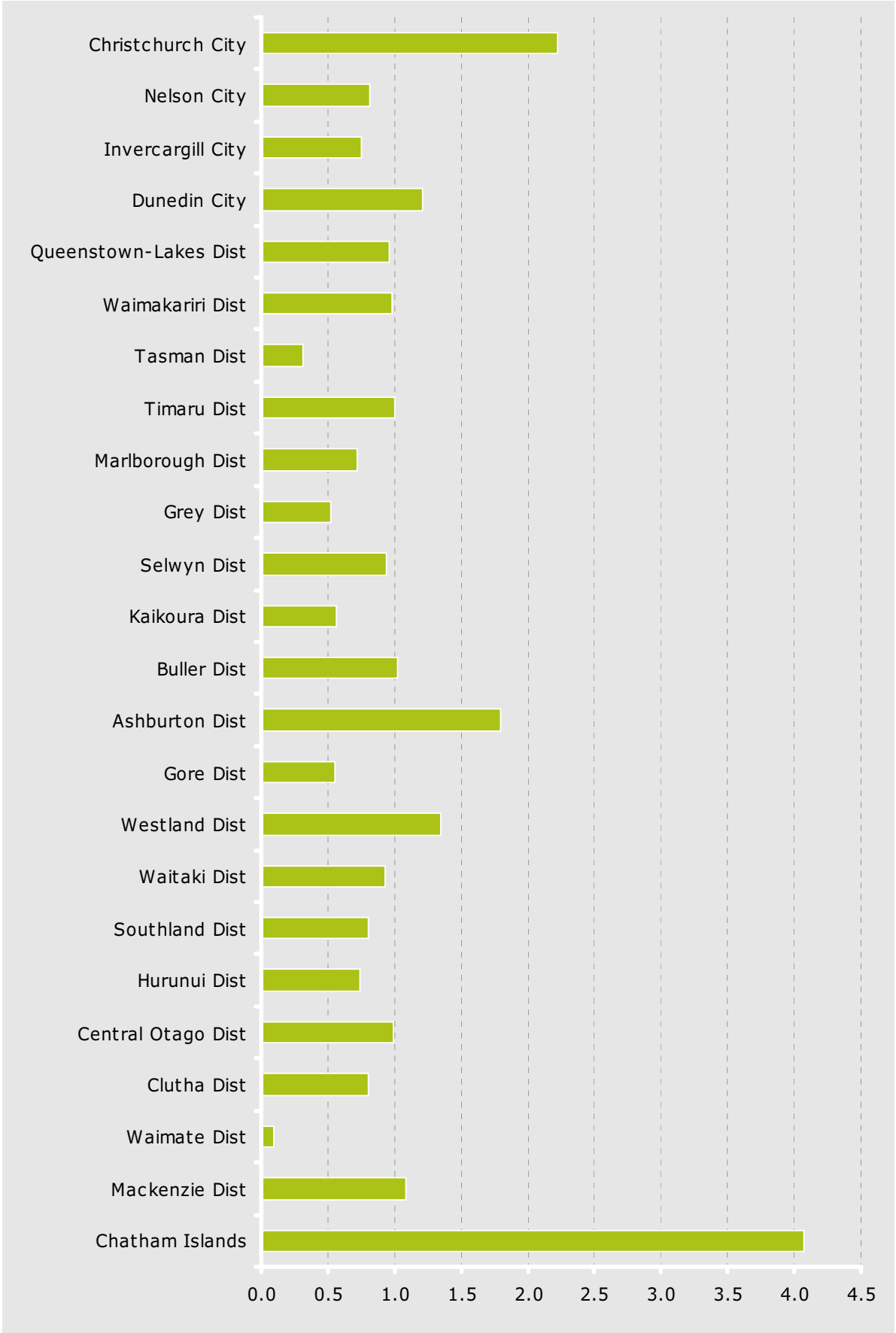


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Street Cleaning - work category 11

Actual expenditure per kilometre of urban sealed road ($000/ km)

