

Development Servicing Plans for Water Supply and Sewerage

April 2023

Snowy Monaro Regional Council | Beca HunterH2O

Record of versions

Version	Date Published	Reason for Amendments	Resolution	Author or Document Owner
Draft	25/11/2022	Draft for Public Exhibition	316/22	Strategic Planning
1		Final Version for Council Adoption	80/23	Strategic Planning

Copyright © Hunter H2O Holdings Pty Limited 2023

The concepts and information contained in this document are the property of Hunter H2O Holdings Pty Limited for the sole use of the nominated client. Use or copying of this document without the written permission of Hunter H2O constitutes an infringement of copyright.



the future of water

Contents

Summary	7
1 Introduction	9
2 Administration	10
2.1 DSP Name and Area Covered	10
2.2 Payment of Developer Charges	11
2.3 Dispute Resolution	12
3 Demographic and Land Use Planning Information	13
3.1 Growth Projections	13
3.2 Land Use Information	14
4 Water Supply and Sewerage Infrastructure	15
4.1 Water Supply	15
4.1.1 Adaminaby	15
4.1.2 Berridale	15
4.1.3 Bombala	15
4.1.4 Bredbo	15
4.1.5 Cooma	15
4.1.6 Dalgety	15
4.1.7 East Jindabyne	16
4.1.8 Eucumbene Cove	16
4.1.9 Jindabyne	16
4.1.10 Kalkite	16
4.1.11 Nimmitabel	16
4.2 Sewerage	16
4.2.1 Adaminaby	16
4.2.2 Berridale	17
4.2.3 Bombala	17
4.2.4 Cooma	17
4.2.5 Jindabyne	17
4.2.6 Kalkite	17
4.2.7 Nimmitabel	18
4.3 Existing Capital Costs	18
4.4 Future Capital Works Program	18
4.5 Reticulation Works	18
5 Levels of Service	19
5.1 Water Supply	19

5.2	Sewerage	20
6	Design Parameters	20
6.1	Water Supply	20
6.2	Sewerage	20
7	Developer Charges Calculation – Water Supply	22
7.1	Summary	22
7.2	Service Areas	23
7.3	Equivalent Tenements (ETs)	23
7.4	Capital Charge	25
7.5	DSP Area	26
7.6	Reduction Amount	27
7.7	Cross-Subsidy	29
8	Developer Charges Calculation – Sewerage	32
8.1	Summary	32
8.2	Service Areas	32
8.3	Equivalent Tenements (ETs)	33
8.4	Capital Charge	34
8.5	DSP Area	35
8.6	Reduction Amount	37
8.7	Cross-Subsidy	38
9	Reviewing/ Updating of Developer Charges	41
10	Background Document	42
11	Other DSPs and Related Contribution Plans	43
12	Glossary	44
13	Plans	47
14	Calculation of ETs	48
15	Existing Capital Costs	49
16	Future Capital Works Program	50
17	Calculation of the Capital Charge	51
18	Calculation of the Reduction Amount	52
19	Cross Subsidy Calculations	53

Figures

Figure 7-1 Impact of Developer Charges Option on TRB for Water Supply31
 Figure 8-1 Impact of Developer Charges Option on TRB for Sewerage..... 40

Tables

Table 3-1 Growth Projections..... 13
 Table 5-1 Levels of Service for Water Supply19
 Table 5-2 Levels of Service for Sewerage20
 Table 7-1 Summary of Proposed Water Supply Developer Charges for Water Supply 22
 Table 7-2 ET Projections for Water Supply 23
 Table 7-3 Capital Charge Calculation for Water Supply 25
 Table 7-4 Agglomeration of Service Areas for Water Supply 26
 Table 7-5 Weighted Average Capital Charge for Water Supply 27
 Table 7-6 Calculation of the Reduction Amount for Water Supply..... 28
 Table 7-7 Developer Charge Options and Cross-Subsidy for Water Supply 30
 Table 7-8 Impact of Cross-Subsidies on Annual Water Supply Bill 31
 Table 8-1 Summary of Proposed Water Supply Developer Charges for Sewerage 32
 Table 8-2 ET Projections for Sewerage 33
 Table 8-3 Capital Charge Calculation for Sewerage 35
 Table 8-4 Agglomeration of Service Areas for Sewerage 36
 Table 8-5 Weighted Average Capital Charge for Sewerage..... 36
 Table 8-6 Calculation of the Reduction Amount for Sewerage 37
 Table 8-7 Developer Charge Options and Cross-Subsidy for Sewerage..... 39
 Table 8-8 Impact of Cross-Subsidies on Annual Sewerage Bill..... 40

Summary

This Development Servicing Plan (DSP) covers water supply and sewerage developer charges for the Snowy Monaro Regional Council Local Government Area.

This DSP has been prepared in accordance with the 2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater issued by the Minister for Lands and Water, pursuant to section 306 (3) of the Water Management Act, 2000.

The area covered by each DSP, and the existing and proposed works serving the area, are shown on the plans in Section 13.

The timing and expenditure for works serving the area covered by each DSP are shown in Section 15 and Section 16.

Levels of service to be provided in each DSP area are summarised in Section 5.

The water supply and sewerage developer charges for the areas covered by this DSP document have been determined as follows:

	DSP Name	DSP Service Area	Developer Charge (\$ per ET)	Cross-subsidy: resulting increase in the Typical Residential Bill
Water Supply	A	Adaminaby	6,622	\$7.48 (1.2 %)
	B	Dalgety	6,622	
	B	Nimmitabel	6,622	
	C	Kalkite	6,622	
	D	Jindabyne	6,622	
	D	East Jindabyne & Berridale	6,622	
	D	Bombala	6,622	
	D	Bredbo	6,622	
	D	Cooma	6,622	
	E	Delegate	0	
Sewerage	A	Adaminaby	15,971	\$2.19 (0.3%)
	A	Kalkite	15,971	
	A	Jindabyne	15,971	
	A	Berridale	15,971	

B	Cooma	11,892
C	Bombala	658
C	Delegate	658
C	Nimmitabel	658

Developer charges relating to this DSP will be reviewed after a period of 4 to 8 years, in accordance with the guidelines. In the period between any review, developer charges will be adjusted annually on the basis of the movements in the CPI for Sydney, excluding the impact of GST.

The developer shall be responsible for the full cost of the design and construction of water supply and sewerage reticulation works within subdivisions.

Background information containing all the critical data including calculation models behind each DSP is available on request.

1 Introduction

Section 64 of the *Local Government Act, 1993* enables a local government council to levy developer charges for water supply, sewerage and stormwater. This derives from a cross-reference in that Act to Section 306 of the *Water Management Act 2000*.

A Development Servicing Plan (DSP) details the water supply, sewerage and/or stormwater developer charges to be levied on development areas utilising a water utility's water supply, sewerage and/or stormwater infrastructure.

This DSP covers water supply and sewerage developer charges for areas served by Snowy Monaro Regional Council (SMRC).

This DSP has been prepared in accordance with the 2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater issued by the Minister for Lands and Water, pursuant to section 306 (3) of the *Water Management Act, 2000*.

This DSP document supersedes any other requirements related to water supply and sewerage developer charges for the areas covered by this DSP. This DSP takes precedence over any of Council's code or policies where there are any inconsistencies relating to water supply and sewerage developer charges.

2 Administration

2.1 DSP Name and Area Covered

The basis for defining the DSP area boundaries is the existing and future development served by the Snowy Monaro Regional Council water supply and sewerage schemes. Separate DSPs have been prepared for the towns with separate water supply schemes and sewerage schemes. There are no other development areas of over 500 lots or areas serviced by alternative technologies that require separate service areas.

