



# Water Fluoridation Survey

## Two Rocks

**November 2011**

Water Unit  
Environmental Health Directorate, Public Health Division  
Department of Health, WA

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**Disclaimer:**

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## Executive Summary

The Water Unit at the Environmental Health Directorate of the Department of Health WA was requested by the Fluoridation of Public Water Supplies Advisory Committee to organise a postal survey of residents of the community of Two Rocks. The purpose of the survey was to ascertain the level of awareness and support within the community for the addition of fluoride to the local public drinking water supply.

The postal survey took place in October 2011.

The major findings of the survey were:

- Just under half (47%) of the respondents agreed to the addition of fluoride in public drinking water supplies. The proportion who agreed to the addition of fluoride was higher than those who did not agree to the addition of fluoride (34%) and those who were unsure (19%).
- The proportion of valid respondents that agreed with the addition of fluoride to the public drinking water supply exceeded the proportion that did not agree, across all age groups, except for the 48 - 57 years age group, where 44% of respondents did not agree.
- Overall, 45% of respondents agreed that the addition of fluoride to the public drinking water supply is safe, with 27% not agreeing and 28% unsure.
- Overall, 53% of respondents agreed that fluoride in the public drinking water supplies can help prevent tooth decay. This was larger than the 18% who did not agree and the 27% who were unsure (2% unstated).
- When comparisons were made between age groups, the majority of respondents in each age group agreed that adding fluoride to the public drinking water supply can assist in preventing tooth decay. The proportion that did not agree or was unsure was uniformly lower.

- Respondents who were in favour of adding fluoride to the public drinking water supply stated the benefit was seen to be for both adults and children.
- Overall, 71% of respondents stated that they usually consumed tap water from the public drinking water supply, with 14% stating that they use rain water as their most common drinking water source and 9% stating that they use bottled water as their most common drinking water source.
- For respondents who usually drink water from the public drinking water supply (which was the majority group), the majority (57%) agree that the addition of fluoride to this type of water supply can assist in preventing tooth decay, with 16% not agreeing and 27% unsure. A greater proportion of the respondents who usually consumed bottled water, rain water or other sources of water did not agree with the proposition, but these groups were smaller in overall numbers.
- Newspapers were the most important individual source of information about fluoridation, with “Television” and “Dentist” also being common responses.
- The results from the Water Fluoridation Survey indicate that around half of the respondents from Two Rocks were in favour of the addition of fluoride to the public drinking water supply and agree that its addition can assist in the prevention of tooth decay. This is greater than the proportion of the respondents who were not in favour of it or the proportion of respondents who were unsure.



## 1. Introduction

This report has been prepared by the Water Unit, Environmental Health Directorate, Department of Health WA for the Fluoridation of Public Water Supplies Advisory Committee<sup>1</sup>.

The Water Unit at the Environmental Health Directorate was requested by the Fluoridation of Public Water Supplies Advisory Committee to organise a postal survey of residents of the community of Two Rocks to ascertain the level of awareness and support within the community for the addition of fluoride to the local public drinking water supply.

This report documents the results of the Water Fluoridation Survey.

The Water Fluoridation Survey had two main objectives:

- To ascertain the level of awareness in the community on fluoride addition to the public water supply.
- To measure local support for the addition of fluoride in the Two Rocks public drinking water supply.

Two Rocks is a community of approximately 2280 people<sup>2</sup>, located 60 km north of Perth, Western Australia. Drinking water is supplied to Two Rocks by Water Corporation. This supply is presently not fluoridated<sup>3</sup>.

Information about drinking water supplied by Water Corporation can be found at:

[www.watercorporation.com.au/about-us/our-performance/drinking-water-quality](http://www.watercorporation.com.au/about-us/our-performance/drinking-water-quality)

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<sup>1</sup> Refer: [www.public.health.wa.gov.au/3/1583/2/fluoride\\_in\\_drinking\\_water.pm](http://www.public.health.wa.gov.au/3/1583/2/fluoride_in_drinking_water.pm)

<sup>2</sup> Refer: [www.censusdata.abs.gov.au/census\\_services/getproduct/census/2011/quickstat/SSC50876?opendocument&navpos=220](http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/SSC50876?opendocument&navpos=220)

<sup>3</sup> Water fluoridation is the adjustment of the amount of fluoride in drinking water to a level that helps protect teeth against decay.  
[source: [www.health.vic.gov.au/environment/fluoridation/community\\_info.htm](http://www.health.vic.gov.au/environment/fluoridation/community_info.htm) ]

## **2. Methodology**

### **2.1 Sample selection**

Survey forms were based on the questions used previously for a similar survey of the greater Bunbury area<sup>4</sup>. This was designed to facilitate comparison of the results. The Two Rocks survey was run at the same time as a similar survey of the nearby Yanchep community.

The survey questions were chosen based on previously published literature on attitudes towards the addition of fluoride to public drinking water supplies and were worded to be succinct, centred on the research and ethically appropriate.

The survey sought some basic demographic and age breakdown information about the respondent's household but did not seek identifiable information about individuals. The approach letter and survey forms are set out in Appendix A and Appendix B respectively.

### **2.2 Data Collection**

The postal survey was sent out in October 2011 to residential properties in Two Rocks that have a registered Water Corporation service. The addresses were based on a (deidentified) database of addresses provided by Water Corporation. The survey form was addressed "Dear Householder" and was accompanied by a reply paid envelope for return at no cost to the respondent. A code was attached to the unmarked survey response sheets to ensure that duplicates were not submitted.

Whilst the survey form requested surveys to be returned by 21 October 2011, all surveys returned by 7 November 2011 were included in the data analysis, to ensure that as many survey results as possible were considered. No survey forms were received after 7 November 2011.

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<sup>4</sup> Epidemiology Branch (2011). Water Fluoridation Survey, Bunbury Area. Perth: Department of Health WA.

The survey was conducted in accordance with all applicable record keeping and privacy provisions for the Western Australian public sector.

## 2.3 Data analysis

For analysis that involved cross tabulation of multiple factors or areas of interest, only data that has a response was included. All analysis presented in this report was completed using de-identified data.

Survey responses that did not answer questions 1, 2 and 3, or were completely blank, were not considered as valid responses and were not included in the analysis.

## 2.4 Response rate

A total of 1053 survey forms were sent out to Two Rocks households. A total of 238 valid survey responses were returned, giving a response rate of 22.6%. Of the 1053 surveys that were sent out, 334 (31.7%) had undeliverable addresses and were returned unopened. This is believed to have been due to some estates in the Two Rocks district not having a residential delivery service for mail (and relying on Post Office box mail).

Based on peer-reviewed literature, the desirable response rate for a mail out survey, regardless of its subject matter, is 60%<sup>5</sup>. However this is not usually reached, with most response rates in mail out surveys generally ranging from 30% to 70%, with 45% response rates being the average in surveys reported in published literature.

The lower the response rate, the more important is the issue of whether or how well the respondents represented the views of the community of interest overall.

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<sup>5</sup> References:

Owen-Smith, V., Burgess-Allen, J., Lavelle, K., Wilding, E., 2008. Can lifestyle surveys survive a low response rate?, *Public Health* vol 122: 1382-1383.

Hikmet, N., Chen, S.K., 2003. An investigation into low mail survey response rates of information technology users in health care organizations, *International Journal of Medical Informatics* vol 72: 29-34

Nevertheless, peer reviewed literature on survey methodology indicates that a person's decision about whether to participate in a survey or not is in part determined by how important the topic of the survey is to them, potentially leading to self-selection bias.<sup>6</sup>

In essence, this means that community members with a view on the subject matter of a survey (in this case, fluoridation of public drinking water supplies) are more likely to respond than those with little interest in the topic.

## **2.5 Weighting the data**

The survey results have not been statistically weighted according to the estimated resident population for Two Rocks. The results and findings were solely based on the data from the responses of the returned surveys and need to be viewed in that light and the information in section 2.4 above.

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<sup>6</sup> Rogelberg SG, Fisher GG, Maynard DC, Hakei MD, Horvath M. 2001 Attitudes Towards Surveys: Development of a Measure and Its Relationship to Respondent Behavior. *Organizational Research Methods*. vol 4(1):3-25.

### 3. Results

Results are presented for each question asked in the survey. Results that are presented in graphic form are also shown in table format in Appendix C of this report.

#### 3.1 Demographics

The socio-demographic characteristics of the 238 valid responses are shown in Table 1. On balance, the survey respondents were predominantly female (43% male, 53% female, 4% not stated), relative to the gender ratios of the Two Rocks community (approx. 50% each), and were predominantly over 47 years of age (71%), with 26% between 18 and 47 years of age and 3% unstated age. Some 60% of respondents lived in households where the youngest person was over 40 years and some 50% of respondents had lived in the area for at least ten years.

**Table 1 Demographic and socio-demographic characteristics of valid respondents, Two Rocks**

<b>Age groups</b>		
18-27	10	4.2
28-37	15	6.3
38-47	36	15.1
48-57	32	13.4
58-67	57	24.0
68+	80	33.6
Not stated	8	3.4
TOTAL	238	100.0%
<b>Gender</b>		
Male	102	42.9
Female	126	52.9
Not stated	10	4.2
TOTAL	238	100.0%
<b>Who they live with</b>		
Alone	52	21.9%
Partner only	106	44.5%