South Island

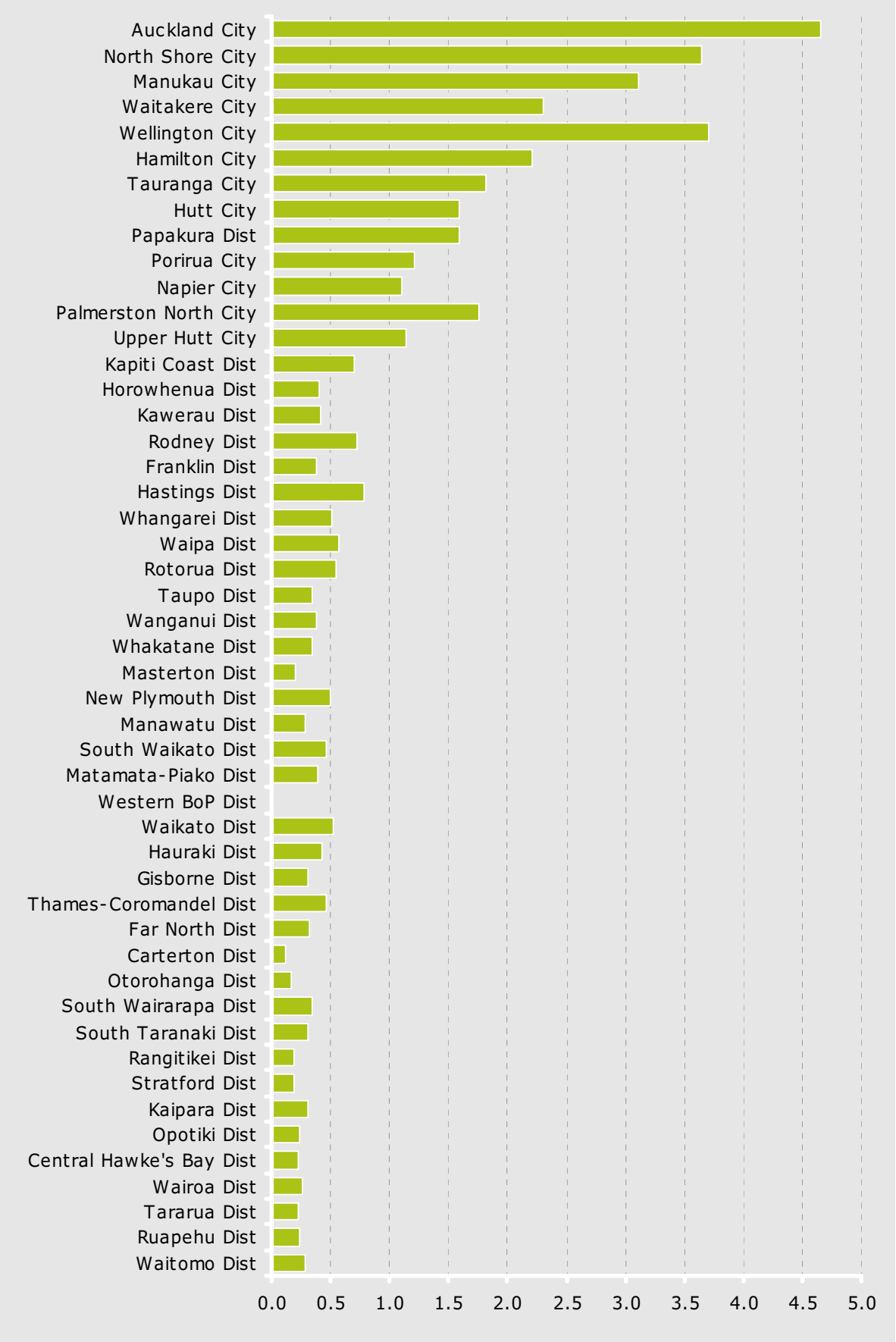


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Traffic Services - work category 12

Actual expenditure per kilometre of road ($000/ km)

North Island

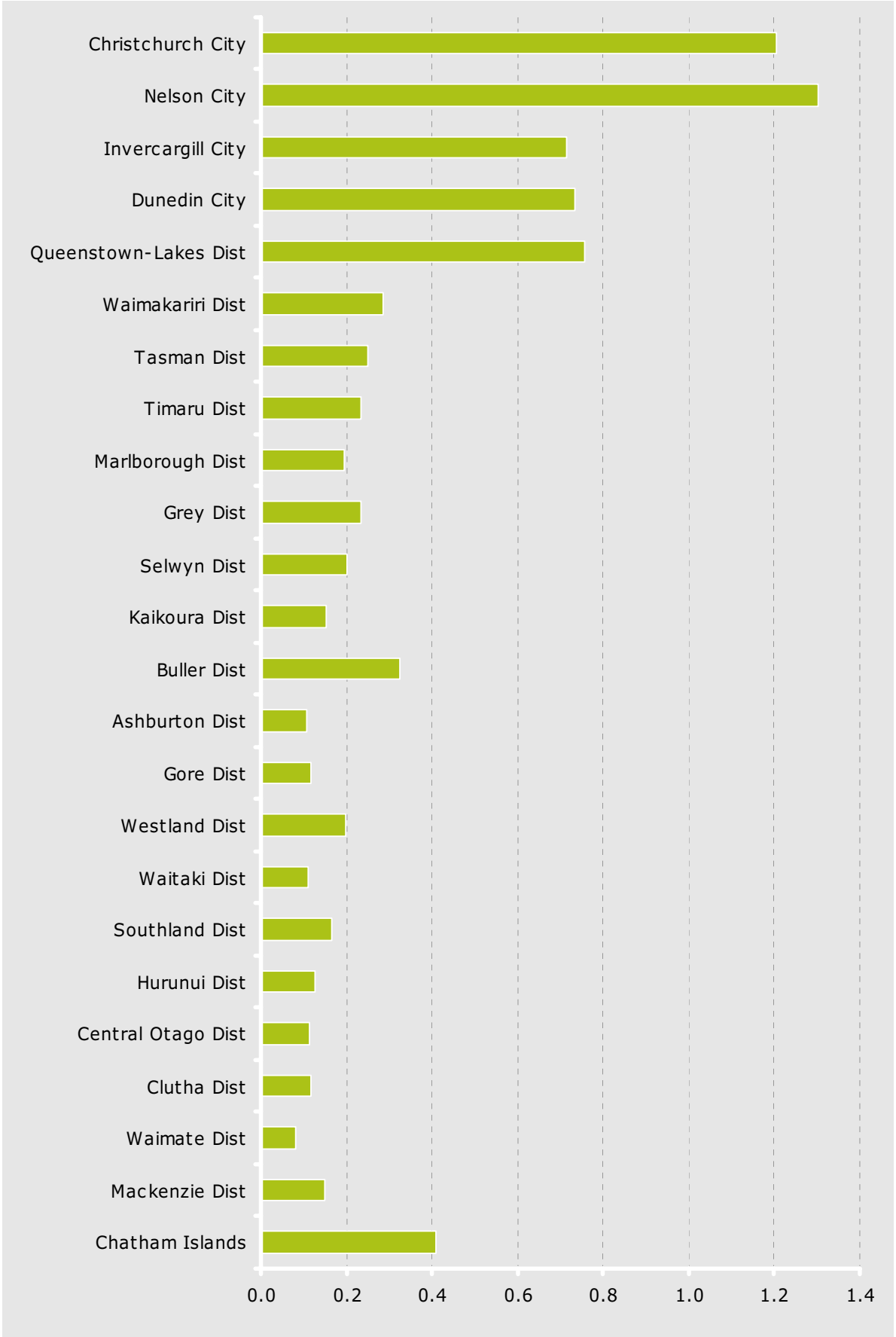


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Traffic Services - work category 12

Actual expenditure per kilometre of road ($000/ km)