	DSP Name	Area Covered
Water Supply	Adaminaby	The area covered by this DSP is shown on Plan 1 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate water supply scheme
	Bombala	The area covered by this DSP is shown on Plan 2 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Bredbo	The area covered by this DSP is shown on Plan 3 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Cooma	The area covered by this DSP is shown on Plan 4 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Dalgety	The area covered by this DSP is shown on Plan 5 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Delegate	The area covered by this DSP is shown on Plan 6 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	East Jindabyne and Berridale	The area covered by this DSP is shown on Plan 7 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Jindabyne	The area covered by this DSP is shown on Plan 8 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Kalkite	The area covered by this DSP is shown on Plan 9 in Section 13. The basis for defining the DSP boundaries is a separate town or village
	Nimmitabel	The area covered by this DSP is shown on Plan 10 in Section 13. The basis for defining the DSP boundaries is a separate town or village
Sewerage	Adaminaby	The area covered by this DSP is shown on Plan 11 in Section 13. The basis for defining the DSP boundaries

DSP Name	Area Covered
	is an area serviced by a separate sewage treatment works.
Berridale	The area covered by this DSP is shown on Plan 12 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.
Bombala	The area covered by this DSP is shown on Plan 13 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.
Cooma	The area covered by this DSP is shown on Plan 14 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.
Delegate	The area covered by this DSP is shown on Plan 15 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.
Jindabyne (including East Jindabyne)	The area covered by this DSP is shown on Plan 16 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.
Kalkite	The area covered by this DSP is shown on Plan 17 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.
Nimmitabel	The area covered by this DSP is shown on Plan 18 in Section 13. The basis for defining the DSP boundaries is an area serviced by a separate sewage treatment works.

2.2 Payment of Developer Charges

Developer charges will be determined and levied in accordance with the provisions of this DSP document at the time of considering an application for a compliance certificate under Section 305 of the Water Management Act 2000 or a construction certificate under section 109 of the Environmental Planning and Assessment Act 1979 or at the time of issuing a notice or other form of written advice, e.g. Under the SEPP (Exempt and Complying Development Codes) 2008.

The time limit for payment of developer charges will be included in the notice of determination or will be advised to the developer by a separate notice. The amount of any developer charges not paid within the specified time limit will lapse. Any subsequent

determination of developer charges will be made in accordance with Council's then current DSP.

2.3 Dispute Resolution

Disputes will be resolved in accordance with Section 2.9 of the Guidelines. SMRC is not a member of the Electricity and Water Ombudsman (EWON).

3 Demographic and Land Use Planning Information

3.1 Growth Projections

Growth projections for the number of water supply and sewerage ETs are shown in Table 3.1. These projections are from the present year to 2047/48 i.e. a 30-year planning horizon. The number of Equivalent Tenements (ETs) in January 1996 (i.e. year 1995/96) are also indicated. ET calculations are included in Section 7.3 and 8.3 of the DSP document.

Table 3-1 Growth Projections

Year	Water Supply		Sewerage	
	Number of ETs	Number of New ETs	Number of ETs	Number of New ETs
1995/96	11,531		9,853	
To end 21/22	13,326	75	11,340	62
2022/23	13,402	76	11,403	63
2023/24	13,479	77	11,466	63
2024/25	13,556	77	11,530	64
2025/26	13,634	78	11,594	64
2026/27	13,712	78	11,659	65
2027/28	13,791	79	11,724	65
2028/29	13,871	79	11,789	66
2029/30	13,951	80	11,855	66
2030/31	14,031	81	11,922	67
2031/32	14,113	81	11,989	67
2032/33	14,194	82	12,057	68
2033/34	14,277	82	12,125	68
2034/35	14,360	83	12,193	69
2035/36	14,444	84	12,262	69
2036/37	14,528	84	12,332	70
2037/38	14,613	85	12,402	70
2038/39	14,699	86	12,473	71
2039/40	14,785	86	12,544	71
2040/41	14,872	87	12,615	72

Year	Water Supply		Sewerage	
	Number of ETs	Number of New ETs	Number of ETs	Number of New ETs
2041/42	14,959	88	12,687	72
2042/43	15,048	88	12,760	73
2043/44	15,136	89	12,833	73
2044/45	15,226	90	12,907	74
2045/46	15,316	90	12,981	74
2046/47	15,407	91	13,056	75
2047/48	15,499	92	13,132	75
2048/49	15,591	92	13,208	76
2049/50	15,684	93	13,284	77
2050/51	15,778	94	13,361	77
2051/52	15,872	94	13,439	78

3.2 Land Use Information

This DSP document should be read in conjunction with the LEP for the former Shire areas, which are still current:

- Bombala Local Environmental Plan 2012
- Cooma-Monaro Local Environmental Plan 2013
- Snowy River Local Environmental Plan 2013

4 Water Supply and Sewerage Infrastructure

4.1 Water Supply

SMRC currently operates and maintains eleven separate water supply schemes. A brief description of these schemes is provided in the following sections.

4.1.1 Adaminaby

The Adaminaby water supply scheme sources water from Lake Eucumbene with an intake pump station located at Observation Point. Water treatment is limited to chlorination and fluoridation only. Treated water is supplied to the Adaminaby township.

4.1.2 Berridale

The Berridale water supply scheme extracts and sources water from Lake Jindabyne at the East Jindabyne intake pump station. Water is treated via chlorination and is fluoridated prior to distribution to properties in Berridale. There is no filtration process.

4.1.3 Bombala

The Bombala water supply scheme sources raw water from the Coolumbooka River via a river off-take. Raw water is treated in a conventional WTP including coagulation, flocculation, clarification and filtration followed by disinfection. Treated water is supplied via a distribution network consisting of two reservoirs, trunk water mains and a reticulation network.

4.1.4 Bredbo

The Bredbo water supply scheme sources water from two bores adjacent to the Murrumbidgee River. Water is first treated by aeration then chlorinated. Treated water is pumped to a roofed storage prior to delivery to consumers.

4.1.5 Cooma

The Cooma water supply scheme sources water from the Murrumbidgee River via a river off-take. Raw water undergoes full treatment (coagulation, flocculation, clarification and filtration) prior to further treatment using Powdered Activated Carbon in case of taste, odour and algal problems in the raw water supply. Treated water is chlorinated then transferred to the Snowy ballast reservoirs. From here, water then gravitates to Pine Range, Royal Hill and Church Hill storages prior to distribution to the reticulation network in Cooma.

4.1.6 Dalgety

The Dalgety water supply scheme sources water from the Snowy River downstream of the confluence point with Wullwye Creek. Raw water is first “conditioned” for the

oxidation of soluble iron, manganese and organic matter, filtered and then chlorinated. Treated water is pumped to a reservoir which then gravitates to the distribution network for supply to the Dalgety township.

4.1.7 East Jindabyne

The East Jindabyne water supply scheme sources water from Lake Jindabyne. Raw water is chlorinated and fluoridated. Treated water is delivered to properties in East Jindabyne, Alpine Sands, Rainbow Beach and Tyrolean Village.

4.1.8 Eucumbene Cove

The Eucumbene Cove water supply scheme sources water from a take-off point inside the Eucumbene Dam outlet tunnel where water is extracted from deep within the dam storage. Water is chlorinated then supplied to the system. There is no DSP for the Eucumbene Cove water supply system as there is no potential for additional development or subdivision in Eucumbene Cove.

4.1.9 Jindabyne

The Jindabyne water supply scheme currently sources water from near the dam wall of Jindabyne Dam. Raw water is chlorinated and fluoridated prior to distribution to the Jindabyne township.

4.1.10 Kalkite

The Kalkite water supply scheme sources water from Lake Jindabyne. Raw water is chlorinated prior to distribution to the Kalkite township.

4.1.11 Nimmitabel

The Nimmitabel water supply scheme sources water from both a weir pond on the MacLaughlin River and two town bores. Raw water is pumped to an enclosed reservoir, then is disinfected prior to distribution to the Nimmitabel township.

4.2 Sewerage

SMRC operates and maintains eight sewerage schemes. Bredo, Dalgety and other villages in the LGA do not have reticulated sewerage schemes.

4.2.1 Adaminaby

The Adaminaby sewerage scheme consists of 5.8 km of gravity sewer mains. The Adaminaby sewage treatment plant (STP) is a trickling filter plant with a design capacity of 300 EP. Treated effluent is discharged into Locker Creek.