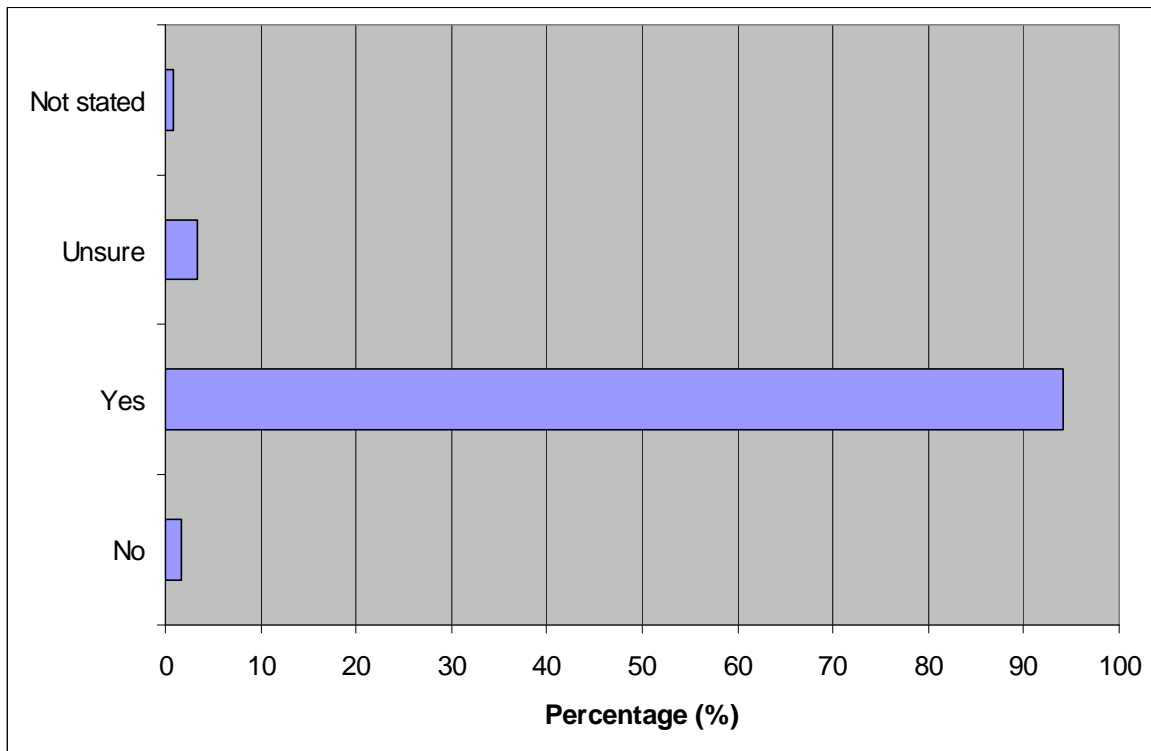
Partner and children	57	24.0%
Children only	6	2.5%
Friends or relatives	6	2.5%
Other	2	0.8%
Not stated	9	3.8%
TOTAL	238	100.0%
<b>Youngest person in household</b>		
0-10	37	15.5%
11-20	24	10.1%
21-30	8	3.4%
31-40	6	2.5%
41+	144	60.5%
Not stated	19	8.0%
TOTAL	528	100.0%
<b>Oldest person in household</b>		
11-20	0	0.0%
21-30	9	3.8%
31-40	21	8.8%
41+	192	80.7%
Not stated	16	6.7%
TOTAL	528	100.0%
<b>Duration of residency</b>		
< 1 year	16	6.7%
1 – 5 years	51	21.5%
6 – 10 years	45	18.9%
>10 years	119	50.0%
Not stated	7	2.9%
TOTAL	528	100.0%

### 3.2 Fluoride in the public water supply

Respondents were asked if their premises were currently connected to the public drinking water supply.

Figure 1 shows that 94% of all valid respondents stated that they were connected to the Two Rocks public drinking water supply, with 2% answering no, 1% not answering and 3% unsure. The data is in Table 2 (in Appendix C).

**Figure 1 Percentage of valid respondents connected to the public drinking water supply, Two Rocks**

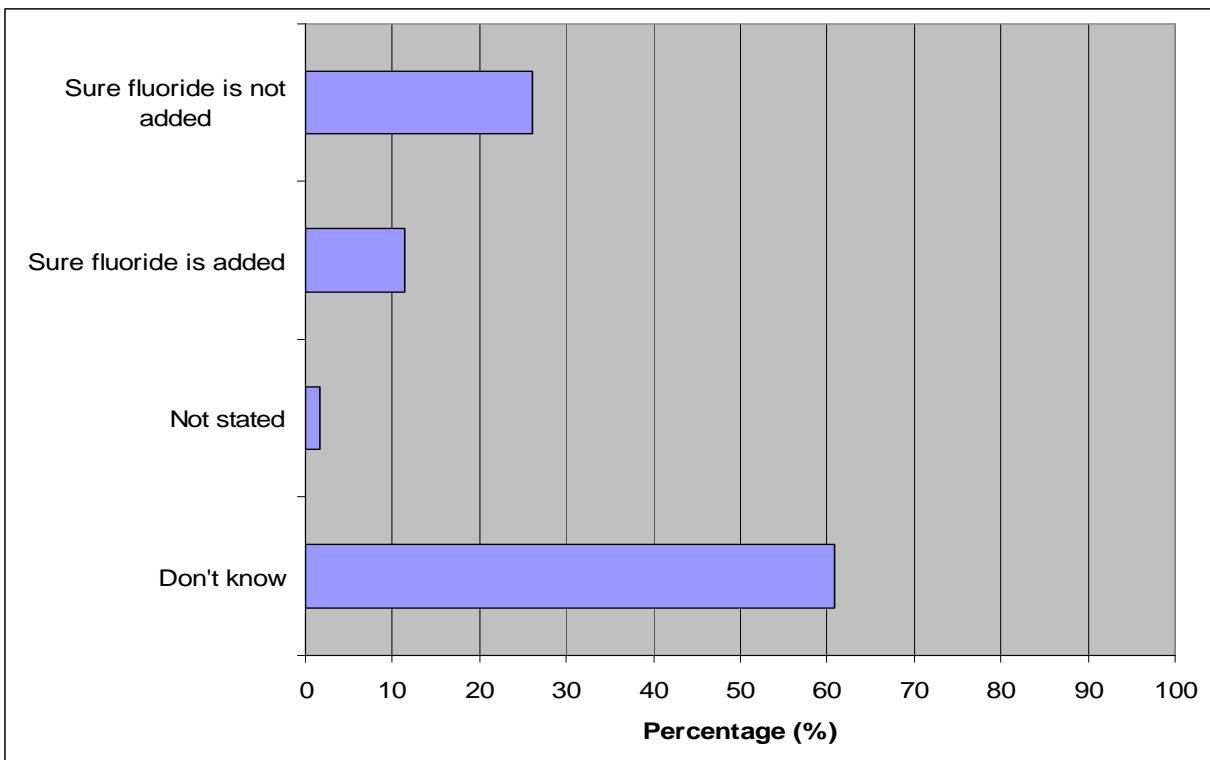


Respondents were also asked if they knew whether their drinking water supply currently had fluoride added to it.

Figure 2 illustrated that the majority of respondents did not know if fluoride was currently added to their drinking water supply or not (61%). Twenty-six percent (26%) of valid respondents were sure that fluoride was not currently added and just over one tenth (11%) were sure that the public water supply was currently fluoridated. The data is in Table 3.

NB The Two Rocks drinking water supply is presently not fluoridated.

**Figure 2 Percentage of valid respondents knowing whether fluoride has or has not been added to the public drinking water supply, Two Rocks**



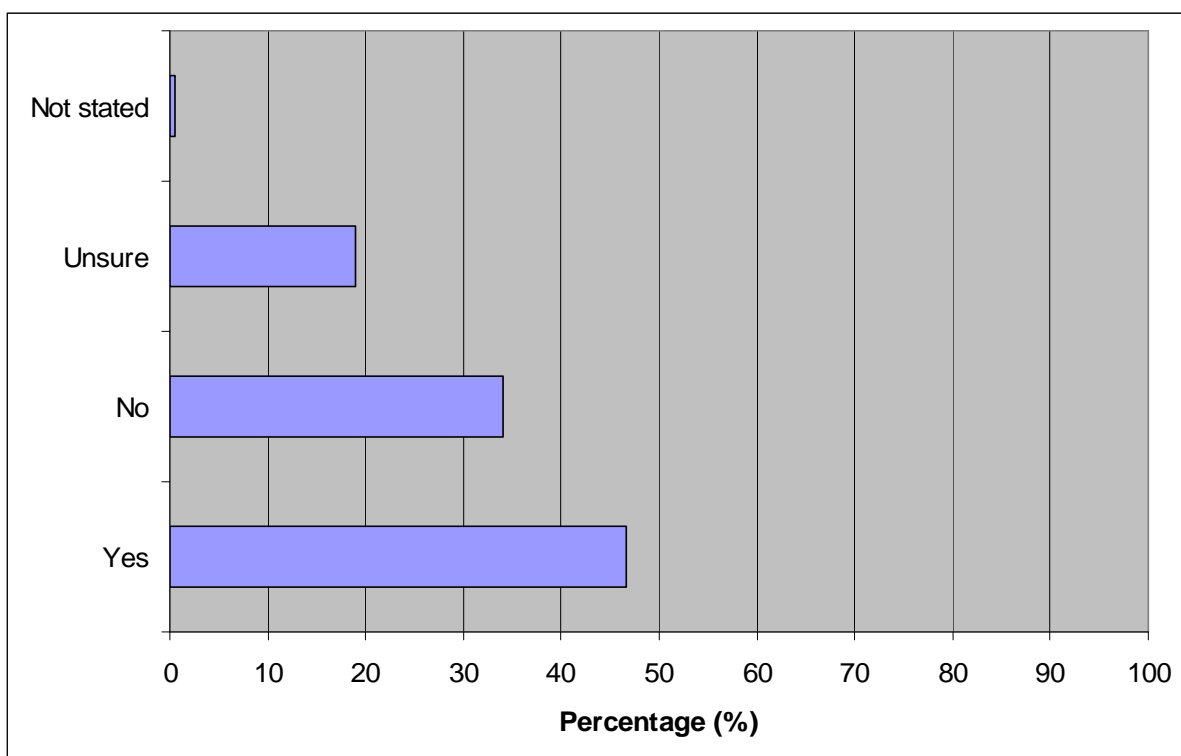


### 3.3 Attitude towards fluoridation

The survey asked about attitudes towards the addition of fluoride to the Two Rocks public drinking water supply and the perceived safety and efficacy of fluoridation.