South Island

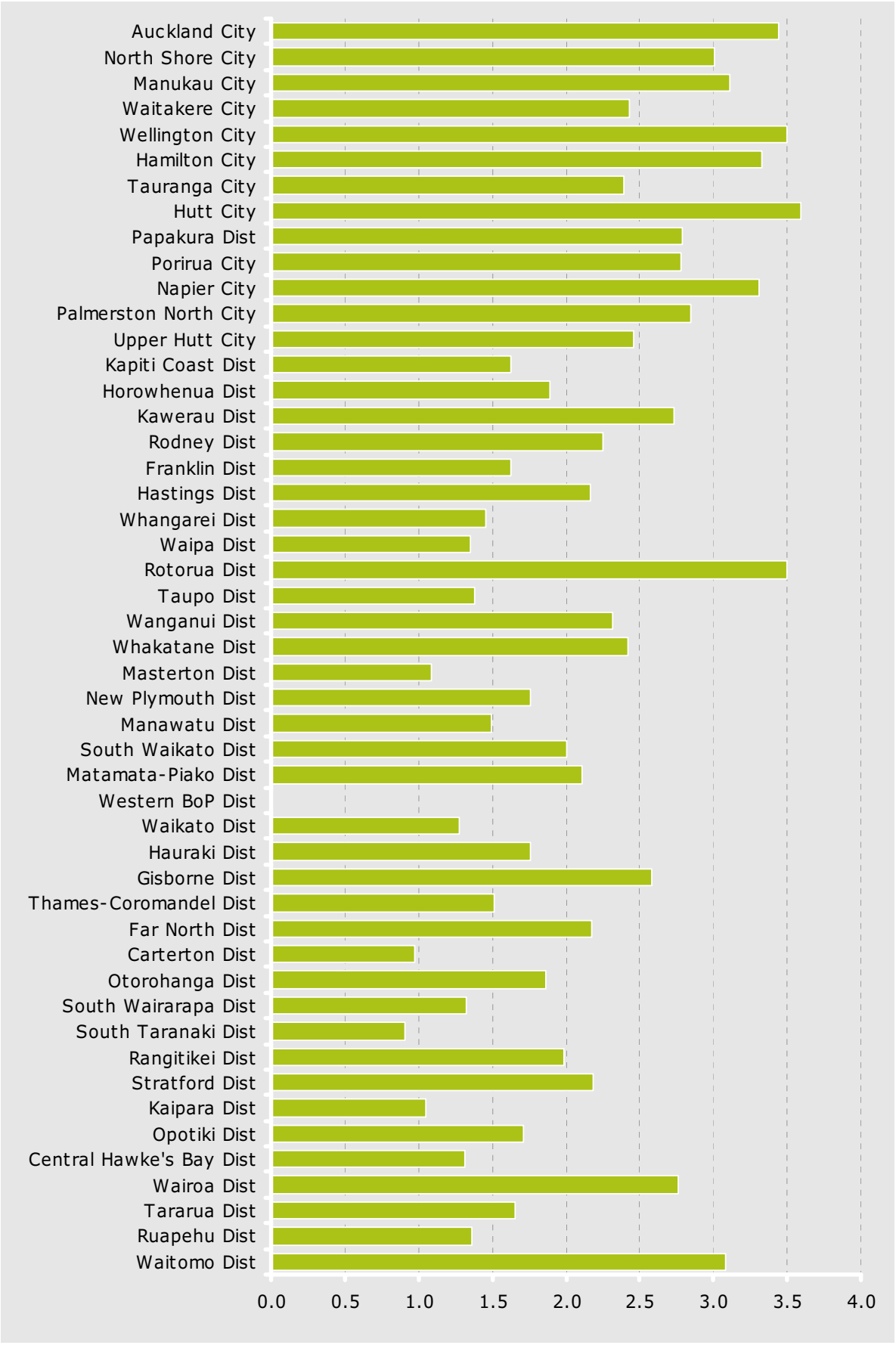


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Carriageway Lighting - work category 13

Actual expenditure per kilometre of urban road ($000/ km)

North Island

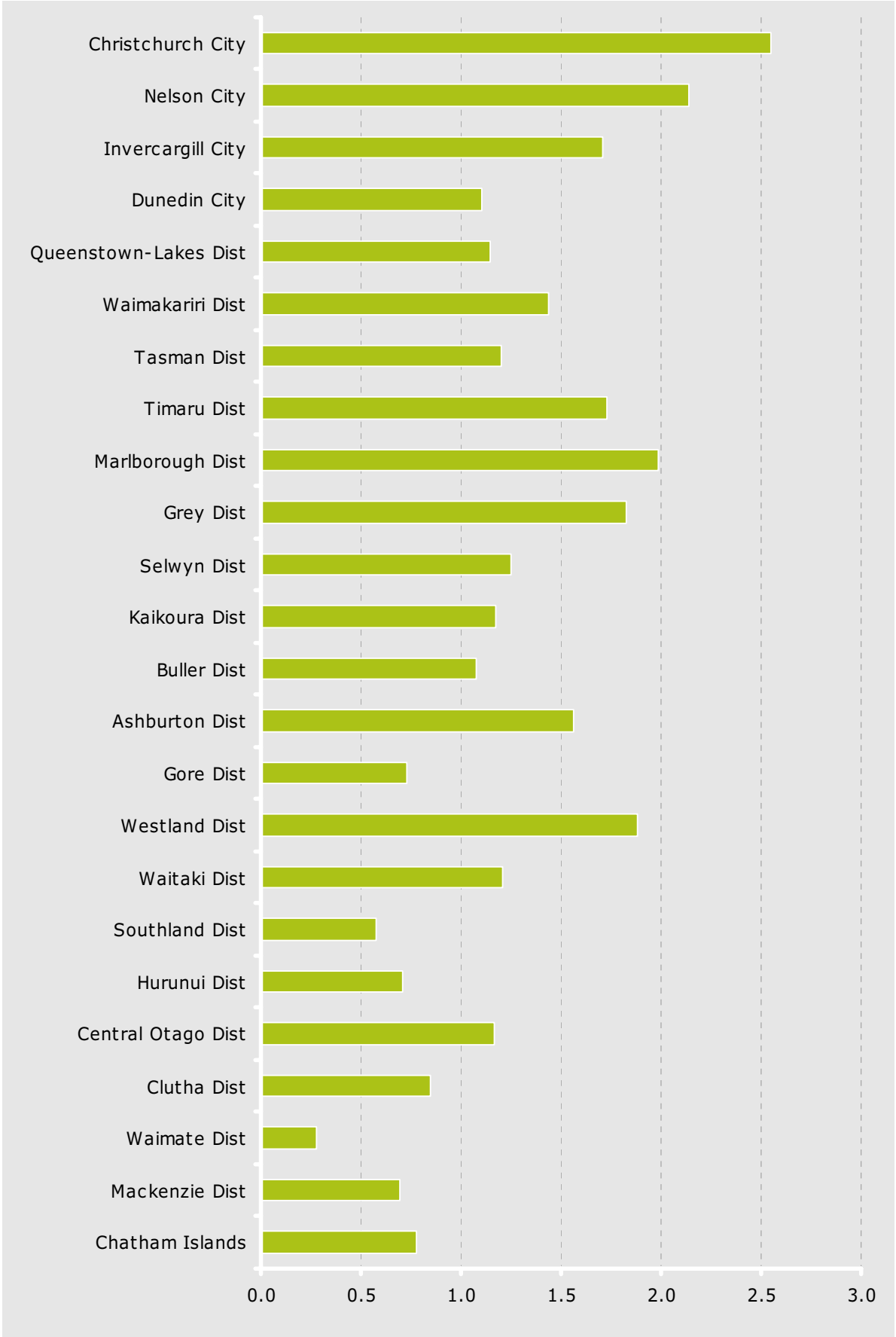


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Carriageway Lighting - work category 13