4.2.2 Berridale

The Berridale sewerage scheme consists of a gravity network of pipes and manholes. The Berridale STP is an intermittently decanted extended aeration (IDEA) based plant with UV disinfection. Tertiary treated effluent is discharged to Myack Creek which is a tributary of Wullwye Creek. There is an effluent reuse scheme for utilisation of treated effluent at Coolamatong Golf Course.

4.2.3 Bombala

The Bombala sewerage scheme contains a trickling filter based plant constructed in 1967 with some upgrades since then. Treated effluent is discharged into the Bombala River.

4.2.4 Cooma

The Cooma sewerage scheme consists of five sewage pump stations (SPSs), a gravity drainage network of pipes, 19.3 km of trunk mains and 6.6 km of rising mains. The Glen STP is an activated sludge (IDEA) based plant which receives sewage from the Cooma township. Treated effluent is discharged to Cooma Creek in accordance with Council's EPA licence or reused at the STP.

4.2.5 Jindabyne

The Jindabyne sewerage scheme collects sewage from Jindabyne, East Jindabyne and Tyrolean Village and transports it to the Jindabyne STP. The sewerage scheme was augmented in 1982 with the construction of a completely new STP and four new SPSs. The STP is an IDEA based plant with treated effluent discharged into Cobbon Creek. There are 15 operational SPSs within the Jindabyne and East Jindabyne sewerage schemes, eight of which are located in the Jindabyne sewerage scheme.

The East Jindabyne sewerage scheme collects sewage from East Jindabyne, Tyrolean Village, Rainbow Beach and Alpine Sands. All sewage from these townships are transported to the Jindabyne STP via a series of SPSs and a pipeline across the Jindabyne dam wall. Sewage from East Jindabyne is delivered to the Jindabyne STP via a pipeline constructed along the Kosciuszko Road and across the Jindabyne dam wall.

4.2.6 Kalkite

The Kalkite sewerage scheme services the township of Kalkite. The scheme consists of three SPSs. The Kalkite STP is a Pasveer Channel based process with treated effluent discharged into an evaporation pond.

4.2.7 Nimmitabel

The Nimmitabel sewerage scheme consists of two SPSs, 7.4 km of reticulation mains and 0.7 km of rising mains. The Nimmitabel STP is a 500 EP Pasveer Channel based plant with treated effluent discharged into Bobundara Creek under licence conditions.

4.3 Existing Capital Costs

The estimated MEERA capital cost of water supply and sewerage capital works (including backlog works) servicing the areas covered by this DSP document are shown in Section 15. Note that only those assets constructed in the last 30 years are included in the calculation of the charges.

4.4 Future Capital Works Program

The timing and expenditure for water supply and sewerage capital works (including backlog works) servicing the area covered by this DSP document are shown in Section 16.

4.5 Reticulation Works

The developer shall be responsible for the full cost of the design and construction of water supply and sewerage reticulation works within subdivisions

5 Levels of Service

Council's Level of Service are outlined in its Draft Asset Management Plans for Water Supply Services and Sewerage Services. Council has defined service levels in two terms:

Customer Levels of Service relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost/efficiency and legislative compliance.

Supporting the community service levels are operational or technical measures of performance developed to ensure that the minimum community levels of service are met

At time of writing the Asset Management plans, Council was in the process of community consultation on a number of proposed funding scenarios which will have impact on future budgets and service levels. The outcome of these consultations will be incorporated into future revisions of the Asset Management Plans.

5.1 Water Supply

Council's current levels of service are detailed in Table 5-1.

Table 5-1 Levels of Service for Water Supply

Key Performance Measure	Level of Service	Performance Measure	Performance Target
Customer Levels of Service			
Quality	Provision of clean, clear disinfected water	Customer satisfaction rating from Annual Community Satisfaction Survey	>3
Safety	Drinking water is safe from any pollutants or contaminants	Compliance with Australian Drinking Water Guidelines	100% compliance in areas that are supplied with potable water
Technical Levels of Service			
Availability of supply	Minimise number of watermain breaks	Number of water main breaks per 100km per year	<30
	Minimise unplanned water supply interruptions	Number of unplanned interruptions per 1000 connections per year	<50
	Reduce response time to emergency water interruptions	Average response time to water incidents	< 4 hours

5.2 Sewerage

Council's current levels of service are detailed in Table 5-1.

Table 5-2 Levels of Service for Sewerage

Key Performance Measure	Level of Service	Performance Measure	Performance Target
Customer Levels of Service			
Quality	Provision of a quality sewerage service	Customer satisfaction rating from Annual Community Satisfaction Survey	<3
Technical Levels of Service			
Service Delivery	Continuity of service delivery	Number of repairs and chokes	<20 per 100 km per year
	Response time	Average response time to sewerage incidents	<4 hours
Compliance	Protection of the Environment	Compliance with EPA licence conditions at Adaminaby, Berridale, Bombala, Cooma, Delegate, Jindabyne and Nimmitabel	100% compliance
	Annual compliance reporting to EPA	Submission of annual return to EPA	Return submitted on time

6 Design Parameters

6.1 Water Supply

Investigation and design of water supply system components is based on the following:

- Council's levels of service (refer Section 5)
- Water Supply Investigation Manual, NSW Public Works (1986)
- Water Services Association of Australia water supply code of Australia - WSA 03 2002

6.2 Sewerage

Investigation and design of sewerage system components is based on:

- Council's levels of service (refer Section 5)
- Manual of Practice: Sewer Design (1984)
- Manual of Practice: Sewage Pumping Station Design (1986)

- Water Services Association of Australia gravity sewerage code of Australia WSA 02-2002 Version 2.3
- Water Services Association of Australia sewage pumping code of Australia WSA 04-2005 Version 2.1
- Water Services Association of Australia pressure sewerage code of Australia WSA 07-2007

7 Developer Charges Calculation – Water Supply

All new properties and properties with change in use which are subject to payment of water supply charges are liable for payment of developer charges for water supply. An ET is the basic unit to determine the demand that the development will place on the water supply system. One ET represents the equivalent demand from a single, detached residential dwelling. SMRC has developed Equivalent Tenements Guidelines Calculations which are available from Council's Strategic Planning Unit.

Credit for existing use is applied in the calculation of the ET loadings, as the developer charges are levied for additional ET loading only. For example, the first lot in a residential subdivision is exempt from developer charges where the lot is already connected to the water supply system. Properties not already rated for water supply do not receive the one lot credit.

7.1 Summary

The developer charges for the area covered by this DSP document area are summarised in Table 7-1.

Table 7-1 Summary of Proposed Water Supply Developer Charges for Water Supply

DSP Name	DSP Service Area	Capital Charge (\$ per ET)	Reduction Amount (\$ per ET)	Calculated Maximum Developer Charge (\$ per ET)	Adopted Developer Charge (\$ per ET)
A	Adaminaby	69,119	2,350	66,769	6,622
B	Dalgety	42,198	2,350	39,267	6,622
B	Nimmitabel	41,430	2,350	39,267	6,622
C	Kalkite	15,791	2,350	13,442	6,622
D	Jindabyne	9,776	2,350	6,622	6,622
D	East Jindabyne & Berridale	9,592	2,350	6,622	6,622
D	Bombala	9,380	2,350	6,622	6,622
D	Bredbo	8,518	2,350	6,622	6,622
D	Cooma	7,642	2,350	6,622	6,622
E	Delegate	2,327	2,350	0	0

These amounts have been calculated on the basis of the information presented in Sections 7.2 to 7.6.

7.2 Service Areas

The water supply service areas and the basis of determining the service areas are as follows:

Service Area	Basis of Determining the Service Area
Adaminaby	Separate small town or village
Nimmitabel	Separate small town or village
Dalgety	Separate small town or village
Bombala	Separate small town or village
East Jindabyne & Berridale	Area serviced by a separate water supply distribution system
Delegate	Separate small town or village
Bredbo	Separate small town or village
Jindabyne	Area serviced by a separate water supply distribution system
Cooma	Area serviced by a separate water supply distribution system
Kalkite	Separate small town or village

7.3 Equivalent Tenements (ETs)

For each service area, the number of ETs to be served has been determined as the estimated annual water to be supplied to the service area divided by the volume of 1 ET. The average annual residential water consumption for 2020/21 (the calculation year) was 159 kL per property. ET projections for each service area are shown in Table 7-2. The ETs in January 1996 are also provided.