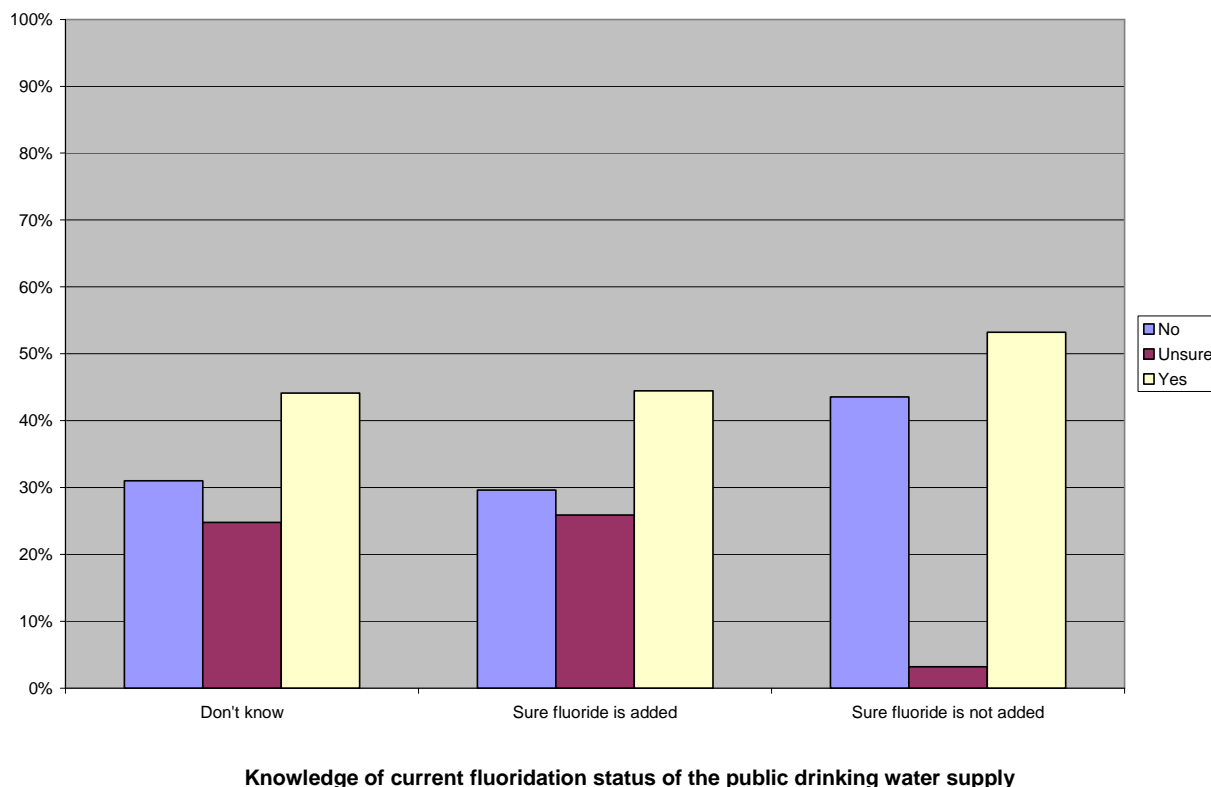
Overall, 47% of valid respondents agreed to adding fluoride to the public drinking water supply. Figure 3 illustrates that the proportion in agreement to the addition of fluoride was higher than those who did not agree to the addition of fluoride (34% of respondents) and considerably higher than those who were unsure (19% of respondents). The data is in Table 4 (in Appendix C).

**Figure 3 Percentage of valid respondents and their agreement to adding fluoride to the public drinking water supply, Two Rocks**



Whether respondents were sure whether the public drinking water supply was currently fluoridated, or not fluoridated, or whether they were unsure, was analysed to determine the degree to which they agreed with fluoride being added to the public drinking water supply.

**Figure 4 Percentage of valid respondents and their agreement to public drinking water supply fluoridation by knowledge of current fluoridation status of the water supply, Two Rocks**



The yellow columns in Figure 4 show that 44% of valid respondents who were unsure if the public drinking water supply was fluoridated or not were in favour of its addition, 44% were in favour if they thought the water supply was already fluoridated and 53% were in favour of fluoridation if they thought the water supply was not currently fluoridated.

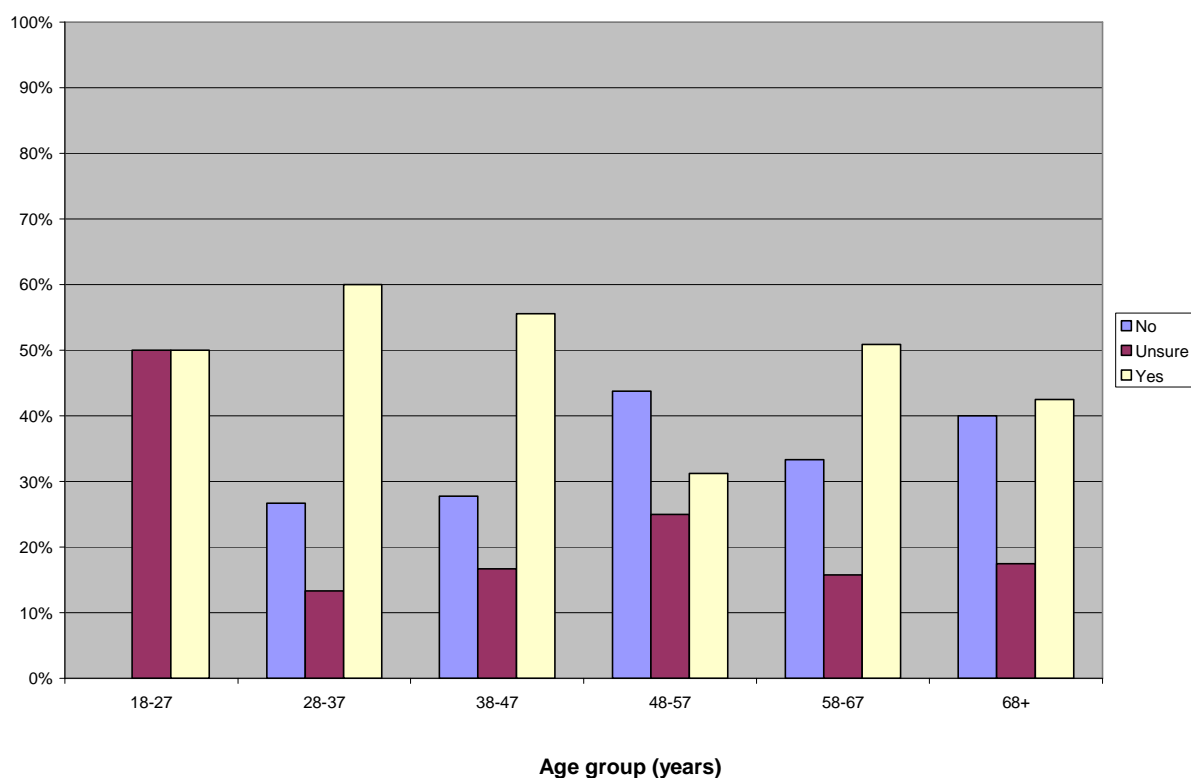
The blue columns in Figure 4 show that 31% of valid respondents who were unsure if the public drinking water supply was fluoridated or not were not in favour of its addition, 30% were not in favour if they thought the water supply was already fluoridated and 44% were not in favour of fluoridation if they thought the water supply was not currently fluoridated.

The proportions of those who were not sure of the fluoridation status of the public drinking water supply, which was the single largest group of respondents for this question, were more in favour of the water supply being fluoridated (44%) and were more equally split between no (31% of respondents) and unsure (25% of respondents). Similarly, the proportions of those who were sure the water was currently fluoridated, a smaller proportion of total respondents, were more equally split between unsure (26%) and no (29%). In all cases, more respondents stated that they agreed with fluoridation than disagreed with it or were unsure about it.

Note that the column heights in Figure 4 need to be viewed in light of the breakdown by knowledge of fluoridation status in Figure 2, where not being sure whether the water supply was fluoridated or not was the most common response.

The data is in Table 5 (in Appendix C).

**Figure 5 Percentage of valid respondents and their agreement with the addition of fluoride into the public drinking water supply, by age group, Two Rocks**



To determine if age was a significant factor in agreeing (or otherwise) with the addition of fluoride in the Two Rocks public drinking water supply, comparison was made between six adult age groups. The proportion of valid respondents that agreed with the addition of fluoride to the public drinking water supply exceeded the proportion that did not agree, across all age groups, except for the 48 - 57 years age group.

The yellow columns in Figure 5 (previous page) show that 60% of valid respondents aged 28 - 37 years were in agreement, along with 56% of valid respondents aged 38 - 47 years, 31% of valid respondents aged 48 - 57 years, 51% of valid respondents aged 58 - 67 years and 43% of valid respondents 68 years and over.

The maroon columns in Figure 5 show that the proportion of valid respondents that were unsure about the addition of fluoride to the public drinking water supply was similar across all groups, at about 16%, except for the 18 - 27 years age group. For the 18 - 27 years age group, equal proportions were unsure and in favour (at 50% each), and the 48 - 57 age group, with 25% of respondents unsure.

The blue columns in Figure 5 show that the proportion of valid respondents that did not agree with the addition of fluoride to the public drinking water supply was lower for younger age groups (0% for 18 - 27 years, 27% for 28 - 37 years age group and 28% for 38 - 47 years age group) and increasing to 44%, 33% and 40% for the three older age groups.

Nevertheless, agreement with the addition of fluoride to the public drinking water supply (yellow columns) was higher than not agreeing (blue columns) or being unsure (maroon columns) for all age groups except for the 18 - 27 years age group, where respondents were equally split between unsure and agreement, and the 48 - 57 years age group.

The data is in Table 6 (in Appendix C).

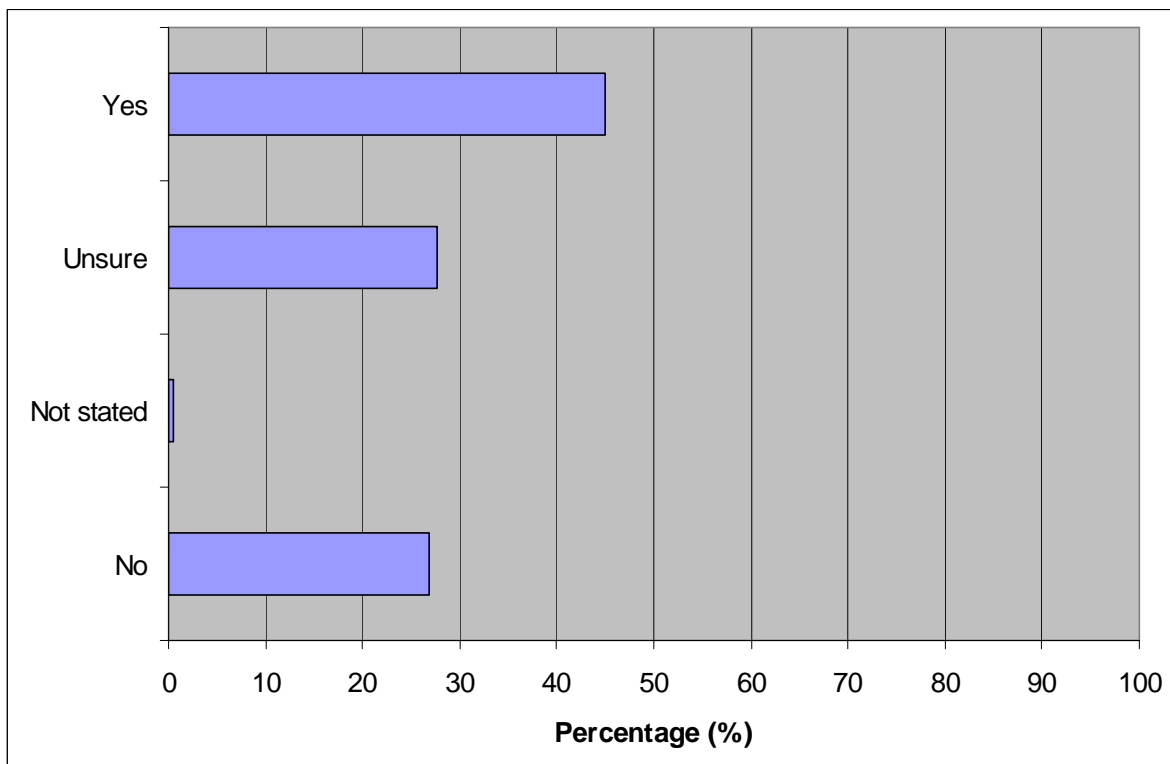
### 3.4 Perceptions of safety and efficacy of fluoridation

Figure 6 illustrates the breakdown of responses in relation to the safety of the addition of fluoride to public drinking water supplies.

