



## Dovedale (Handout)

The Dovedale water supply scheme serves a population of 450 people via 264 rural restricted connections. The scheme has high maintenance costs; the aging nature of the pipe network resulting in frequent failures and poor water quality causing blockages to filters and restrictors.

The surface water intake has variable water quality and unreliable supply. This could potentially be aggravated once the surrounding forest is harvested. The supply is already at risk of running out of water during dry periods and this risk is likely to increase when the forest is harvested. If the scheme runs dry there is no means of supplying water. Most customers only have a maximum of seven days storage.

The frequency of failures of the main supply line to the treatment plant is also creating uncertainty and increased cost. There have been four pipe failures this year alone. The cost of replacement of this line is estimated to be in the order of \$700,000. It is therefore necessary that a new water source, most likely groundwater near Woodstock, is seriously considered to help remedy the poor water quality and unreliability of the supply for the community.

An advantage of a groundwater supply will be a significant improvement in water quality and a good chance that the permanent boil water notice could be lifted.

The other consideration is that the scheme should meet NZDWS.

Options 1 to 4 are calculated from preliminary budgets for the 2025/26 financial year and include Operation and Maintenance costs.

**Option 1 - Proposed in LTP** - Upgrade the scheme with new bores, headworks and reticulation at Woodstock to meet drinking water standard ie filtration, UV disinfection and chlorine dosing to meet NZDWS.

Upgrade details (\$3.2million):

- Bores and associated headworks;
- Filtration, UV disinfection, Chlorine dosing; and
- Reticulation.

**Option 2** - Upgrade scheme with new bores, headworks and reticulation at Woodstock to the minimum standard required to ensure continuity of supply and resilience. There is a risk that we will be forced to upgrade to meet NZDWS at a later date which would be more expensive than providing the correct sized building at the time of upgrade.

Upgrade details (\$2.9million):

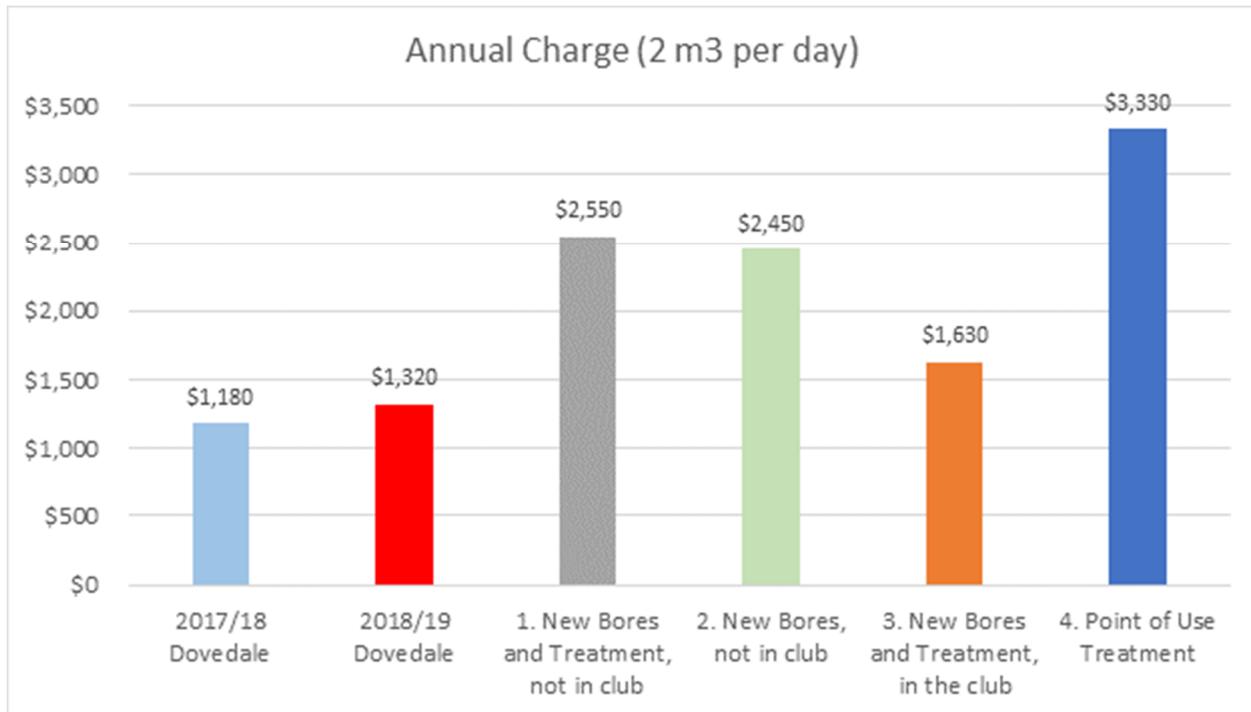
- Bores and associated headworks;
- Chlorine Dosing; and
- Reticulation.