Table 7-2 ET Projections for Water Supply

Year	Adaminaby	Bombala	Bredbo	Cooma	Dalgety	Delegate	East Jindabyne & Berridale	Jindabyne	Kalkite	Nimmitabel
Jan 1996	356	1,205	86	5,755	109	290	1,062	2,359	105	192
2021/22	380	1,240	98	6,404	118	329	1,388	3,040	113	217

Year	Adaminaby	Bombala	Bredbo	Cooma	Dalgety	Delegate	East Jindabyne & Berridale	Jindabyne	Kalkite	Nimmitabel
2022/23	381	1,241	98	6,430	118	330	1,402	3,069	114	218
2023/24	382	1,242	99	6,457	119	332	1,417	3,099	114	219
2024/25	383	1,244	99	6,483	119	333	1,431	3,129	114	220
2025/26	384	1,245	100	6,510	119	335	1,446	3,159	115	221
2026/27	385	1,247	100	6,537	120	337	1,461	3,190	115	223
2027/28	386	1,248	101	6,563	120	338	1,476	3,221	115	224
2028/29	387	1,249	101	6,590	120	340	1,491	3,252	116	225
2029/30	388	1,251	102	6,617	121	342	1,506	3,284	116	226
2030/31	389	1,252	102	6,644	121	343	1,521	3,315	116	227
2031/32	390	1,253	103	6,672	121	345	1,537	3,348	117	228
2032/33	391	1,255	103	6,699	122	346	1,553	3,380	117	229
2033/34	392	1,256	104	6,726	122	348	1,569	3,413	117	230
2034/35	393	1,258	104	6,754	122	350	1,585	3,446	118	231
2035/36	394	1,259	105	6,782	123	351	1,601	3,479	118	232
2036/37	395	1,260	105	6,809	123	353	1,617	3,513	118	233
2037/38	396	1,262	106	6,837	123	355	1,634	3,547	119	235
2038/39	397	1,263	106	6,865	124	357	1,651	3,582	119	236
2039/40	398	1,265	107	6,894	124	358	1,668	3,616	119	237
2040/41	399	1,266	107	6,922	124	360	1,685	3,651	120	238
2041/42	400	1,267	108	6,950	125	362	1,702	3,687	120	239
2042/43	401	1,269	108	6,979	125	363	1,719	3,723	120	240
2043/44	402	1,270	109	7,007	126	365	1,737	3,759	121	241
2044/45	403	1,271	109	7,036	126	367	1,755	3,795	121	243
2045/46	404	1,273	110	7,065	126	369	1,773	3,832	121	244
2046/47	405	1,274	110	7,094	127	370	1,791	3,869	122	245
2047/48	406	1,276	111	7,123	127	372	1,809	3,907	122	246

Year	Adaminaby	Bombala	Bredbo	Cooma	Dalgety	Delegate	East Jindabyne & Berridale	Jindabyne	Kalkite	Nimmitabel
2048/49	407	1,277	111	7,152	127	374	1,828	3,945	122	247
2049/50	408	1,278	112	7,182	128	376	1,847	3,983	123	248
2050/51	409	1,280	112	7,211	128	378	1,866	4,021	123	250
2051/52	410	1,281	113	7,241	129	379	1,885	4,060	123	251

ET calculation details for each service area are shown in Section 14.

7.4 Capital Charge

The capital charge for each service area covered by this DSP document has been calculated using the NPV spreadsheet method.

Under the NPV spreadsheet method, the capital cost of relevant assets and projected ETs served in a service area are entered into a spreadsheet. These capital costs are only for the share of the asset capacity used in the service area. The PV of capital cost and the PV of new ETs are calculated, and the capital charge per ET is the PV of the capital cost divided by the PV of the ETs. A 3% discount rate was applied for pre-1996 infrastructure and a 5% discount rate was applied to post 1996 and future assets, in accordance with the DPI guidelines.

Calculation details for PV of ETs and PV of capital costs for each service area are shown in Section 17. The summary of the capital charge calculations is shown in Table 7-3.

Table 7-3 Capital Charge Calculation for Water Supply

Service Area	PV of New ETs for pre-1996 assets @ 3%	PV of New ETs for post-1996 assets @ 5%	PV of capital cost for pre-1996 assets @ 3% (\$)	PV of capital cost for post-1996 assets @ 5% (\$)	Capital charge for pre-1996 assets per ET (\$)	Capital charge for post-1996 assets per ET (\$)	Capital charge per ET (\$)
Adaminaby	25	17	0	1,199,145	0	69,119	69,119
Bombala	37	25	103,646	165,072	2,836	6,544	9,380
Bredbo	12	8	6,944	66,764	563	7,956	8,518
Cooma	693	472	0	3,608,999	0	7,642	7,642

Dalgety	9	6	0	262,199	0	42,198	42,198
Delegate	41	28	0	65,626	0	2,327	2,327
East Jindabyne & Berridale	366	243	0	2,330,151	0	9,592	9,592
Jindabyne	759	506	0	4,942,981	0	9,776	9,776
Kalkite	9	6	0	94,274	0	15,791	15,791
Nimmitabel	27	19	60,624	730,890	2,212	39,218	41,430

7.5 DSP Area

Table 7-4 shows the agglomeration of service areas into DSP areas of within 30% of the highest capital charge.

- The Dalgety and Nimmitabel service areas are agglomerated into a single DSP area as the Nimmitabel charge is within 30% of the Dalgety capital charge.
- The Jindabyne, East Jindabyne and Berridale, Bombala, Bredbo and Cooma service areas are agglomerated into a single DSP as the charges are within 30 % of the Jindabyne capital charge.

Table 7-4 Agglomeration of Service Areas for Water Supply

Service Area	Capital Charge (\$ per ET)	Percentage of highest capital charge DSP Area A	Percentage of highest capital charge DSP Area B	Percentage of highest capital charge DSP Area C	Percentage of highest capital charge DSP Area D	Percentage of highest capital charge DSP Area E
Adaminaby	69,119	100%				
Dalgety	42,198	61%	100%			
Nimmitabel	41,430	60%	98%			
Kalkite	15,791	23%	37%	100%		
Jindabyne	9,776	14%	23%	62%	100%	
East Jindabyne & Berridale	9,592	14%	23%	61%	98%	
Bombala	9,380	14%	22%	59%	96%	
Bredbo	8,518	12%	20%	54%	87%	
Cooma	7,642	11%	18%	48%	78%	100%
Delegate	2,327	3%	6%	15%	24%	100%

Weighted average capital charge for each DSP area is calculated by weighting by the PV of new ETs in each service areas. The calculation is shown in Table 7-5.