Actual expenditure per kilometre of urban road ($000/ km)

South Island

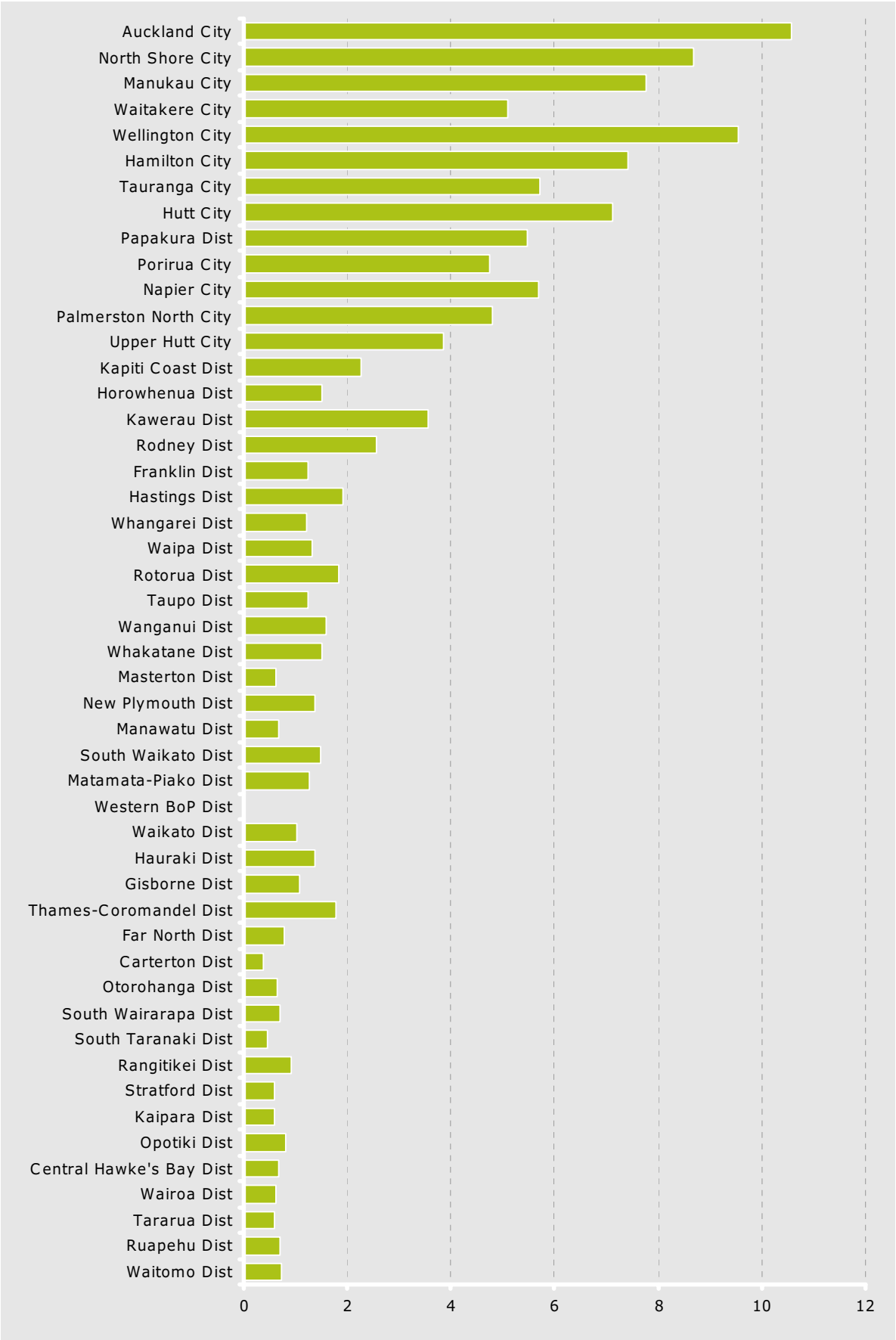


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total Corridor Maintenance - work categories 10 - 13

Actual expenditure per kilometre of road ($000/ km)