Overall, 45% of valid respondents agreed that the addition of fluoride to the public drinking water supply is safe. This was greater than the 27% of valid respondents who did not agree that the addition of fluoride to public drinking water supplies was safe and the 28% of valid respondents who were unsure.

The data is in Table 7 (in Appendix C).

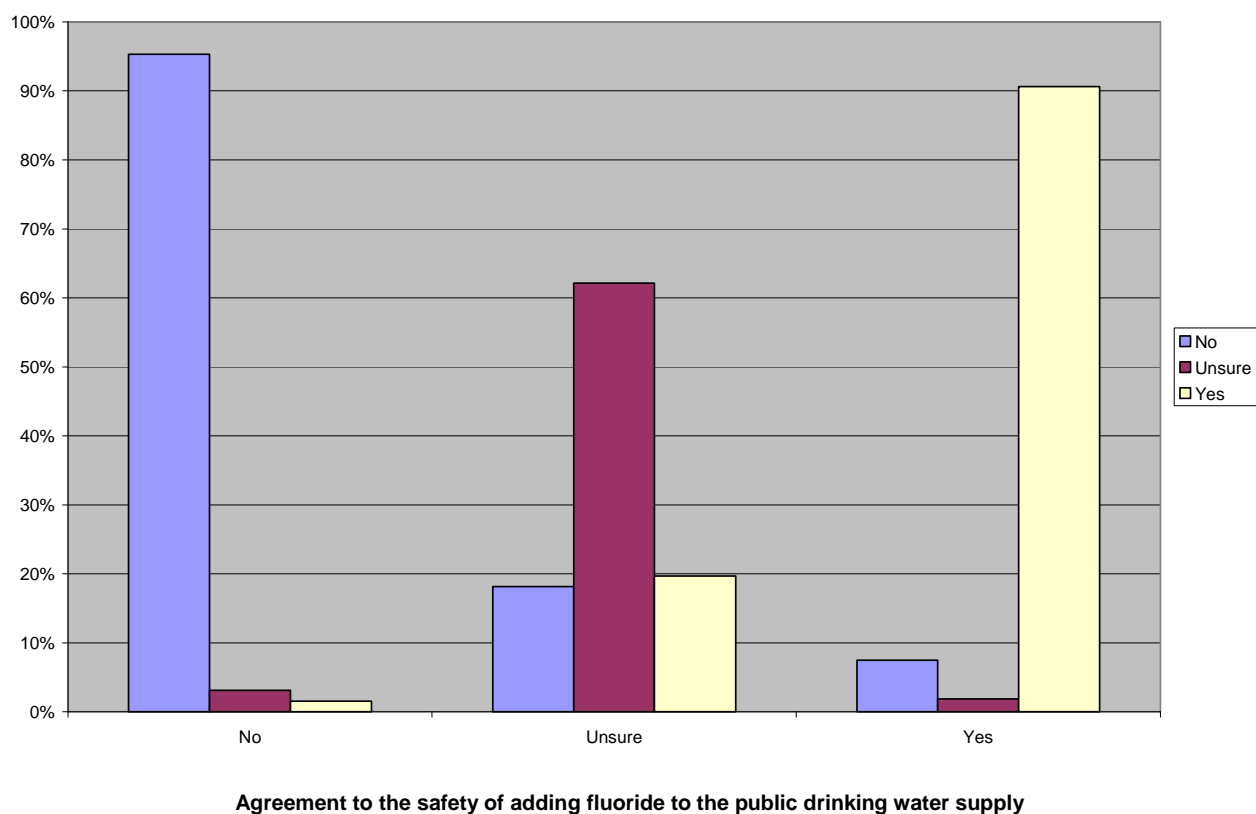
**Figure 6 Percentage of valid respondents who agreed that the addition of fluoride to the public drinking water supply is safe, Two Rocks**



Respondents' perception of safety around the addition of fluoride to public drinking water supplies was linked to their agreement with adding fluoride to the public drinking water supply.

Figure 7 illustrates that the majority (91%) of respondents who agreed with the addition of fluoride to public drinking water supplies agreed it was safe, while the majority (95%) of those who did not agree to the addition of fluoride to public drinking water supplies also did not agree that it was safe. Of those who neither agreed nor disagreed with the addition of fluoride, the majority was unsure whether it was safe (62%), with an approximately even split otherwise (19%). The data is in Table 8 (in Appendix C).

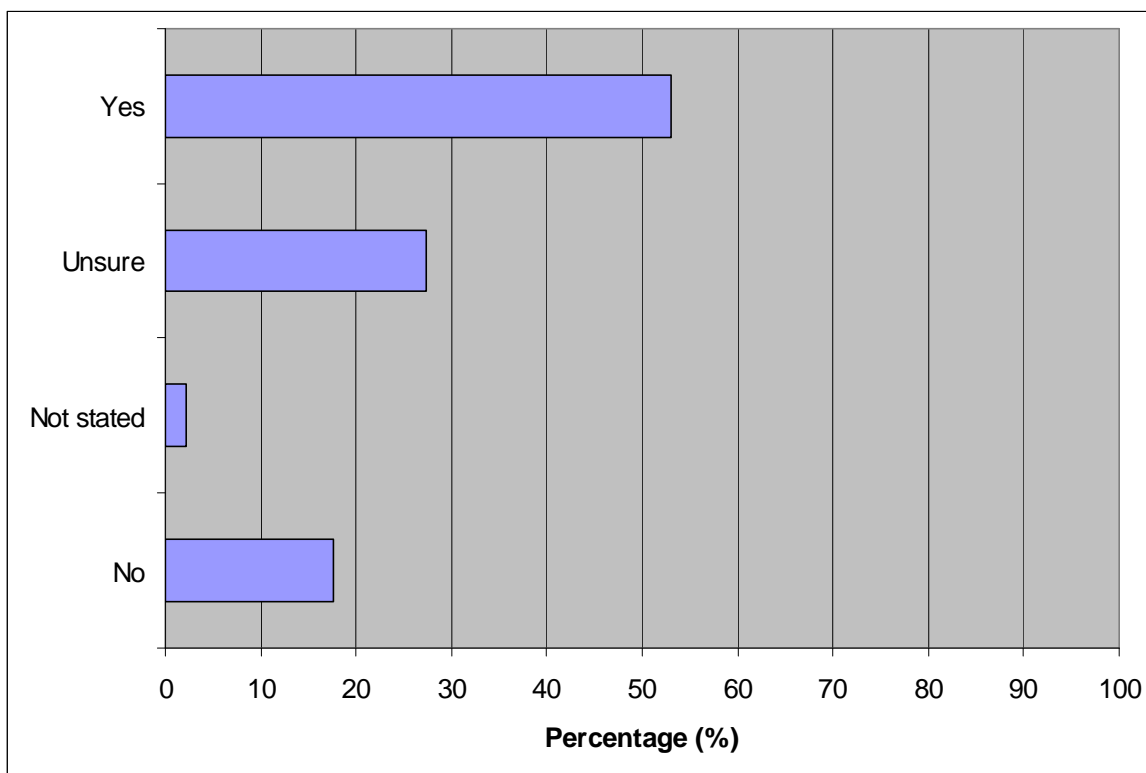
**Figure 7 Percentage of valid respondents and their perceived safety of the addition of fluoride to public drinking water supplies and agreement to public water supply fluoridation, Two Rocks**



Respondents were asked if they agreed that the addition of fluoride to public drinking water supplies can help prevent tooth decay (efficacy of fluoridation).

Figure 8 shows that the majority (53%) of valid respondents agreed that the addition of fluoride to the public drinking water supplies can help prevent tooth decay. This was larger than the 18% who did not agree that the addition of fluoride to public drinking water supplies can help prevent tooth decay and the 27% who were unsure (with 2% not stating a response to this question). The data is in Table 9 (in Appendix C).

**Figure 8 Percentage of valid respondents and their agreement that fluoride in the public drinking water supplies can help prevent tooth decay, Two Rocks**



A number of respondents also provided written comments in the returned survey forms. These comments are set out verbatim in Appendix D (except for correction of spelling errors).

When comparisons were made between age groups, the majority of valid respondents in all age groups agreed that adding fluoride to the public drinking water supply can assist in preventing tooth decay.

The yellow columns in Figure 9 illustrate that 50% of respondents aged 18 - 27 years, 53% of respondents aged 28 - 37 years, 61% of respondents aged 38 - 47 years, 55% of respondents aged 48 - 57 years 61% of respondents aged 58 - 67 years agreed that fluoride in the public drinking water supply could assist in the prevention of tooth decay. For the 68 + years age group, the data was more equally split between agreeing and unsure, with 47% agreeing and 39% unsure (the remaining 14% not agreeing).

The proportion of respondents who were unsure whether adding fluoride to the public drinking water supply could assist in the prevention of tooth decay was usually around 20 - 30% for most age groups, as represented by the maroon columns in Figure 9. More respondents in the 68 + years age group (39%) were unsure whether adding fluoride to the public drinking water supply could assist in the prevention of tooth decay.