Table 7-5 Weighted Average Capital Charge for Water Supply

DSP area	Service area	Capital charge for each service area (\$ per ET)	New ETs in service area	PV of new ETs in service area	% of PV of new ETs in DSP area	Weighted component of the capital charge for each DSP area (\$ per ET)	Weighted capital charge for each DSP area (\$ per ET)
A	Adaminaby	69,119	30	16	100.0%	69,119	69,119
B	Dalgety	42,198	11	6	24.3%	10,259	41,617
B	Nimmitabel	41,430	34	18	75.7%	31,357	41,617
C	Kalkite	15,791	10	6	100.0%	15,791	15,791
D	Jindabyne	9,776	1,021	535	42.0%	4,105	8,972
D	East Jindabyne & Berridale	9,592	497	260	20.4%	1,955	8,972
D	Bombala	9,380	42	23	1.8%	166	8,972
D	Bredbo	8,518	15	8	0.6%	54	8,972
D	Cooma	7,642	836	449	35.2%	2,692	8,972
E	Delegate	2,327	51	27	100.0%	2,327	2,327

Utility-wide weighted average capital charge: \$ 10,155 per ET

7.6 Reduction Amount

SMRC has adopted the NPV of Annual Bills method to calculate the Reduction Amount. This method involves calculation of the PV of the future net income, which is the difference between the revenue from annual bills, and annual OMA cost, projected for new development over the next 30 years. This is divided by the PV of the new ETs over 30 years to give the reduction amount. SMRC has a single tariff structure for all towns and villages. The reduction amount calculations are shown in Table 7-6. The annual bill and OMA costs were calculated using data from the Special Purpose Financial Statement Income Statement – Water Supply Business Activity for the year ended June 2021 and are summarised below:

Annual bill at the commencement of the DSP = \$649 per ET

OMA Cost at the commencement of the DSP = \$449 per ET

Net income = Annual bill – OMA cost = \$200 per ET

Table 7-6 Calculation of the Reduction Amount for Water Supply

Year	Total ETs	New ETs	PV of new ETs	Cumulative new ETs	Net income from new ETs (\$)	PV of net income from new ETs (\$)	Reduction Amount (\$ per ET)
2021/22	13,326						
2022/23	13,402	76	1,334	76	\$15,236	\$3,133,913	\$2,350
2023/24	13,479	77		153	\$30,584		
2024/25	13,556	77		230	\$46,046		
2025/26	13,634	78		308	\$61,621		
2026/27	13,712	78		386	\$77,312		
2027/28	13,791	79		465	\$93,119		
2028/29	13,871	79		544	\$109,043		
2029/30	13,951	80		624	\$125,085		
2030/31	14,031	81		705	\$141,246		
2031/32	14,113	81		786	\$157,527		
2032/33	14,194	82		868	\$173,930		
2033/34	14,277	82		951	\$190,455		
2034/35	14,360	83		1,034	\$207,103		
2035/36	14,444	84		1,117	\$223,876		
2036/37	14,528	84		1,202	\$240,773		
2037/38	14,613	85		1,287	\$257,798		
2038/39	14,699	86		1,372	\$274,950		
2039/40	14,785	86		1,459	\$292,231		
2040/41	14,872	87		1,545	\$309,641		
2041/42	14,959	88		1,633	\$327,183		
2042/43	15,048	88		1,721	\$344,857		
2043/44	15,136	89		1,810	\$362,664		

Year	Total ETs	New ETs	PV of new ETs	Cumulative new ETs	Net income from new ETs (\$)	PV of net income from new ETs (\$)	Reduction Amount (\$ per ET)
2044/45	15,226	90		1,900	\$380,605		
2045/46	15,316	90		1,990	\$398,682		
2046/47	15,407	91		2,081	\$416,895		
2047/48	15,499	92		2,172	\$435,247		
2048/49	15,591	92		2,265	\$453,737		
2049/50	15,684	93		2,358	\$472,368		
2050/51	15,778	94		2,451	\$491,141		
2051/52	15,872	94		2,546	\$510,056		

7.7 Cross-Subsidy

The cross-subsidy is the difference (%) between the annual bill with the calculated maximum developer charge and the proposed lower developer charge.

LWUs may elect to cap the developer charges for small villages in order to maintain affordability and to avoid 'stranded' assets in such villages. LWUs may also cap other developer charges to maintain affordability, subject to adopting a commercial developer charge which recovers a significant proportion of the capital cost of the infrastructure.

SMRC has decided to apply a cross subsidy to reduce the developer charges in Adaminaby, Dalgety, Nimmitabel and Kalkite to be the same as the calculated charge for DSP Area D (which covers Jindabyne, East Jindabyne and Berridale, Bombala, Bredbo and Cooma). The rationale for applying the cross subsidy is to maintain affordability in villages and small towns.

The cross-subsidy, resulting from capping of developer charges must be disclosed in the DSP, the utility's Annual Report, annual Operational Plan and in communication materials for consultation with stakeholders as noted above.

Two options were developed and examined as follows:

Option 1 – No cross subsidy – Calculated maximum developer charge

Option 2 – Cross subsidy - to reduce the Adaminaby, Dalgety, Nimmitabel and Kalkite charges to be equal to DSP Area D charge – adopted.

A summary of the developer charges option and cross-subsidy is shown in Table 7-7.

Table 7-7 Developer Charge Options and Cross-Subsidy for Water Supply

DSP Area	Service Area	Capital Charge for Service Area (\$ per ET)	PV of new ETs over 30 years	Reduction Amount (\$ per ET)	Calculated Maximum Developer Charge (\$ per ET)	Proposed Developer Charge (\$ per ET)	Cross-subsidy to developer charge (\$ per ET)
Option 1 - No Cross Subsidy							
A	Adaminaby	69,119	16	2,350	66,769	66,769	0
B	Dalgety	42,198	6	2,350	39,267	39,267	0
B	Nimmitabel	41,430	18	2,350	39,267	39,267	0
C	Kalkite	15,791	6	2,350	13,442	13,442	0
D	Jindabyne	9,776	535	2,350	6,622	6,622	0
D	East Jindabyne & Berridale	9,592	260	2,350	6,622	6,622	0
D	Bombala	9,380	23	2,350	6,622	6,622	0
D	Bredbo	8,518	8	2,350	6,622	6,622	0
D	Cooma	7,642	449	2,350	6,622	6,622	0
E	Delegate	2,327	27	2,350	0	0	0
Option 2 – Cross Subsidy (adopted)							
A	Adaminaby	69,119	16	2,350	66,769	6,622	60,147
B	Dalgety	42,198	6	2,350	39,267	6,622	32,645
B	Nimmitabel	41,430	18	2,350	39,267	6,622	32,645
C	Kalkite	15,791	6	2,350	13,442	6,622	6,819
D	Jindabyne	9,776	535	2,350	6,622	6,622	0
D	East Jindabyne & Berridale	9,592	260	2,350	6,622	6,622	0
D	Bombala	9,380	23	2,350	6,622	6,622	0
D	Bredbo	8,518	8	2,350	6,622	6,622	0
D	Cooma	7,642	449	2,350	6,622	6,622	0
E	Delegate	2,327	27	2,350	0	0	0

The impact of the cross-subsidies on the annual water supply bill are summarised in Table 7-8 and shown in Figure 7-1.

Table 7-8 Impact of Cross-Subsidies on Annual Water Supply Bill

Option	Required Annual Water Supply Bill per ET	Resulting Increase in Annual Water Supply Bill
1 – No cross subsidy	\$649.48	\$0
2 – Adopted cross subsidy	\$656.95	\$7.48