North Island

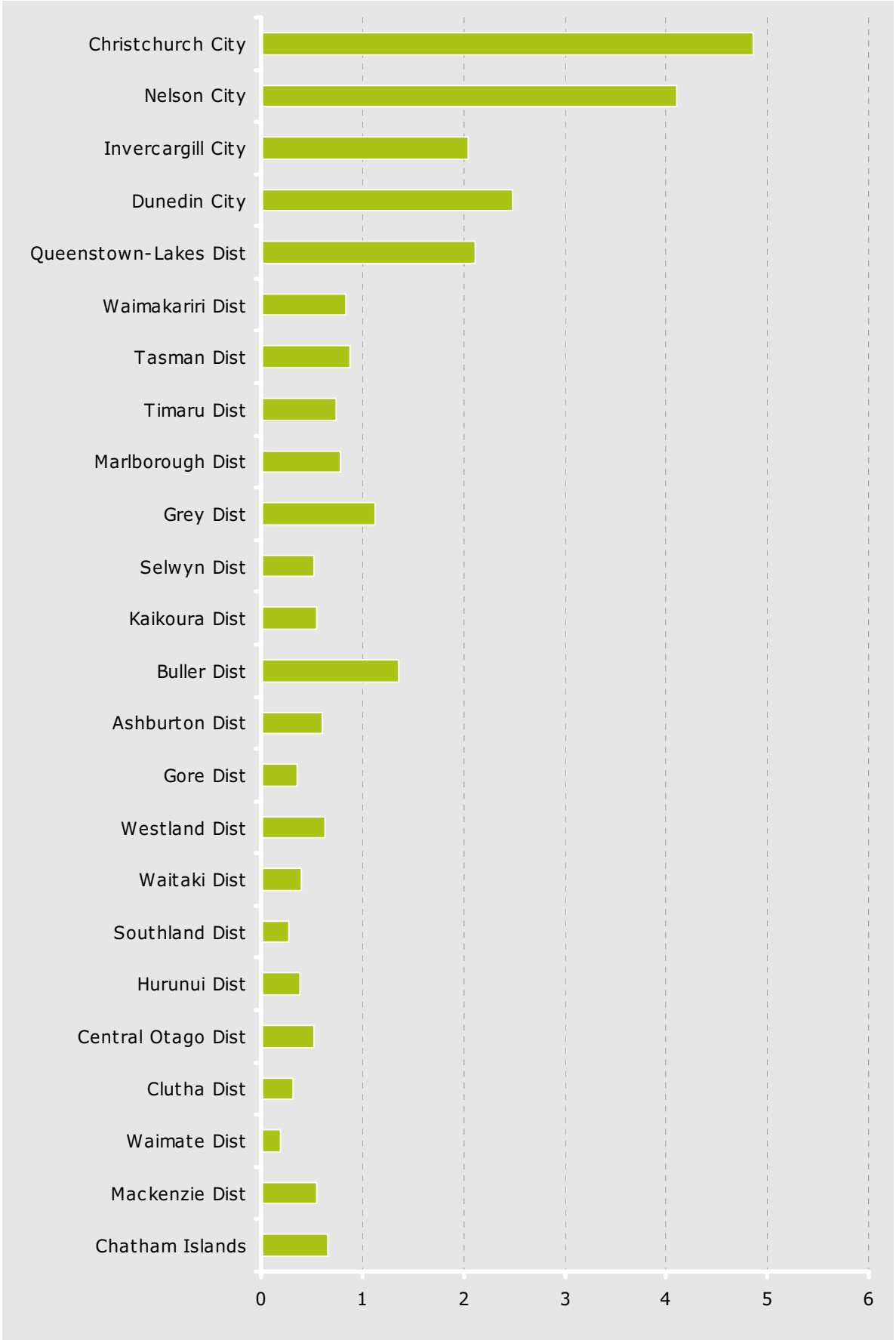


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total Corridor Maintenance - work categories 10 - 13

Actual expenditure per kilometre of road ($000/ km)

South Island

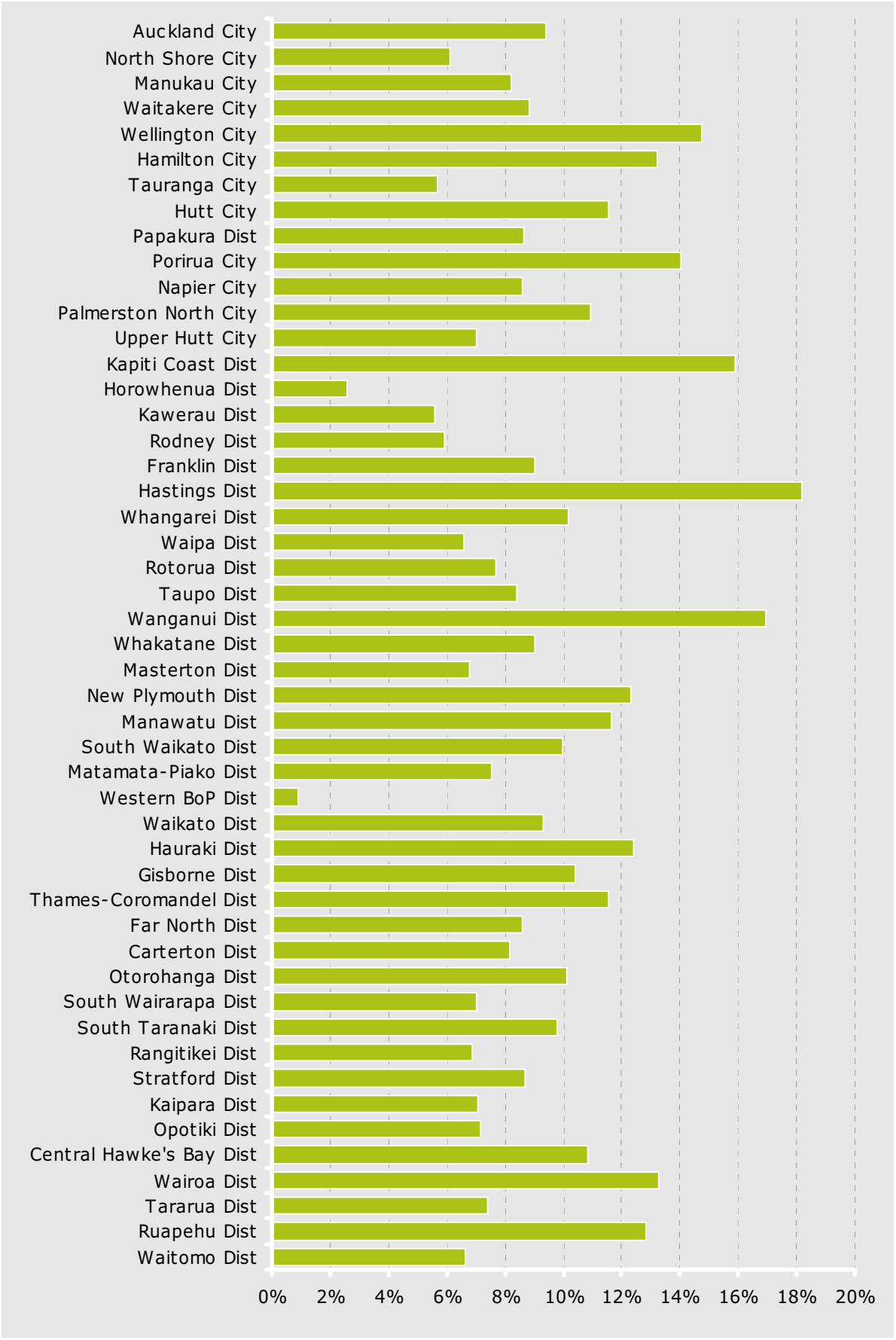


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Professional Services - work category 17

as a % of maintenance block allocation (work categories 1—17)