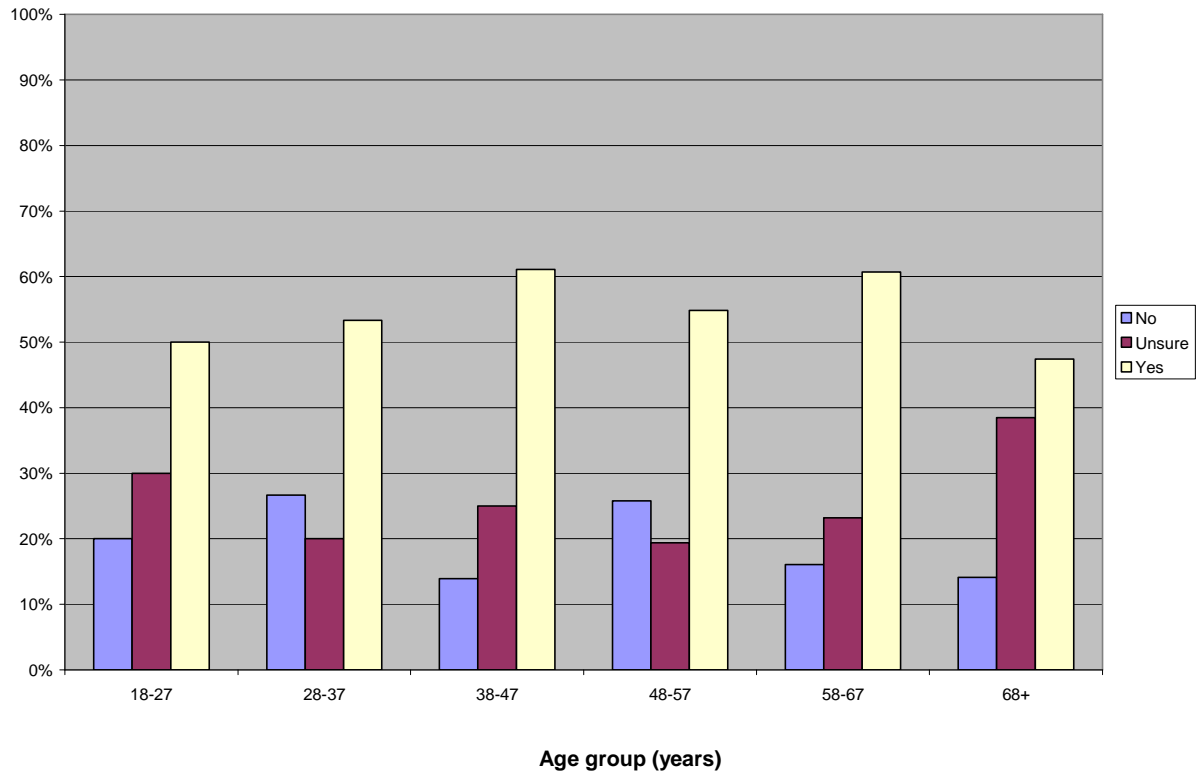
In all age groups the proportion that did not agree that adding fluoride to the public drinking water supply can assist in preventing tooth decay was uniformly lower than the proportion that agreed.

Figure 9 shows that 20% of respondents aged 18 - 27 years, 27% of respondents aged 28 - 37 years, 14% of respondents aged 38 - 47 years, 26% of respondents aged 48 - 57 years, 16% of respondents aged 58 - 67 years and 14% of respondents aged 68 years and over did not agree, as represented by the blue columns in Figure 9. The difference in proportion between those who agreed and those who did not agree was more marked than the results shown in Figure 5.

The data is in Table 10 (in Appendix C).



**Figure 9 Percentage of valid respondents and their agreement that the addition of fluoride to public drinking water supplies can help prevent tooth decay, by age group, Two Rocks**



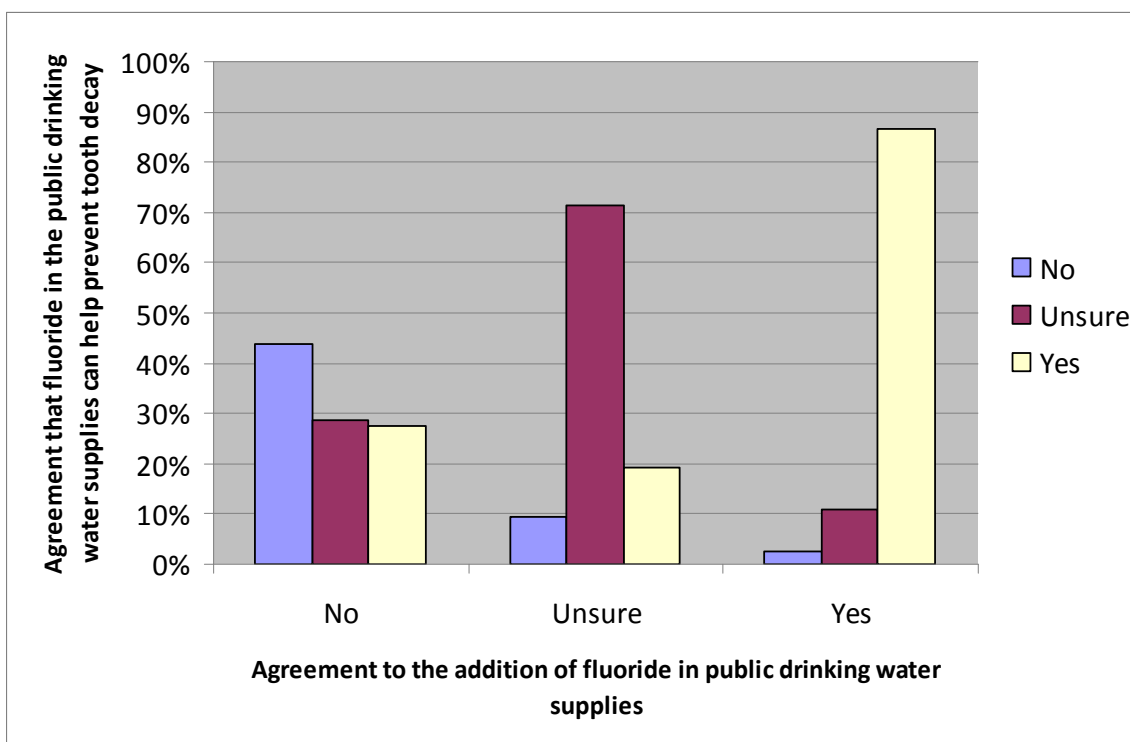
The views of respondents on whether adding fluoride to the public drinking water supply can help prevent tooth decay was significantly correlated with their agreement (or otherwise) to adding fluoride to the public drinking water supply.

Figure 10 illustrates that 87% of valid respondents who agreed to adding fluoride to the public drinking water supply agreed that doing so can help prevent tooth decay, with 11% of this group unsure and only 3% of this group not agreeing.

On the other hand, 44% of valid respondents who did not agree to adding fluoride to the public drinking water supply did not agree that doing so can help prevent tooth decay. Nevertheless, 27% of this group still agreed that adding fluoride to the public drinking water supply can help prevent tooth decay, with 29% unsure.

Most (72%) of the respondents who were unsure about adding fluoride to the public drinking water supply were also unsure whether doing so can help prevent tooth decay, with 19% agreeing and 9% not agreeing. The data is in Table 11.

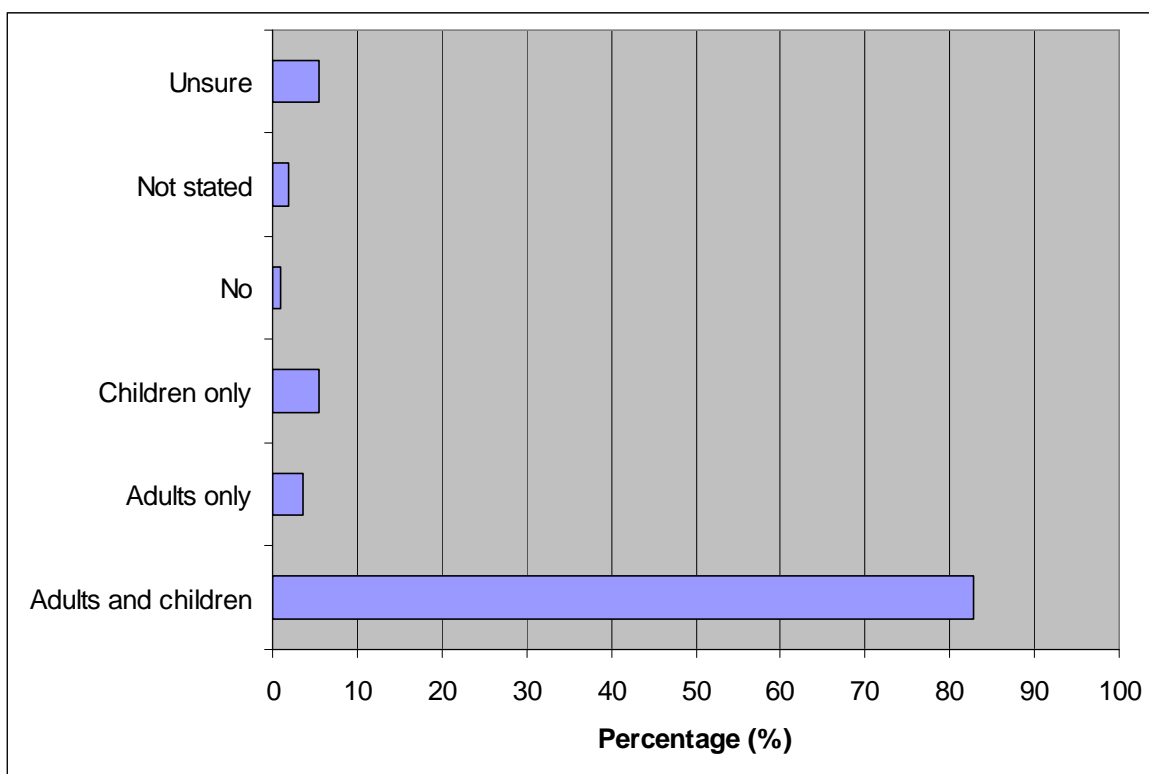
**Figure 10 Percentage of valid respondents and their agreement that the addition of fluoride to public drinking water supplies can help prevent tooth decay, Two Rocks**



Those respondents who agreed that fluoride could assist in the prevention of tooth decay were asked if they would be in favour of adding fluoride to the public drinking water supply to assist with preventing tooth decay and what groups in the community they felt would benefit.

Figure 11 illustrates that, for respondents who were in favour of fluoridation of public water supplies, the benefit was overwhelmingly seen to be for both adults and children (83%), with 5% seeing the benefit as being for children only and 5% being unsure. The data is in Table 12 (in Appendix C).