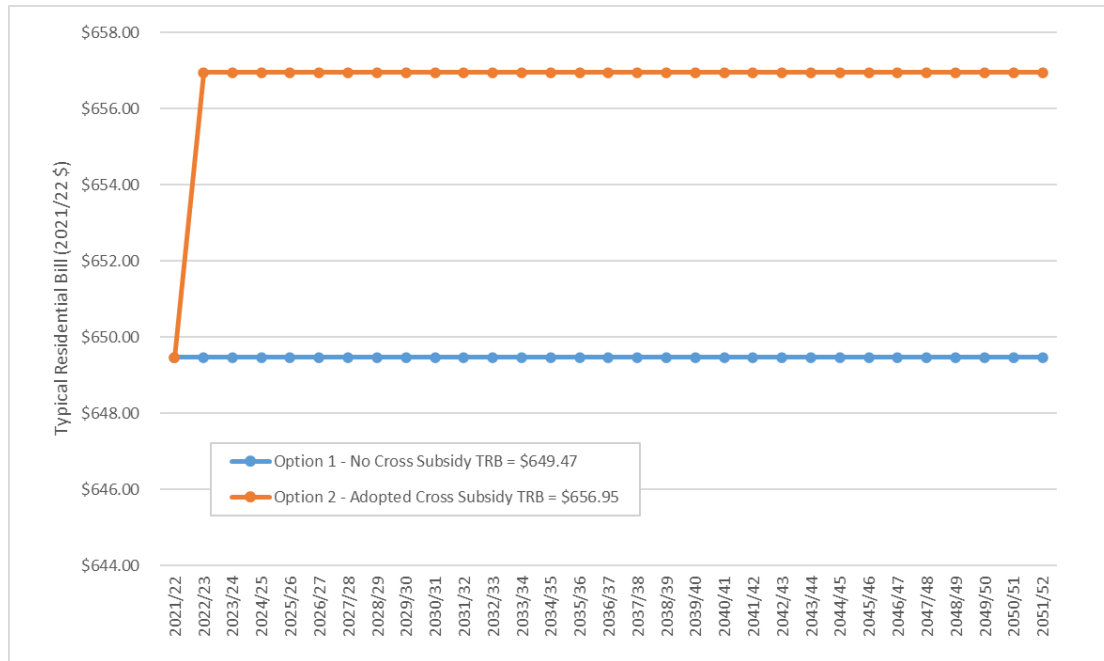


Figure 7-1 Impact of Developer Charges Option on TRB for Water Supply

8 Developer Charges Calculation – Sewerage

All new properties and properties with change in use which are subject to payment of sewerage charges are liable for payment of developer charges for sewerage. An ET is the basic unit to determine the loading that the development will place on the sewerage system. One ET represents the equivalent loading from a single, detached residential dwelling. SMRC has developed Equivalent Tenements Guidelines Calculations which are available from Council's Strategic Planning Unit

Credit for existing use is applied in the calculation of the ET loadings, as the developer charges are levied for additional ET loading only. For example, the first lot in a residential subdivision is exempt from developer charges where the lot is already connected to the sewerage system. Properties not already rated for sewerage do not receive the one lot credit.

8.1 Summary

The developer charges for the area covered by this DSP document area are summarised in Table 8-1.

Table 8-1 Summary of Proposed Water Supply Developer Charges for Sewerage

DSP Name	DSP Service Area	Capital Charge (\$ per ET)	Reduction Amount (\$ per ET)	Calculated Maximum Developer Charge (\$ per ET)	Adopted Developer Charge (\$ per ET)
A	Adaminaby	23,556	1,834	15,971	
A	Kalkite	19,839	1,834	15,971	
A	Jindabyne	17,757	1,834	15,971	
A	Berridale	17,323	1,834	15,971	
B	Cooma	13,894	1,834	11,892	
B	Bombala	10,795	1,834	11,892	
C	Delegate	9,253	1,834	7,419	
D	Nimmitabel	2,492	1,834	658	

These amounts have been calculated on the basis of the information presented in Sections 8.2 to 8.6.

8.2 Service Areas

The sewerage service areas and the basis of determining the service areas are as follows:

Service Area	Basis of Determining the Service Area
Adaminaby	Separate small town or village
Berridale	Separate small town or village
Bombala	Separate small town or village
Cooma	Area serviced by a separate sewage treatment works
Delegate	Separate small town or village
Jindabyne	Area serviced by a separate sewage treatment works
Kalkite	Separate small town or village
Nimmitabel	Separate small town or village

8.3 Equivalent Tenements (ETs)

For each service area, the number of ETs to be served has been determined as the measured average dry weather flow (ADWF) at the STP divided by the volume of 1 ET. The ADWF per equivalent person (EP) was assumed to be 150 L/EP/day and the EP to ET conversion rate was based on the occupancy rate obtained from Census data. There was no data on the measured ADWF for Delegate and Kalkite; the sewer ETs were assumed to be equal to the water supply ETs for these service areas. ET projections for each service area are shown in Table 7-2. The ETs in January 1996 are also provided.

Table 8-2 ET Projections for Sewerage

Year	Adaminaby	Berridale	Bombala	Cooma	Delegate	Jindabyne	Kalkite	Nimmitabel
Jan 1996	305	661	1,123	5,160	290	1,938	105	270
2021/22	329	873	1,159	5,739	329	2,492	113	306
2022/23	330	883	1,160	5,762	330	2,516	114	307
2023/24	331	892	1,162	5,786	332	2,540	114	309
2024/25	332	902	1,163	5,810	333	2,565	114	310
2025/26	333	912	1,164	5,834	335	2,590	115	312
2026/27	334	922	1,166	5,858	337	2,615	115	313
2027/28	335	931	1,167	5,882	338	2,640	115	315
2028/29	336	942	1,169	5,906	340	2,666	116	316

Year	Adaminaby	Berridale	Bombala	Cooma	Delegate	Jindabyne	Kalkite	Nimmitabel
2029/30	337	952	1,170	5,930	341	2,692	116	318
2030/31	338	962	1,171	5,954	343	2,718	116	319
2031/32	339	972	1,173	5,979	345	2,744	117	321
2032/33	340	983	1,174	6,003	346	2,771	117	322
2033/34	341	993	1,176	6,028	348	2,798	117	324
2034/35	342	1,004	1,177	6,052	350	2,825	118	326
2035/36	343	1,015	1,178	6,077	351	2,852	118	327
2036/37	344	1,026	1,180	6,102	353	2,880	118	329
2037/38	345	1,037	1,181	6,127	355	2,908	119	330
2038/39	346	1,048	1,183	6,152	356	2,936	119	332
2039/40	347	1,060	1,184	6,178	358	2,964	119	333
2040/41	348	1,071	1,186	6,203	360	2,993	120	335
2041/42	349	1,083	1,187	6,228	362	3,022	120	337
2042/43	350	1,094	1,188	6,254	363	3,051	120	338
2043/44	351	1,106	1,190	6,279	365	3,081	121	340
2044/45	352	1,118	1,191	6,305	367	3,111	121	342
2045/46	353	1,130	1,193	6,331	369	3,141	121	343
2046/47	354	1,142	1,194	6,357	370	3,172	122	345
2047/48	355	1,155	1,196	6,383	372	3,202	122	346
2048/49	356	1,167	1,197	6,409	374	3,233	123	348
2049/50	357	1,180	1,198	6,436	376	3,265	123	350
2050/51	358	1,193	1,200	6,462	378	3,296	123	351
2051/52	359	1,205	1,201	6,488	379	3,328	124	353

ET calculation details for each service area are shown in Section 14.

8.4 Capital Charge

The capital charge for each service area covered by this DSP document has been calculated using the NPV spreadsheet method.

Under the NPV spreadsheet method, the capital cost of relevant assets and projected ETs served in a service area are entered into a spreadsheet. These capital costs are only for the share of the asset capacity used in the service area. The PV of capital cost and the PV of new ETs are calculated, and the capital charge per ET is the PV of the capital cost divided by the PV of the ETs. A 3% discount rate was applied for pre-1996 infrastructure and a 5% discount rate was applied to post 1996 and future assets, in accordance with the DPI guidelines.

Calculation details for PV of ETs and PV of capital costs for each service area are shown in Section 17. The summary of the capital charge calculations is shown in Table 8-3.

Table 8-3 Capital Charge Calculation for Sewerage

Service Area	PV of New ETs for pre-1996 assets @ 3%	PV of New ETs for post-1996 assets @ 5%	PV of capital cost for pre-1996 assets @ 3% (\$)	PV of capital cost for post-1996 assets @ 5% (\$)	Capital charge for pre-1996 assets per ET (\$)	Capital charge for post-1996 assets per ET (\$)	Capital charge per ET (\$)
Adaminaby	25	17	0	410,401	0	23,556	23,556
Berridale	242	160	0	2,778,103	0	17,323	17,323
Bombala	37	26	2,891	275,446	78	10,718	10,795
Cooma	621	423	432,762	5,584,519	697	13,197	13,894
Delegate	41	28	0	260,796	0	9,253	9,253
Jindabyne	622	414	3,020,353	5,348,416	4,852	12,905	17,757
Kalkite	9	6	0	118,566	0	19,839	19,839
Nimmitabel	39	26	0	65,405	0	2,492	2,492
Adaminaby	25	17	0	410,401	0	23,556	23,556
Berridale	242	160	0	2,778,103	0	17,323	17,323

8.5 DSP Area

Table 8-4 shows the agglomeration of service areas into DSP areas of within 30% of the highest capital charge.