North Island

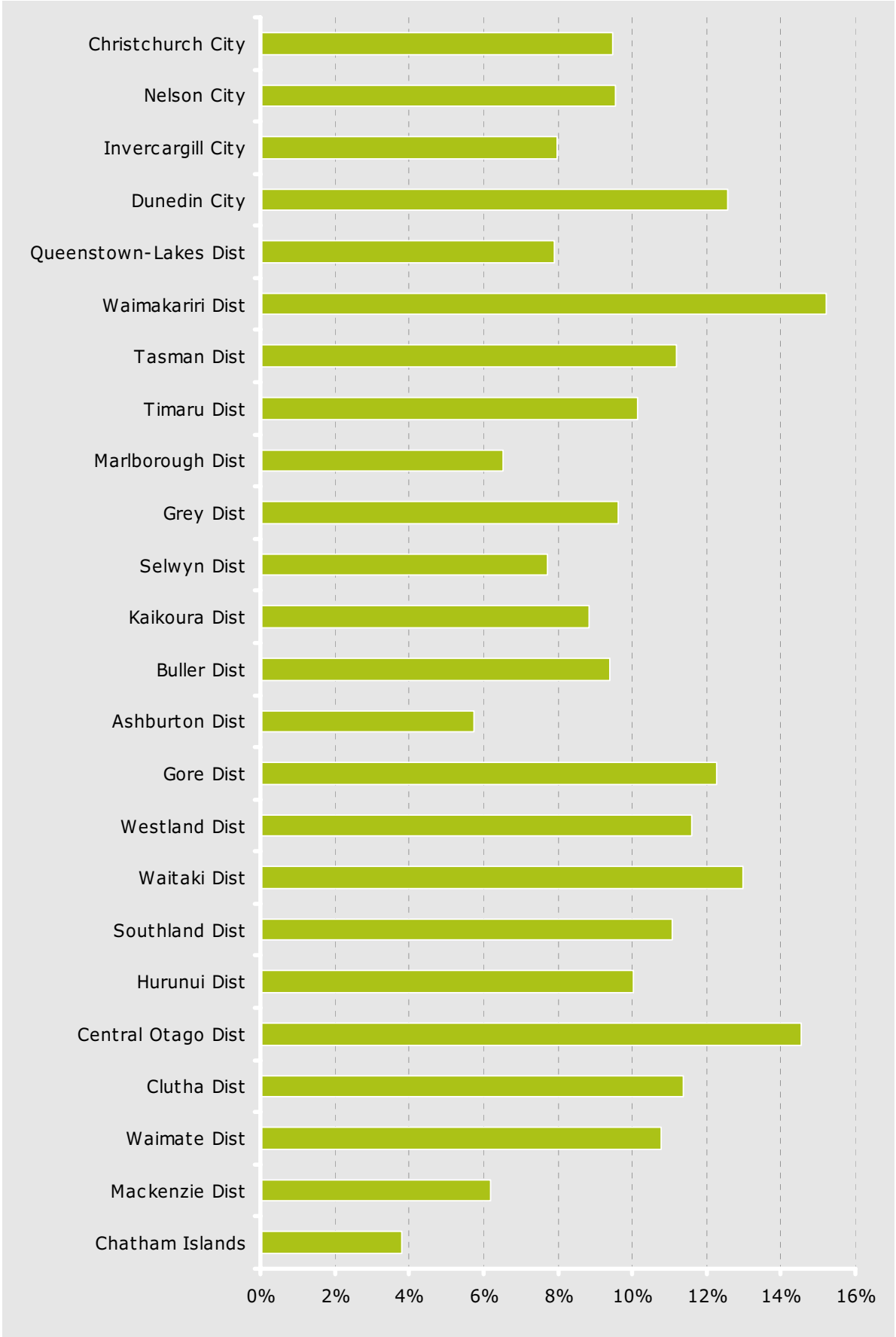


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Professional Services - work category 17

as a % of maintenance block allocation (work categories 1—17)

South Island

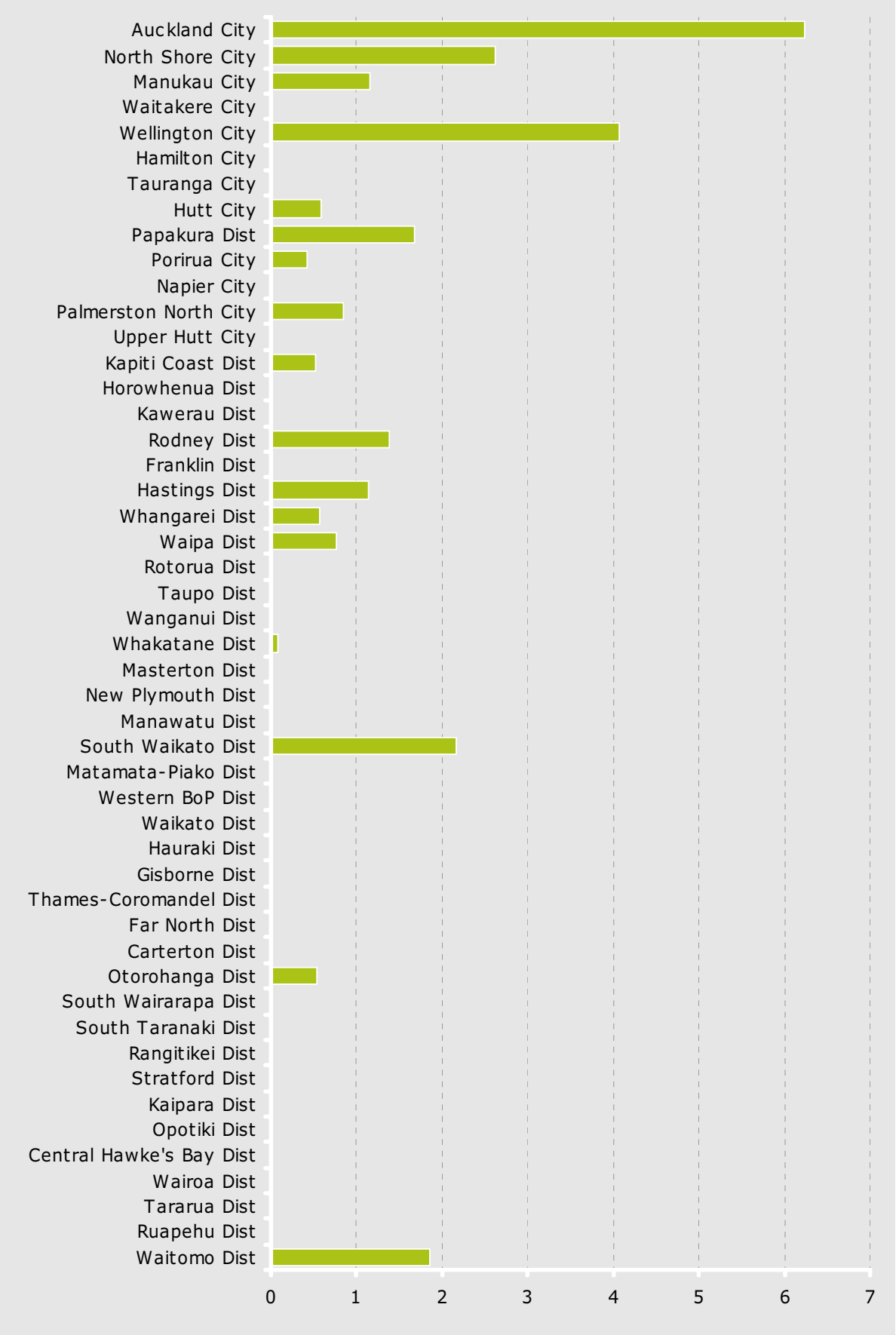


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Pavement smoothing - work category 40