**Figure 11 Percentage of valid respondents (who agreed to fluoridation) and their perception on the benefits of the addition of fluoride in public drinking water supplies, Two Rocks**

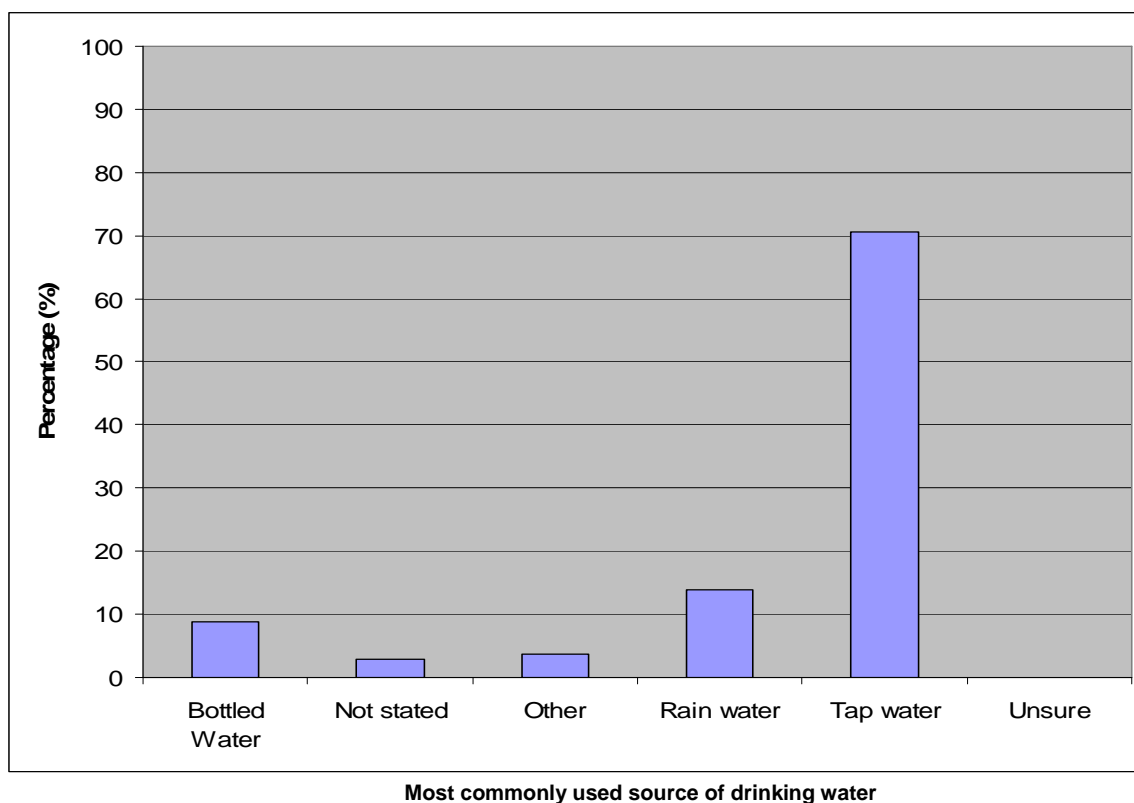


### 3.5 Drinking water source

While almost all households in the survey were connected to the Two Rocks public drinking water supply, it was also of interest to determine what proportion of respondents actually consumes water from this supply.

Figure 12 illustrates that tap water is the most common type of water consumed. Overall, 71% of valid respondents stated that they usually consumed tap water from the public drinking water supply, with 14% stating that they use rain water as their most common drinking water source and 9% stating that they use bottled water as their most common drinking water source. The data is in Table 13 (in Appendix C).

**Figure 12 Percentage of valid respondents and their most commonly used source of drinking water, Two Rocks**



Along with agreement to the addition of fluoride there was also interest in determining if the type of water consumed had an impact on the respondent's perception of the benefits (or otherwise) of adding fluoride to public drinking water supplies in assisting to prevent tooth decay.

Figure 13 illustrates that, for those who stated that they usually drink water from the public drinking water supply (i.e. 71% of respondents, as shown in Figure 12), the majority (57%) agree that the addition of fluoride to this type of water supply can assist in preventing tooth decay, with 16% not agreeing and 27% unsure.

For the other 29% of respondents, who stated that they usually drink all the other water types, 46% agreed that the addition of fluoride to the public drinking water could assist in preventing tooth decay, with the remainder being split between those who did not agree (25%) and those who were unsure (29%). The data is in Table 14 (in Appendix C).

Note that the column heights in Figure 13 need to be viewed in light of the breakdown by water source in Figure 12, where tap water from the public water supply was stated as being the most common type of water consumed. In some cases the total number of responses was slightly below 238, because not all respondents answered all parts of this question.

**Figure 13 Percentage of valid respondents and their agreement that the addition of fluoride to public drinking water supplies can help prevent tooth decay, by water source, Two Rocks**

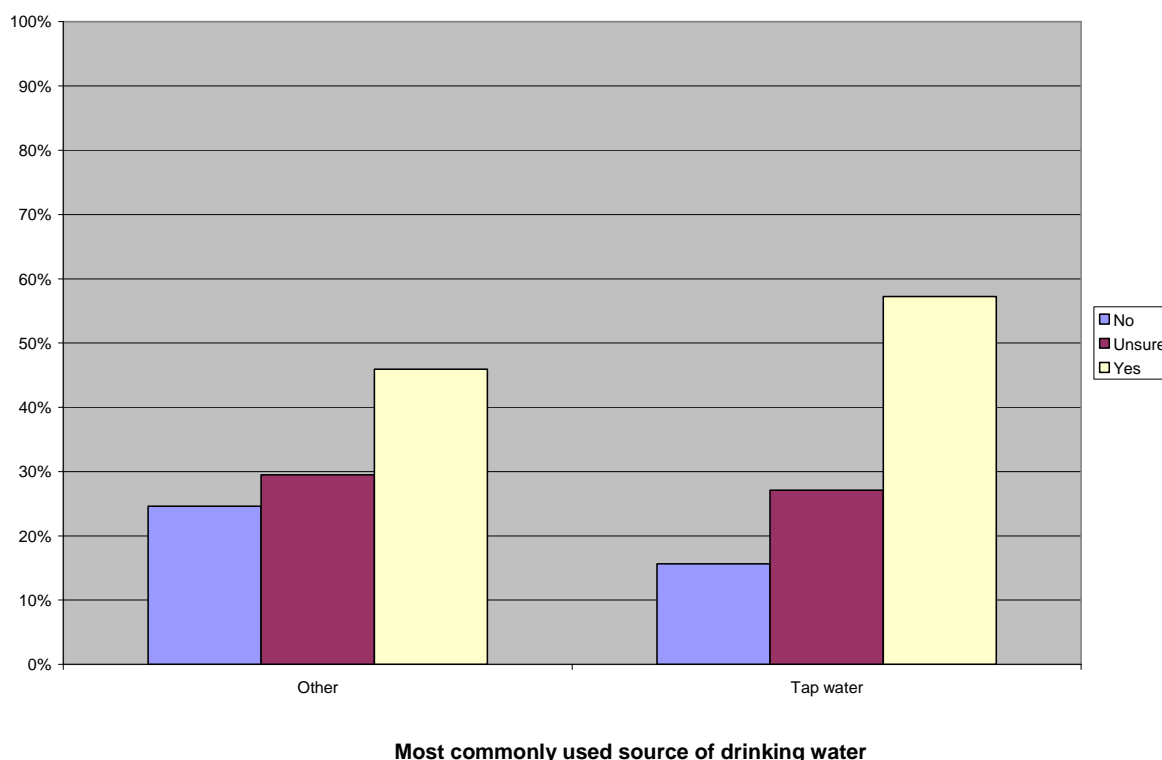


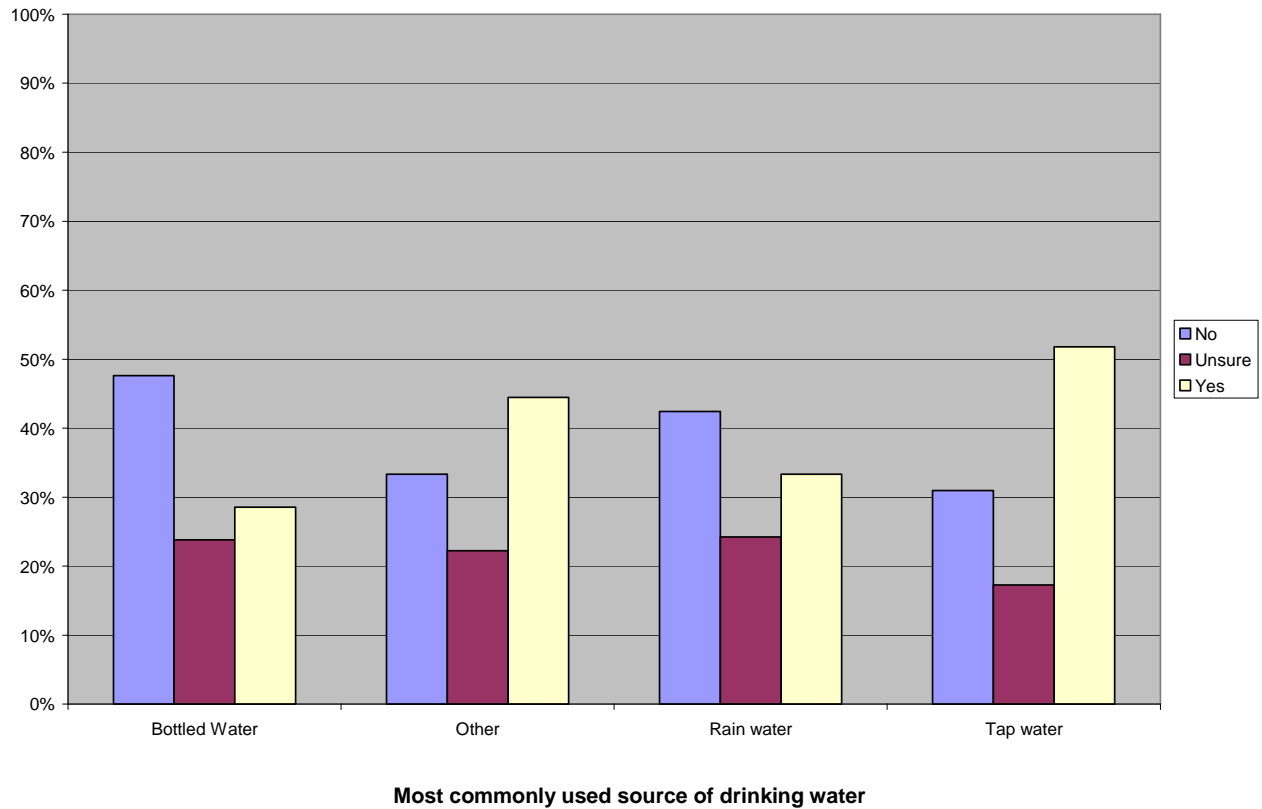
Figure 14 (overleaf) illustrates that, of the respondents who usually consumed tap water from the public water supply, approximately half agreed to the addition of fluoride to public drinking water supplies, but a greater proportion of the respondents who usually consumed bottled water or rain water did not.

The yellow columns show that 52% of those who stated that they usually drink water from the public drinking water supply, 33% of those who stated that they usually drink rain water and 29% of those who stated that they usually drink bottled water agreed to the addition of fluoride to public drinking water supplies.

The blue columns in Figure 14 show that 31% of those who stated that they usually drink water from the public drinking water supply, 42% of those who stated that they usually drink rain water and 48% of those who stated that they usually drink bottled water did not agree to the addition of fluoride to public drinking water supplies. The maroon columns indicate that a significant 17% to 24% of respondents were unsure on this matter.

The column heights in Figure 14 need to be viewed in light of the breakdown by water source in Figure 12, which indicated that tap water from the public drinking water supply was by far the predominant source, with a total of 169 respondents. The number of respondents in the bottled water, rain water and other water source categories was considerably smaller, at 21, 33 and 9 respondents respectively. The data is in Table 15.