**Option 3** - As for Option 1 above but the scheme joins the Club.

**Option 4** - Install “point-of-use” treatment to provide a potable water supply to each residence in the scheme. The Council could take responsibility for maintaining this treatment. Due to the poor water quality such equipment will require good quality filters which are routinely flushed and maintained to ensure a drinking water supply at the point of domestic use. This will not address the risk of the creek drying up.

Upgrade details (\$1.84million):

- Filtration and Domestic UV disinfection



**Figure 5:** Option Charges for Dovedale

A 2m<sup>3</sup>/day sample customer is used in Figure 5 as this is the most common usage in the Dovedale scheme. Option 3 is the lowest cost option for this sized customer. Because the current Dovedale charging method has a lower charge for units greater than 2m<sup>3</sup>/day, larger customers would face a higher increase as shown in Figure 6 for the club option.

**Note 1:** Dovedale Rural Water Supply Charges

- \$591.29/m<sup>3</sup> per day water restrictor volume for the first 2m<sup>3</sup> per day of restrictor volume; and
- \$455.30/m<sup>3</sup> per day water restrictor volume for each subsequent m<sup>3</sup>.

For example, users with a 2m<sup>3</sup> per day restrictor would pay 2 times the \$591.29 rate for a total of \$1,182.58. Users with a 3m<sup>3</sup> per day restrictor would pay two of the \$591.29 rates and one \$455.30 rate for a total of \$1,637.88.

**Note 2:** The Council has not yet discussed the criteria for entry to the Club. Over many years the schemes not in the club have had very low charges and those in the Club have cross-subsidised each other to spread the costs over the years and reduce the impact of significant upgrades. It may be unfair for the schemes not in the Club to now join and expect others to subsidise their charges when they are faced with major upgrades. A possible entry fee to join the Club has yet to be considered by the Council.

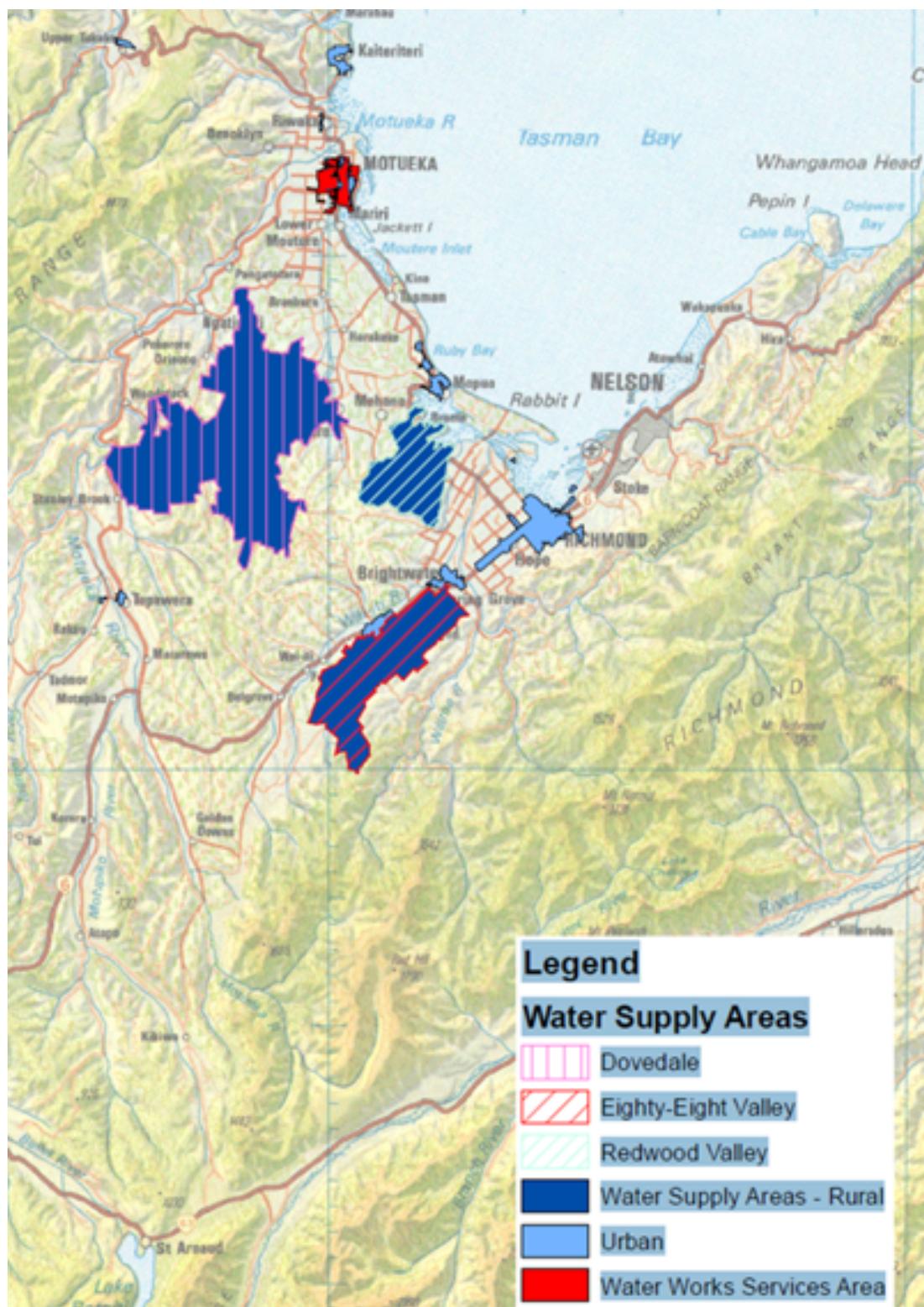
**Note 3:** The Charges to the Club for metered and urban extension restricted connections would increase as follows if the 88 Valley and Dovedale water supply schemes were brought into the Club:

Charge Type	Units	2025/26 Projected Charges	With 88 Valley and Dovedale Fully Treated	Increase
Fixed Charge	per annum	\$425.43	\$439.44	3.3%
Variable charge	per m <sup>3</sup>	\$2.73	\$2.82	3.3%
Restricted	per annum for 1m <sup>3</sup> /day	\$797.03	\$823.26	3.3%

Units	Number of Customers	2017/18 Annual Charge	2018/19 Annual Charge	Option 1: New Bores and Treatment, not in club	Option 2: New Bores, not in club	Option 3: New Bores and Treatment, in the club	Option 4: Point of Use Treatment
1	10	\$590	\$660	\$1,280	\$1,230	\$810	\$2,670
1.2	5	\$710	\$790	\$1,530	\$1,470	\$980	\$2,800
2	159	\$1,180	\$1,320	\$2,550	\$2,450	\$1,630	\$3,330
3	3	\$1,640	\$1,820	\$3,540	\$3,400	\$2,440	\$3,830
4	47	\$2,090	\$2,330	\$4,520	\$4,340	\$3,260	\$4,340
5	3	\$2,550	\$2,840	\$5,500	\$5,290	\$4,070	\$4,850
6	13	\$3,000	\$3,350	\$6,490	\$6,230	\$4,880	\$5,360
7	1	\$3,460	\$3,850	\$7,470	\$7,180	\$5,700	\$5,860
8	7	\$3,910	\$4,360	\$8,450	\$8,120	\$6,510	\$6,370
10	4	\$4,820	\$5,380	\$10,420	\$10,010	\$8,140	\$7,390
11	1	\$5,280	\$5,880	\$11,410	\$10,960	\$8,960	\$7,890
12	3	\$5,740	\$6,390	\$12,390	\$11,900	\$9,770	\$8,400
14	2	\$6,650	\$7,410	\$14,360	\$13,790	\$11,400	\$9,420
16	1	\$7,560	\$8,420	\$16,320	\$15,680	\$13,030	\$10,430
18	2	\$8,470	\$9,430	\$18,290	\$17,570	\$14,650	\$11,440
20	2	\$9,380	\$10,450	\$20,260	\$19,460	\$16,280	\$12,460
50	1	\$23,040	\$25,670	\$49,760	\$47,810	\$40,710	\$27,680

**Figure 6:** Current Charge vs Options for Different Usages

### Map of Rural Water Supply Schemes



## Appendix 2

### Long Term Plan Water Treatment Budgets

Upgrade Description	Location	Total 10 years	LTP Input 2018/19	LTP Input 2019/20	LTP Input 2020/21	LTP Input 2021/22	LTP Input 2022/23	LTP Input 2023/24	LTP Input 2024/25	LTP Input 2025/26	LTP Input 2026/27	LTP Input 2027/28
Intake access and pipeline renewal	88 Valley	34,900	34,900									
Supply most of scheme from Wakefield and leave remaining scheme as an agricultural supply and install UV at houses to meet DWSNZ or new WTP at 88 Valley source.	88 Valley	1,820,500			200,000	1,620,500						
Consider moving chlorine out of building, new generator to run pump in power cut. Replace pipework& install chlorine scales.	88 Valley	31,000		6,000		25,000						
New bore, treatment, headworks, pump station, treatment plant, delivery of pipework.	Dovedale	3,155,200	40,000			80,000	1,110,000	1,925,200				
Improve chlorine dosing chamber & install pumps.	Dovedale	120,000	50,000	20,000	50,000							
2 deploxs units (chlorine analyser) need replacing & turbidity unit old and no longer supported by 2022.	Dovedale	35,000	15,000	20,000								
New treatment plant in Spring Grove, piped to Wakefield (will meet DWSNZ).	Wakefield	4,341,600	2,341,600	2,000,000								
Decommission old well, bore & WTP and remove from site completely.	Wakefield	98,000						98,000				