Actual expenditure per kilometre of road ($000/ km)

North Island

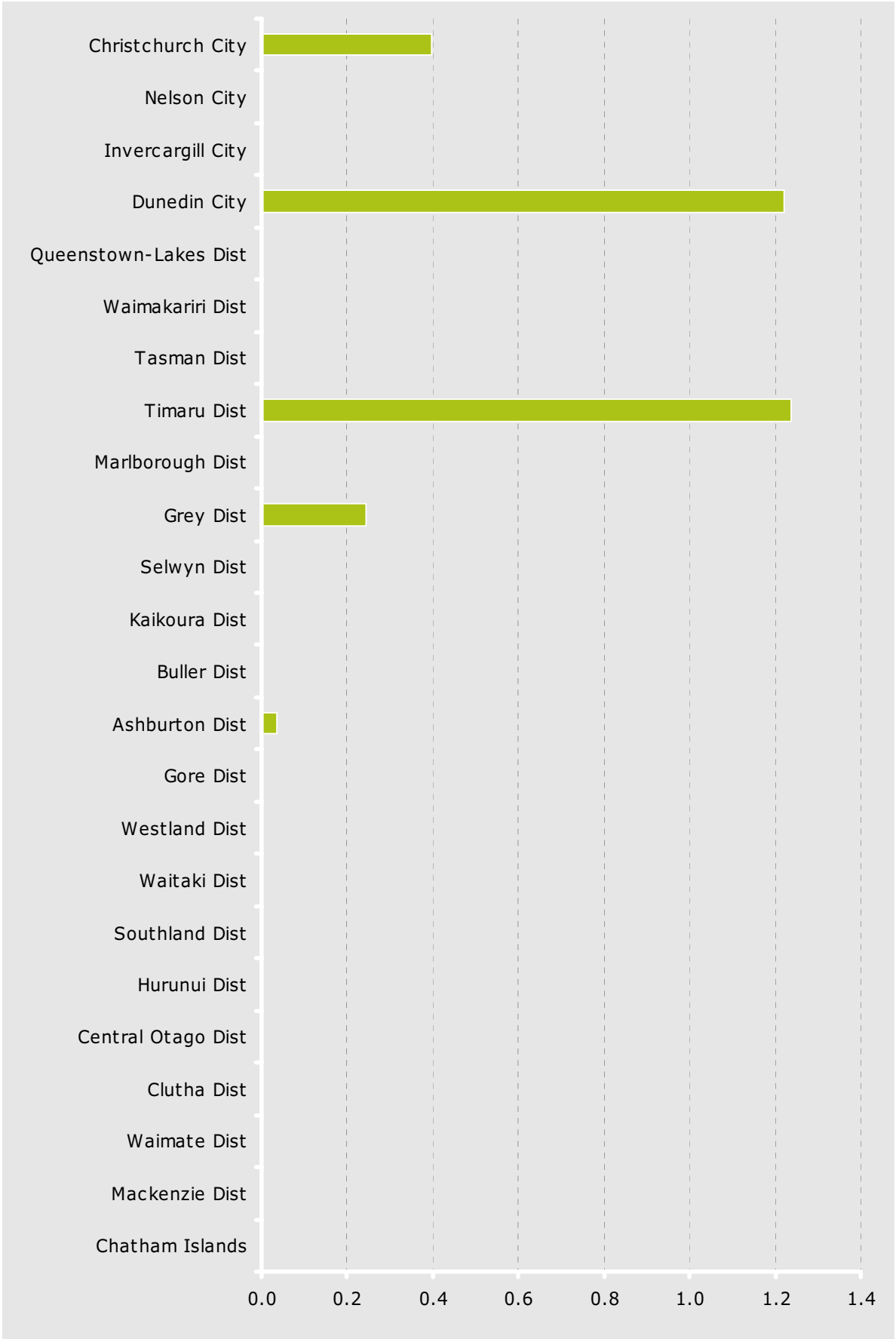


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Pavement smoothing - work category 40

Actual expenditure per kilometre of road ($000/ km)