**Figure 14 Percentage of valid respondents and their agreement to addition of fluoride to public drinking water supplies, by water source, Two Rocks**



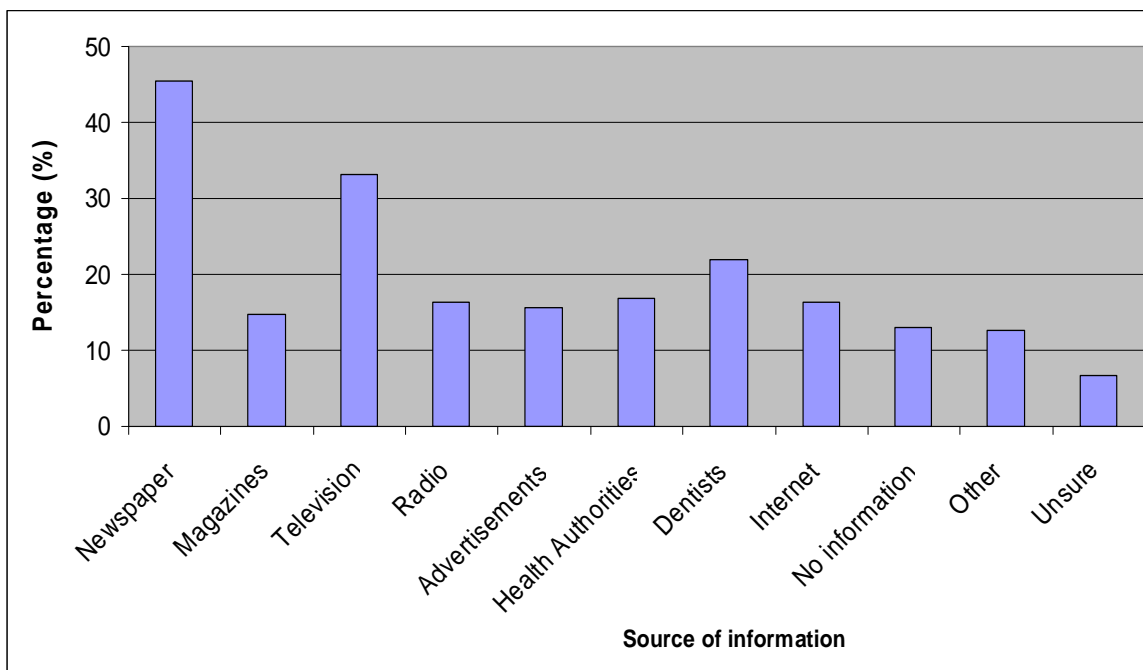
### 3.6 Information received on fluoridation

Respondents were asked where they had received information about the addition of fluoride to public drinking water supplies.

Figure 15 illustrates the main sources of information for those respondents who answered this question. Multiple responses were possible for this question. Newspapers were the most important individual source, at 45%, with “Television”, and “Dentists” being also common responses to this question, at 33% and 22% respectively, followed by “Health Authorities”, “Radio”, “Advertisements”, and “Internet”, at approximately 16% each.

As multiple responses were possible for this question, the data total exceeds 100%. The data is in Table 16 (in Appendix C).

**Figure 15 Percentage of respondents and their source of information about adding fluoride to the public drinking water supply, Two Rocks**





# Appendix A: Approach letter



Government of Western Australia  
Department of Health



049



1033

Dear Householder

## Water Fluoridation Survey

The Department of Health is inviting residents of Yanchep and Two Rocks to take part in a survey on attitudes towards the addition of fluoride to public drinking water.

The survey will take no more than a few minutes to complete. All information collected will be strictly confidential. The answers from all people who respond will be gathered together and no individual answers will be published or passed on. While you do not have to participate I hope that you do.

The results of the survey will be used to help us obtain a community view on the addition of fluoride to public drinking water supplies in Yanchep and Two Rocks.

The survey needs to be completed by an adult over the age of 18 years and returned in the enclosed reply paid envelope by the **21 OCTOBER 2011**.

If you have any queries about the survey, please call Richard Theobald on 9388 4967.

I would like to thank you in advance for your support and for participating in this important initiative.

Yours sincerely

Jim Dodds  
**DIRECTOR**  
**ENVIRONMENTAL HEALTH DIRECTORATE**  
Encs

**Environmental Health**  
All Correspondence: PO Box 8172 Perth Business Centre Western Australia 6849  
Grace Vaughan House 227 Stubbs Terrace Shenton Park WA 6008  
Telephone (08) 9388 4999 Fax (08) 9388 4955  
wa.gov.au  
ABN 28 684 750 332

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# Appendix B: Water Fluoridation Survey Questionnaire



Government of Western Australia  
Department of Health  
Public Health

## Water Fluoridation Survey 2011

0001

How to complete this form:

Answer questions by ticking only the single most appropriate option unless otherwise specified. Please provide additional comments in the space provided.

**Q1) Is your residence connected to the public water supply? (Please tick only ONE box)**

- No (Go to Q3)
- Yes (Go to Q2)
- Unsure (Go to Q2)

**Q2) Do you know whether fluoride has or has not been added to your public water supply? (Please tick only ONE box)**

- No, I don't know if fluoride has been added to the public water supply
- Yes, I am sure the public water supply has had fluoride added
- Yes, I am sure the public water supply has not had fluoride added

**Q3) Do you agree with the addition of fluoride to the public drinking water supply? (Please tick only ONE box)**

- Yes
- No
- Unsure

**Q4) Do you believe that the addition of fluoride to the public drinking water supply is safe? (Please tick only ONE box)**

- Yes
- No
- Unsure

Please turn over



**Q5) Do you believe that the addition of fluoride to public drinking water supplies can help prevent tooth decay? (Please tick only ONE box)**

- No (enter comment Q5a) (Go to Q7)
- Yes (enter comment Q5a) (Go to Q6)
- Unsure (Go to Q6)

**Q5a) Comment** \_\_\_\_\_

*[specify]*

**Q6) Would you be in favour of adding fluoride to the public drinking water supply to assist in the prevention of tooth decay? (Please tick only ONE box)**

- No
- Yes, in children only
- Yes, in adults only
- Yes, in both adults and children
- Unsure

**Q7) Where have you received information on the addition of fluoride to public drinking water supplies? Please select multiple options if applicable.**

- Newspapers
- Magazines
- Television
- Radio
- Advertisements for dental products
- Health authorities
- Dentists
- Internet
- No information/source
- Other \_\_\_\_\_ *[specify]*
- Unsure



**Q8) What is your most commonly used source of drinking water? (Please tick only ONE box)**

- Tap water from public drinking water supply
- Store bought bottled water
- Rainwater tank
- Other \_\_\_\_\_ [specify]
- Unsure

**Below are some demographic questions to help to categorise your answers**

**Q9) Are you?**

- Male
- Female

**Q10) What age group are you? (Please tick only ONE box)**

- 18-27 years
- 28-37 years
- 38-47 years
- 48-57 years
- 58-67 years
- 68 years and over

**Q11) Do you live? (Please tick only ONE box)**

- alone
- with partner/spouse only
- with partner/spouse and children
- with children only
- with friends or relatives
- other \_\_\_\_\_ [specify]

**Please turn over**



**Q12) How old is the youngest person living in your household? Select your age group if you are living alone. (Please tick only ONE box)**

- 0-10 years
- 11-20 years
- 21-30 years
- 31-40 years
- 41+ years

**Q13): How old is the oldest person living in your household? (Please tick only ONE box)**

- 11-20 years
- 21-30 years
- 31-40 years
- 41+ years

**Q14) Which of the following best describes how long you have lived in this community? (Please tick only ONE box)**

- less than one year
- 1-5 years
- 6-10 years
- greater than 10 years

**NO MORE QUESTIONS**

Thank you for taking the time to complete this survey (No. 0001).

Please return it by the **21 October 2011** in the reply paid envelope.



## Appendix C: Result tables

**Table 2 Number and percentage of valid respondents connected to the public drinking water supply, Two Rocks**

Connected to public drinking water supply	Number of valid responses	Percentage
No	4	1.7%
Yes	224	94.1%
Unsure	8	3.4%
Not stated	2	0.8%
Total	238	100.0%

**Table 3 Number and percentage of valid respondents knowing whether fluoride has or has not been added to the public drinking water supply, Two Rocks**

Knowledge of current fluoridation status of the water supply	Number of valid responses	Percentage
Don't know	145	60.9%
Not stated	4	1.7%
Sure fluoride is added	27	11.3%
Sure fluoride is not added	62	26.1%
Total	238	100.0%

**Table 4 Number and percentage of valid respondents and their agreement to adding fluoride to the public drinking water supply, Two Rocks**

Agreement to public drinking water supply fluoridation	Number of valid responses	Percentage
Yes	111	46.7%
No	81	34.0%
Unsure	45	18.9%
Not stated	1	0.4%
Total	238	100.0%

**Table 5 Number and percentage of valid respondents and their agreement to public drinking water supply fluoridation by knowledge of current fluoridation status of the public drinking water supply, Two Rocks**

Knowledge of current fluoridation status of public drinking water supply	Agreement to public drinking water supply fluoridation			Total
	Yes	No	Unsure	
Sure added	(12) 44.4%	(8) 29.7%	(7) 25.9%	(27) 100.0%
Sure not added	(33) 53.2%	(27) 43.6%	(2) 3.2%	(62) 100.0%
Not sure	(64) 44.2%	(45) 31.0%	(36) 24.8%	(145) 100.0%
Total	(109) 46.6%	(80) 34.2%	(45) 19.2%	(234) 100.0%

**Table 6 Number and percentage of valid respondents and their agreement with the addition of fluoride to the public drinking water supply, by age group, Two Rocks**

Age group	Agree with the addition of fluoride			Total
	Yes	No	Unsure	
18-27	(5) 50.0%	(0) 0.0%	(5) 50.0%	(10) 100.0%
28-37	(9) 60.0%	(4) 26.7%	(2) 13.3%	(15) 100.0%
38-47	(20) 55.6%	(10) 27.8%	(6) 16.6%	(36) 100.0%
48-57	(10) 31.3%	(14) 43.7%	(8) 25.0%	(32) 100.0%
58-67	(29) 50.9%	(19) 33.3%	(9) 15.8%	(57) 100.0%
68 +	(34) 42.5%	(32) 40.0%	(14) 17.5%	(80) 100.0%
Total	(107) 46.5%	(79) 34.3%	(44) 19.1%	(230) 100.0%

**Table 7 Number and percentage of valid respondents and their perception of the safety of fluoridation, Two Rocks**

Agrees fluoridation is safe	Number of valid responses	Percentage
Yes	107	45.0%
No	64	26.9%
Not stated	1	0.4%
Unsure	66	27.7%
Total	238	100.0%