- The Adaminaby, Kalkite, Jindabyne and Berridale services areas are agglomerated into a single DSP area as the charges are within 30% of the Adaminaby charge

- The Cooma and Bombala service areas are agglomerated into a single DSP area as the charges are within 30 % of the Cooma capital charge.

Table 8-4 Agglomeration of Service Areas for Sewerage

Service Area	Capital Charge (\$ per ET)	Percentage of highest capital charge DSP Area A	Percentage of highest capital charge DSP Area B	Percentage of highest capital charge DSP Area C	Percentage of highest capital charge DSP Area D
A	Adaminaby	23,556	100%		
A	Kalkite	19,839	84%		
A	Jindabyne	17,757	75%		
A	Berridale	17,323	74%		
B	Cooma	13,894	59%	100%	
B	Bombala	10,795	46%	78%	
C	Delegate	9,253	39%	67%	100%
D	Nimmitabel	2,492	11%	18%	27%

Weighted average capital charge for each DSP area is calculated by weighting by the PV of new ETs in each service areas. The calculation is shown in Table 8-5.

Table 8-5 Weighted Average Capital Charge for Sewerage

DSP area	Service area	Capital charge for each service area (\$ per ET)	New ETs in service area	PV of new ETs in service area	% of PV of new ETs in DSP area	Weighted component of the capital charge for each DSP area (\$ per ET)	Weighted capital charge for each DSP area (\$ per ET)
A	Adaminaby	23,556	30	16	2.6%	602	17,805
A	Kalkite	19,839	10	6	0.9%	174	17,805
A	Jindabyne	17,757	837	438	69.2%	12,293	17,805
A	Berridale	17,323	332	173	27.3%	4,737	17,805
B	Cooma	13,894	750	402	94.6%	13,140	13,726
B	Bombala	10,795	42	23	5.4%	586	13,726
C	Delegate	9,253	51	27	100.0%	9,253	9,253

D	Nimmitabel	2,492	47	25	100.0%	2,492	2,492
---	------------	-------	----	----	--------	-------	-------

Utility-wide weighted average capital charge: \$ 15,686 per ET

8.6 Reduction Amount

SMRC has adopted the NPV of Annual Bills method to calculate the Reduction Amount. This method involves calculation of the PV of the future net income, which is the difference between the revenue from annual bills, and annual OMA cost, projected for new development over the next 30 years. This is divided by the PV of the new ETs over 30 years to give the reduction amount. SMRC has a single tariff structure for all towns and villages. The reduction amount calculations are shown in **Error! Reference source not found.** The annual bill and OMA costs were calculated using data from the Special Purpose Financial Statement Income Statement – Sewerage Business Activity for the year ended June 2021 and are summarised below:

Annual bill at the commencement of the DSP = \$742 per ET

OMA Cost at the commencement of the DSP = \$586 per ET

Net income = Annual bill – OMA cost = \$156 per ET

Table 8-6 Calculation of the Reduction Amount for Sewerage

Year	Total ETs	New ETs	PV of new ETs	Cumulative new ETs	Net income from new ETs (\$)	PV of net income from new ETs (\$)	Reduction Amount (\$ per ET)
2021/22	11,340						
2022/23	11,403	63	1,101	63	\$9,826	\$2,018,343	\$1,834
2023/24	11,466	63		126	\$19,722		
2024/25	11,530	64		190	\$29,690		
2025/26	11,594	64		254	\$39,730		
2026/27	11,659	65		319	\$49,843		
2027/28	11,724	65		384	\$60,029		
2028/29	11,789	66		450	\$70,288		
2029/30	11,855	66		516	\$80,622		
2030/31	11,922	67		582	\$91,032		
2031/32	11,989	67		649	\$101,517		

Year	Total ETs	New ETs	PV of new ETs	Cumulative new ETs	Net income from new ETs (\$)	PV of net income from new ETs (\$)	Reduction Amount (\$ per ET)
2032/33	12,057	68		717	\$112,078		
2033/34	12,125	68		785	\$122,717		
2034/35	12,193	69		854	\$133,433		
2035/36	12,262	69		923	\$144,227		
2036/37	12,332	70		992	\$155,101		
2037/38	12,402	70		1,062	\$166,055		
2038/39	12,473	71		1,133	\$177,088		
2039/40	12,544	71		1,204	\$188,203		
2040/41	12,615	72		1,275	\$199,400		
2041/42	12,687	72		1,348	\$210,680		
2042/43	12,760	73		1,420	\$222,042		
2043/44	12,833	73		1,494	\$233,489		
2044/45	12,907	74		1,567	\$245,020		
2045/46	12,981	74		1,642	\$256,637		
2046/47	13,056	75		1,716	\$268,340		
2047/48	13,132	75		1,792	\$280,129		
2048/49	13,208	76		1,868	\$292,007		
2049/50	13,284	77		1,944	\$303,973		
2050/51	13,361	77		2,022	\$316,028		
2051/52	13,439	78		2,099	\$328,173		

8.7 Cross-Subsidy

The cross-subsidy is the difference (%) between the annual bill with the calculated maximum developer charge and the proposed lower developer charge.

LWUs may elect to cap the developer charges for small villages in order to maintain affordability and to avoid 'stranded' assets in such villages. LWUs may also cap other developer charges to maintain affordability, subject to adopting a commercial developer charge which recovers a significant proportion of the capital cost of the infrastructure.

SMRC has decided to apply a cross subsidy to reduce the developer charges in Bombala and Delegate to be the same as the calculated charge for Nimmitabel. This cross subsidy reduces the number of DSP areas as part of Area B and all of Area C have the same proposed charge as Area D. The rationale for applying the cross subsidy is to maintain affordability and avoid stranded assets in small towns and villages.

The cross-subsidy, resulting from capping of developer charges must be disclosed in the DSP, the utility's Annual Report, annual Operational Plan and in communication materials for consultation with stakeholders as noted above.

Two options were developed and examined as follows:

Option 1 – No cross subsidy – Calculated maximum developer charge

Option 2 – Cross subsidy - to reduce the Bombala and Delegate charges

A summary of the developer charges option and cross-subsidy is shown in Table 8-7.

Table 8-7 Developer Charge Options and Cross-Subsidy for Sewerage

DSP Area	Service Area	Capital Charge for Service Area (\$ per ET)	PV of new ETs over 30 years	Reduction Amount (\$ per ET)	Calculated Maximum Developer Charge (\$ per ET)	Proposed Developer Charge (\$ per ET)	Cross-subsidy to developer charge (\$ per ET)
Option 1 - No Cross Subsidy							
A	Adaminaby	23,556	30	1,834	15,971	15,971	0
A	Kalkite	19,839	10	1,834	15,971	15,971	0
A	Jindabyne	17,757	837	1,834	15,971	15,971	0
A	Berridale	17,323	332	1,834	15,971	15,971	0
B	Cooma	13,894	750	1,834	11,892	11,892	0
B	Bombala	10,795	42	1,834	11,892	11,892	0
C	Delegate	9,253	51	1,834	7,419	7,419	0
D	Nimmitabel	2,492	47	1,834	658	658	0
Option 2 – Cross Subsidy (adopted)							
A	Adaminaby	23,556	30	1,834	15,971	15,971	0
A	Kalkite	19,839	10	1,834	15,971	15,971	0
A	Jindabyne	17,757	837	1,834	15,971	15,971	0
A	Berridale	17,323	332	1,834	15,971	15,971	0

B	Cooma	13,894	750	1,834	11,892	11,892	0
C	Bombala	10,795	42	1,834	11,892	658	11,234
C	Delegate	9,253	51	1,834	7,419	658	6,760
C	Nimmitabel	2,492	47	1,834	658	658	0

The impact of the cross-subsidies on the annual water supply bill are summarised in Table 8-8 and shown in Figure 8-1.