South Island

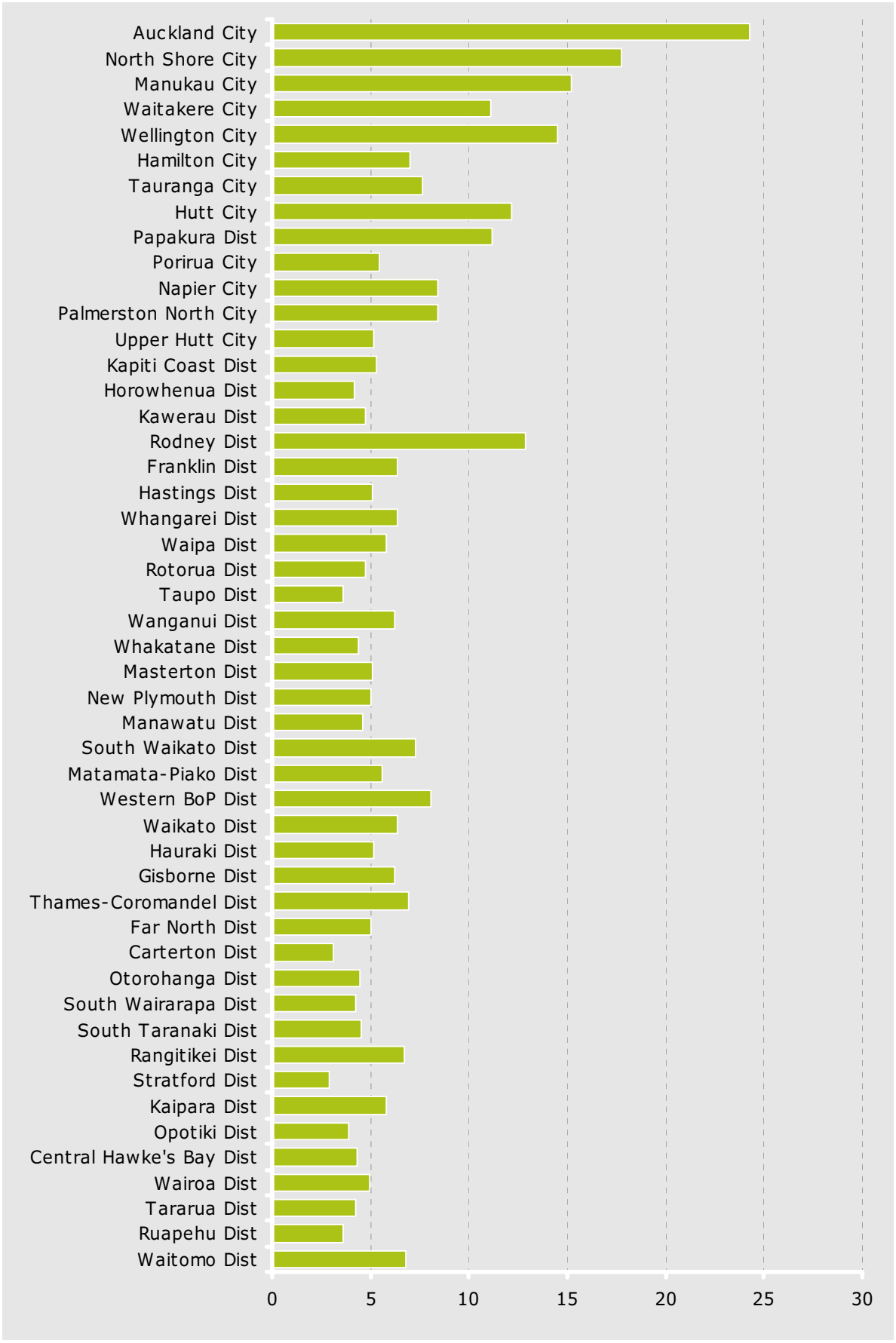


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total pavement and drainage mtce - work categories 1—6 & 40

Actual expenditure per kilometre of road ($000/ km)

North Island

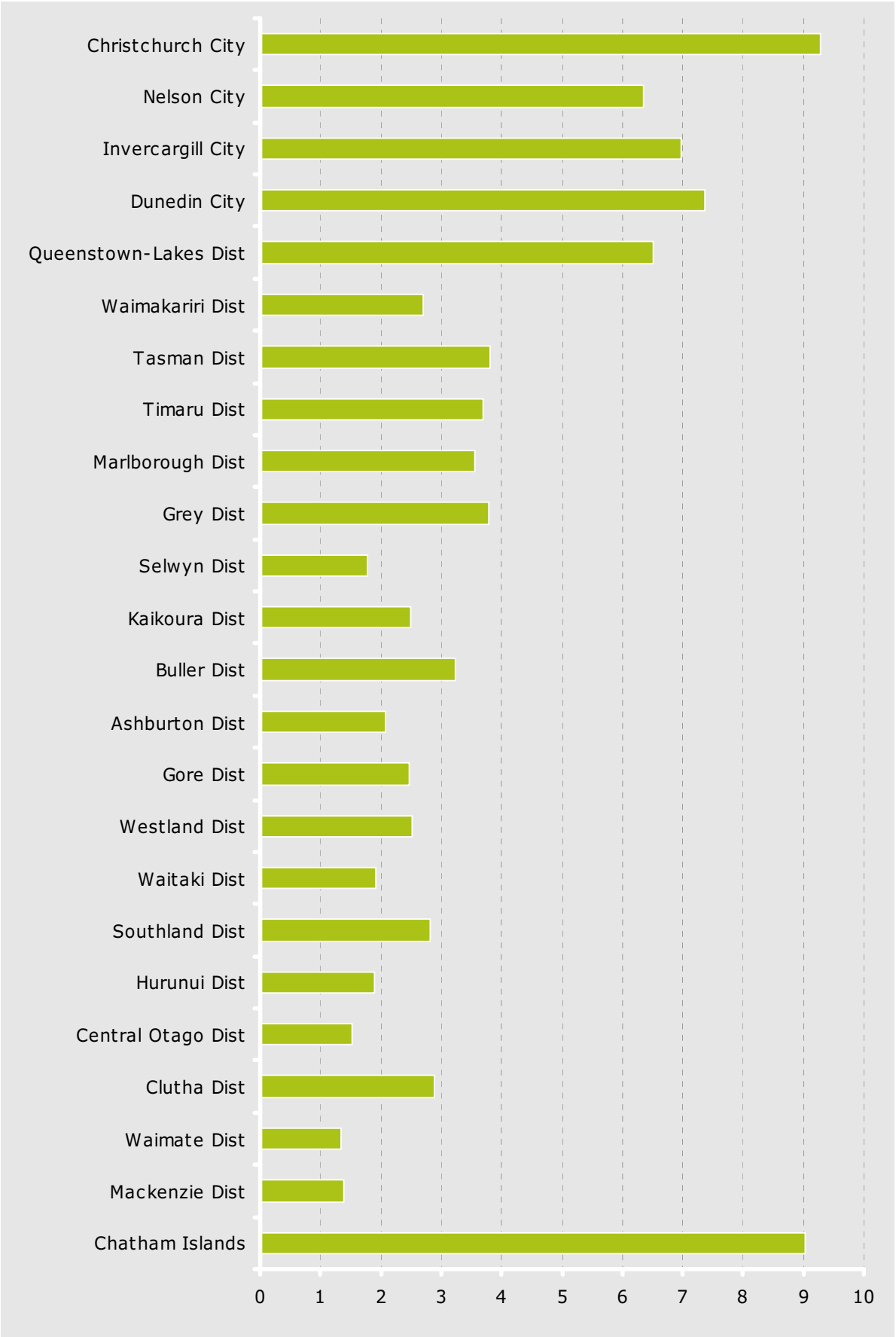


Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim

Total pavement and drainage mtce - work categories 1—6 & 40

Actual expenditure per kilometre of road ($000/ km)

South Island



Note 1: Authorities are listed from highest to lowest average traffic density
Note 2 : Expenditure taken from final claim


WORKS END