**Table 8 Number and percentage of valid respondents and their perceived safety of the addition of fluoride to public drinking water supplies and agreement to public water supply fluoridation, Two Rocks**

Perceived safety of the addition of fluoride to public drinking water supplies	Agreement to public water supply fluoridation			Total
	Yes	No	Unsure	
Yes	(97) 90.7%	(8) 7.5%	(2) 1.9%	(107) 100.0%
No	(1) 1.6%	(61) 95.3%	(2) 3.1%	(64) 100.0%
Unsure	(13) 19.7%	(12) 18.2%	(41) 62.1%	(66) 100.0%
Total	(111) 46.8%	(81) 34.2%	(45) 19.0%	(237) 100.0%

**Table 9 Number and percentage of valid respondents and their perception of the efficacy of fluoridation, Two Rocks**

Agrees fluoridation can help prevent tooth decay	Number of valid responses	Percentage
No	42	17.7%
Yes	126	52.9%
Unsure	65	27.3%
Not stated	5	2.1%
Total	238	100.0%

**Table 10 Number and percentage of valid respondents and their agreement that the addition of fluoride to public drinking water supplies can help prevent tooth decay, by age group, Two Rocks**

Age group	Agreement that the addition of fluoride to public water supplies can help prevent tooth decay			Total
	Yes	No	Unsure	
18-27	(5) 50.0%	(2) 20.0%	(3) 30.0%	(10) 100.0%
28-37	(8) 53.3%	(4) 26.7%	(3) 20.0%	(15) 100.0%
38-47	(22) 61.1%	(5) 13.9%	(9) 25.0%	(36) 100.0%
48-57	(17) 54.8%	(8) 25.8%	(6) 19.4%	(31) 100.0%
58-67	(34) 60.7%	(9) 16.1%	(13) 23.2%	(56) 100.0%
68 +	(37) 47.4%	(11) 14.1%	(30) 38.5%	(78) 100.0%
Total	(123) 54.4%	(39) 17.3%	(64) 28.3%	(226) 100.0%

**Table 11 Number and percentage of valid respondents and their agreement to public drinking water supply fluoridation by their agreement that the addition of fluoride to public drinking water supplies can help prevent tooth decay, Two Rocks**

Agreement that the addition of fluoride to public water supplies can help prevent tooth decay	Agreement to public drinking water supply fluoridation			Total
	Yes	No	Unsure	
No	(22) 27.5%	(35) 43.7%	(23) 28.8%	(80) 100.0%
Unsure	(8) 19.0%	(4) 9.5%	(30) 71.5%	(42) 100.0%
Yes	(96) 86.5%	(3) 2.7%	(12) 10.8%	(111) 100.0%
Total	(126) 54.1%	(42) 18.0%	(65) 27.9%	(233) 100.0%

**Table 12 Number and percentage of valid respondents (who agreed to fluoridation) and their perception of the benefits of the addition of fluoride in public drinking water supplies, Two Rocks**

Perception of the benefits of the addition of fluoride	Number of valid responses	Percentage
Adults only	4	3.6%
Children Only	6	5.4%
Adults and children	92	82.9%
No	1	0.9%
Not stated	2	1.8%
Unsure	6	5.4%
Total	111	100.0%

NB – This table adds to 111.

**Table 13 Number and percentage of valid respondents and their most commonly used source of drinking water**

Most commonly used source of drinking water	Number of valid responses	Percentage
Tap water from public water supply	168	70.6%
Rain water	33	13.9%
Bottled water	21	8.8%
Other	9	3.8%
Unsure	0	0.0%
Not stated	7	2.9%
Total	238	100.0%

**Table 14 Number and percentage of valid respondents and their agreement that the addition of fluoride to public water supplies can help prevent tooth decay by water source, Two Rocks**

Most commonly used source of drinking water	Agreement that the addition of fluoride to public water supplies can help prevent tooth decay			Total
	No	Unsure	Yes	
Other	(15) 24.6%	(18) 29.5%	(28) 45.9%	(61) 100.0%
Tap	(26) 15.7%	(45) 27.1%	(95) 57.2%	(166) 100.0%
Total	(41) 18.1%	(63) 27.7%	(123) 54.2%	(227) 100.0%

**Table 15 Number and percentage of valid respondents agreement to the addition of fluoride to public drinking water supplies by water source, Two Rocks**

Most commonly used source of drinking water	Agreement to public drinking water supply fluoridation			Total
	No	Unsure	Yes	
Tap water	(52) 31.0%	(29) 17.3%	(87) 51.8%	(168) 100.0%
Rain water	(14) 42.4%	(8) 24.3%	(11) 33.3%	(33) 100.0%
Bottled water	(10) 47.6%	(5) 23.8%	(6) 28.6%	(21) 100.0%
Other	(3) 33.3%	(2) 22.2%	(4) 44.4%	(9) 100.0%
Total	(79) 34.2%	(44) 19.0%	(108) 46.8%	(231) 100.0%

**Table 16 Percentage of respondents and their source of information about adding fluoride to the public drinking water supply, Two Rocks**

Information Source	Newspaper	Magazines	Television	Radio	Dental Products Ads	Health Authorities	Dentists	Internet	No information	Other	Unsure
Counts	108	35	79	39	37	40	52	39	31	30	16
Percent	45.4%	14.7%	33.2%	16.4%	15.5%	16.8%	21.8%	16.4%	13.0%	12.6%	6.7%

Total counts for this question: 506 responses from 238 respondents

Multiple responses were possible for this question.

Percentage sum is a percentage of respondents (not responses) and therefore exceeds 100.

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## Appendix D: Respondents' comments

All comments are presented verbatim (apart from spelling corrections).

- Granddaughter lived in Two Rocks since birth, is now 6, new teeth pitted. Dentist advises this is caused by lack of fluoride.
- Grew up in Kalgoorlie-Boulder where fluoride is added, had little problem with tooth decay.
- Publicity has been given to the benefits of fluoride as such.
- When I was young it was proven there was less decay with the fluoride.
- That's what I understand.
- It has been used in other areas for years.
- We understand that fluoride was added to public water, Australia wide. We have wonderful strong teeth.
- Used overseas.
- In children only.
- Yes, but concerned about levels for my young children.
- It helps prevent decay only in children therefore it is up to the parents to give fluoride tablets and toothpaste.
- I'm 67 years old and believe anything to help with dental health is necessary and not an option.
- I have child born at Quinns and I up here the one in Yanchep has rotting teeth and the other doesn't and now I have a third + am concerned about her teeth.
- Encourage people to brush their teeth. Nothing worst than dermical taste + smalls in drinking water [sic].
- Parents responsibility - buy tablets.
- No I do not support this theory we get far more decay from processed foods than drinking water.
- Plenty of evidence to suggest fluoride helps tooth decay, but other to suggest harmful to health in other ways + people should have freedom to chose.
- I've always been told by authorities that it does just that, I've had very little decay.
- Test and research have proven to be advantageous + safe in other countries for both raising and adding the correct level.
- Yes but it is only one factor in preventing decay.
- Don't intake enough and doesn't spend its time in your mouth anyway.
- Believe can assist in the prevention of tooth decay.
- Recommended by dentist.
- I'm 32 and have never had a filling due to fluoride in tap water an good oral care.
- It works.
- Yes it's very important especially in young children with growing teeth.

- As former residents in England where fluoride is in water we know the positives.
- Water needs to be tested to ensure no more than 1 mg per litre is present, to prevent dental fluorosis or any other as yet unknown adverse effects. I would like to be informed on the level before and after process of adding any chemical to drinking water.
- Lives in Two Rocks 3 years, I have seen huge amount of decay in locals.
- Lived in Sydney until 1992 - fluoridated water - my parents had dentures - I didn't! (in the A60's I believe).
- For children's health. This could be given by other means ie. Not contaminating the whole of the water supply.
- Fluoride is in toothpaste.
- I've had it elsewhere and interstate and it is obvious it makes a difference.
- Fluoride is a poison banned in many countries.
- Potential for overdose (mechanical or human error) accumulates in body. Subject in certain concerns. Downs syndrome + thyroid problems in later life.
- I believe adequate diet is necessary only.
- There is enough in toothpaste! Fluoride is a poison.
- It may prevent tooth decay at a drastic cost to other horrible health issues if with infection.
- What is the science on it long term.
- Grew up with fluoride many cavities due to genetics.
- Over the years we have had to pay for a dentist to install fluoride caps to prevent decay and the use of a higher-fluoride toothpaste was needed.
- I've heard and read different from creditable local and overseas sources. Also go on the internet.
- Too many other side effects to be beneficial.
- Cannot comment don't have any teeth.
- Our children have drunk fluoride water and have no tooth problems over 40-50 yrs.
- I dislike the fact of anything added into my water.
- Recent media reports question the long term benefits.
- I believe however that this is a very ad hoc means of administering fluoride to children. Issue of free fluoride tablets would be more efficient. Issued only to parents who request then and will therefore insure they are taken.
- Thalidomide comes to mind.
- I do know that people who had fluoride added to water have good teeth but how many are forced. What's wrong with tablets - you know, free choice!
- The quality of young people teeth since fluoridation speak for itself.
- But so can eating less sugar.
- Possibly did hear somewhere that evidence shows there is less tooth decay where fluoride is added to the water.
- But the taste is horrible.

- Grew up in Germany which has no fluoridation of drinking water yet shows the same decline in tooth decay over the past 60 years as Australia.
- Dentist put me on higher concentrate - 5000 ppm fluoride professional toothpaste.
- Scientifically proven as a human health hazard.
- I believe fluoride to be detrimental to one's general health.
- Cleaning teeth correctly is more important than adding an additive to water.
- My mother gave me fluoride tablets as a child. Don't believe everyone needs it.
- I have seen no definitive studies with proof.
- Silicofluorides are non biodegradable hazardous waste products which can contain both lead and arsenic and are more toxic than either.
- Since we have moved up here 19mths ago my 9 year old had 3 fillings. My husband and myself have never had any.
- But we don't need to get it through the water supply get enough elsewhere.
- It's the damage to the other organs that is the problem.
- Countries with no fluoride in their water do not show more signs of tooth decay than countries who so, it's a poison!
- The government of the day also made milk available to primary students long gone!
- Fluorosis has destroyed my teeth, whilst I remained to have major cavities my whole life. Fluoride is a neurotoxic that causes brain impairment, cancer and ironically tooth and bone damage. Refer to TRIM for further comments.
- No proof.
- What's the point of having teeth when your being slowly poisoned.
- I believe research & past results (including my own children); prove decay is reduced.
- Less lollies, better brushing of teeth will prevent decay.

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Delivering a **Healthy WA**

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in alternative formats on request for a person with a disability.