Table 8-8 Impact of Cross-Subsidies on Annual Sewerage Bill

Option	Required Annual Sewerage Bill per ET	Resulting Increase in Annual Sewerage Bill
1 – No cross subsidy	\$742.20	\$0
2 – Adopted cross subsidy	\$744.39	\$2.19

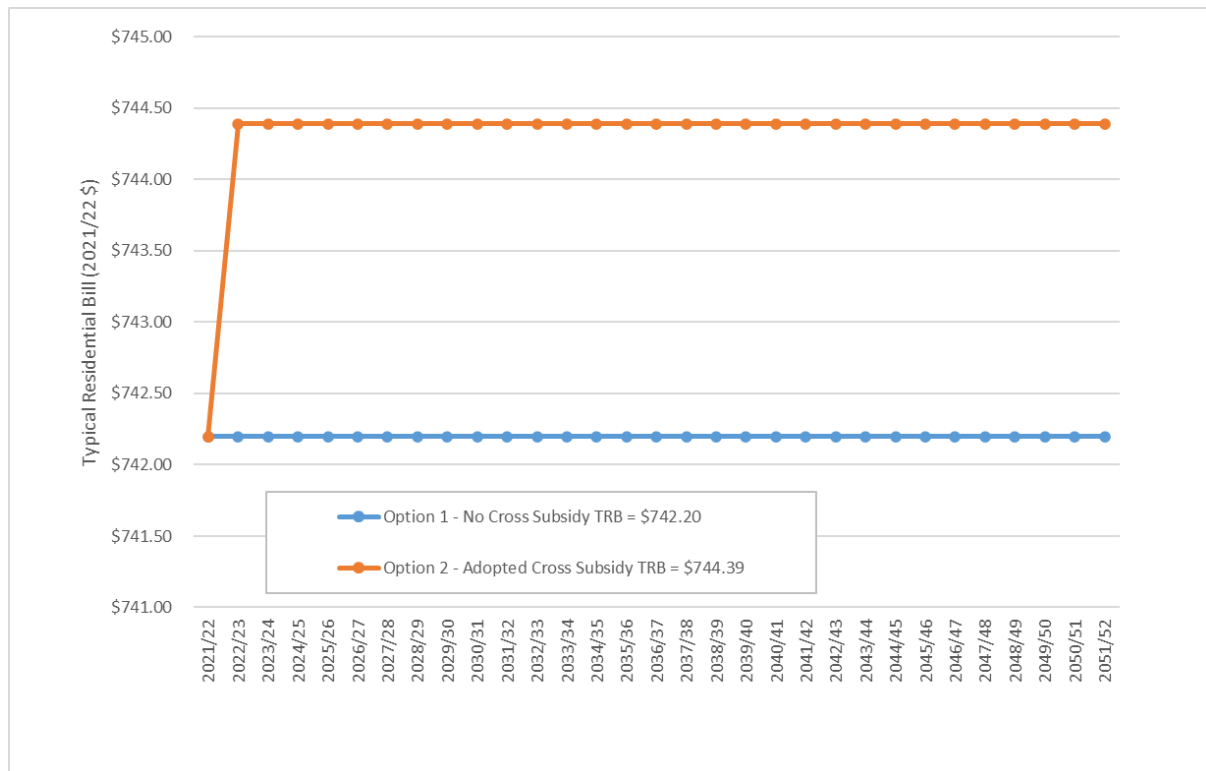


Figure 8-1 Impact of Developer Charges Option on TRB for Sewerage

9 Reviewing/ Updating of Developer Charges

Developer charges will be adjusted on 1 July each year on the basis of movements in the CPI for Sydney, in the preceding 12 months to December, excluding the impact of GST.

Developer charges will be reviewed by Council after a period of 4 to 8 years.

10 Background Document

A background document containing all the critical data including calculation models behind each DSP is available from Council on request. The contact details are below:

Team Leader Strategic Planning

Snowy Monaro Regional Council

Ph: 1300 345 345

Email: council@snowymonaro.nsw.gov.au

11 Other DSPs and Related Contribution Plans

Other related plans include:

- Snowy Monaro Section 7.12 Local Infrastructure Contributions Plan 2022

This DSP replaces previous DSPs for water supply and sewerage.

12 Glossary

Annual Bill	LWU's annual water supply or sewerage bill for an annual demand of 1 ET.
Asset	An asset (or part of an asset) including land and headworks assets that directly provides, or will provide, the developer services to developments within the DSP area for which the Developer Charge is payable
ADWF	Average dry weather flow. One of the design parameters for flow in sewers.
Capital Cost	The Present Value (MEERA basis) of all expenditure on assets used to service the development.
Capital Charge	Capital cost of assets per ET adjusted for commercial return on investment (ROI).
CPI	Consumer price index.
Developer Charge (DC)	Charge levied on developers to recover part of the capital cost incurred in providing infrastructure to new development.
Development Area	See DSP area.
Discount Rate	The rate used to calculate the present value of money arising in the future.
DSP	Development Servicing Plan
DSP area	That part of a water utility's area covered by a particular Development Servicing Plan. Also referred to as Development Area.
EP	Equivalent Persons (or equivalent population). Used as a design parameter for loadings of sewage treatment works.
ET	Equivalent tenement. The annual demand a detached residential dwelling will place on the infrastructure in terms of the water consumption or sewage discharge.
GST	Goods and services tax.
Headworks	Significant assets at the top end of the water systems or the bottom end of the wastewater and stormwater system. For example water headworks may comprise a system of storage reservoirs, water treatment works and major supply conduits.

IPART	The NSW Independent Pricing and Regulatory Tribunal.
kL	Kilolitre (1,000 litres).
LGSA	Local Government and Shires Associations.
LWU	Local water utility (NSW). Excludes Sydney Water Corporation, Hunter Water Corporation, Gosford Council, Wyong Council, Essential Water and Fish River Water Supply.
MEERA	Modern Engineering Equivalent Replacement Asset. An asset value calculated on the basis that the asset is constructed at the time of valuation in accordance with modern engineering practice and the most economically viable technologies, which provides similar utility functions to the existing asset in service.
ML	Megalitre (1,000,000 litres, or 1,000 kilolitres).
Net income	Annual bill minus OMA cost per ET.
NPV	Net present value means the difference between the Present Value of a revenue stream and the Present Value of a cost stream.
OMA	Operation, maintenance and administration (cost).
Operating cost	In relation to a DSP is the operation, maintenance and administration cost (excluding depreciation and interest) of a LWU in providing Customer services to a DSP area.
Post 1996 Asset	An asset that was commissioned by a LWU on or after 1 January 1996 or that is yet to be commissioned.
Pre 1996 Asset	An asset that was commissioned by a LWU before 1 January 1996.
PV	Present value. The current value of future money or ETs.
PWWF	Peak wet weather flow. One of the design parameters of flow in sewers.
Real Terms	The value of a variable adjusted for inflation by a CPI adjustment
Reduction Amount	The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the capital contribution that will be paid by the occupier of a development as part of future annual bills.

ROI	Return on investment. Represents the income that is, or could be, generated by investing money.
Service Area	An area serviced by a separate water supply system, an area served by a separate STW, a separate small town or village, or a new development of over 500 ETs.
SMRC	Snowy Monaro Regional Council
STP	Sewage treatment plant
TRB	Typical residential bill, which is the principal indicator of the overall cost of a water supply or sewerage system and is the bill paid by a residential customer using the utility's average annual residential water supplied per connected property.
WTP	Water treatment plant.

13 Plans

Page left blank intentionally. This section provided in separate attachment.

14 Calculation of ETs

Page left blank intentionally. This section provided in separate attachment.

15 Existing Capital Costs

Page left blank intentionally. This section provided in separate attachment.

16 Future Capital Works Program

Page left blank intentionally. This section provided in separate attachment.

17 Calculation of the Capital Charge

Page left blank intentionally. This section provided in separate attachment.

18 Calculation of the Reduction Amount

Page left blank intentionally. This section provided in separate attachment.

19 Cross Subsidy Calculations

Page left blank intentionally. This section provided in separate attachment.