

State of Florida



Public Service Commission

-M-E-M-O-R-A-N-D-U-M-

DATE: June 17, 1998
TO: Representative Mike Fasano
 F. Marshall Deterding, Esquire
 James Goldberg
 Office of Public Counsel (McLean)
FROM: Charles H. Hill, Director, Division of Water and Wastewater *CHH*
RE: Survey Responses In Docket No. 960545-WS, Investigation Into Quality of Service
 Provided By Aloha Utilities, Inc., Seven Springs Division

Attached please find a copy of the requested staff workpapers that provide a preliminary tabulation of customer responses to the Aloha survey. These workpapers are a compilation of the responses only and contain no analysis of the data.

CHH/pd

Attachment

cc: Chairman Julia Johnson
 Commissioner Susan Clark
 Commissioner Terry Deason
 ✓ Division of Records and Reporting (Bayo)
 Division of Water and Waster (Crouch, McRoy, Starling)
 Division of Legal Services (Jaeger)

- ACK _____
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 PPS-D-RECORDS/REPORTING

Preliminary Aloha Survey Tabulation

Introduction

Due to continuing customer complaints about poor water quality at Aloha Utility, Inc.'s Seven Springs water system, the Commission ordered Aloha to survey its Seven Springs water customers about the quality of their water. A copy of this survey is provided in Attachment 1. Aloha sent 8,597 surveys to its Seven Springs customers and the survey queried customers about the following subjects:

- A. Water Discoloration
- B. Water Odor and Taste
- C. Water Pressure
- D. Willingness to Pay Increased Rates
- E. Demographics and other Information

The Commission received 3,706 (43%) survey responses. The Commission staff has input each of these responses into a database. The information and charts presented in this report are entirely based upon this database. Since the staff has not yet had an opportunity to completely verify the accuracy of this database, the information and charts are preliminary and are subject to change.

Discolored Water (Charts 1-8)

Of the 3,585 customers who responded to survey question one, 2625 (73%) indicated that they have observed the discolored water during the past two year. Of the 2,625 customers who observed discolored water, 1,689 (64%) observed either black or grey water. Additional charts summarize the customer responses to questions 1b, 1d, 1e, 1f, 1g, and 1h.

Taste and Odor (Charts 9-12)

Of the 3,398 customers who responded to survey question two, 2,415 (71%) indicated that the odor and taste was unacceptable. Additional charts summarize the customer responses to questions 2a and 2b.

Pressure (Chart 13)

Of the 3,508 customers who responded to survey Question three, 1989 (56.4%) indicated that the pressure was acceptable.

Willingness to Pay Increase Rates (Charts 14-15)

Of the 3,488 customers who responded to survey question four, 2921 (83.7%) indicated that they were unwilling to pay higher water rates.

Demographics (Charts 16-19)

Of the 2,147 customers who indicated that they had a home water treatment unit, 1,613 indicated that they have a water softener.

Charts 17 and 18 summarize the number of customer responses for each subdivision within Aloha's Seven Springs service area.

WATER QUALITY SURVEY

In connection with recent proceedings before the Florida Public Service Commission, the Commission found that the quality of water provided by Aloha Utilities, Inc., meets applicable federal and state drinking-water standards. However, during those proceedings, the Commission heard complaints from numerous customers about the color and odor of the water, and about low water pressure. By Order No. PSC-97-1512-FOF-WS, the Commission directed the utility to conduct a survey of its customers concerning the level of customer satisfaction with water quality as relates to odor, taste, pressure and clarity (color).

The survey response should be returned to the Public Service Commission for processing and evaluation. The Commission and the utility will use this survey to aid them in determining what actions, if any, should be undertaken. It is imperative that you accurately respond to all applicable questions and return the survey whether you are satisfied or dissatisfied with the current level of service. Returning the completed survey will assist in a determination of Aloha's quality of service. If you do not return the survey, it will be presumed by staff to mean you are satisfied with the quality of water service you currently receive.

Once you have completed the survey, please mail it in the attached self-addressed stamped envelope to:

CHARLES H. HILL, DIRECTOR
RE: WATER QUALITY SURVEY IN DOCKET NO. 960545-WS
DIVISION OF WATER AND WASTEWATER
FLORIDA PUBLIC SERVICE COMMISSION
2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FL 32399-0850

Please return only one survey per billing location. All responses should apply only to the location billed for water service and SHOULD BE RETURNED to the above address NO LATER THAN APRIL 24, 1998.

If you have any questions about the survey, you may contact the Commission Staff set forth below:

Ralph R. Jaeger, Senior Attorney, 850-413-6234
John Starling, Staff Engineer, 850-413-6952
James McRoy, Staff Engineer, 850-413-7009

WATER QUALITY SURVEY

Name: _____
Address: _____
Phone Number: _____
Signature: _____
Subdivision: _____

1. In the last 24 months, have you observed discolored water in your home or business?

- a. Yes
b. No

If yes, please respond to questions 1a through 1j. Otherwise, skip to question 2.

1a. Which color best describes your water.

- | | | | |
|-----------------------------|-------|-----------------------------|--------------------------------|
| a. <input type="checkbox"/> | Black | e. <input type="checkbox"/> | Blue |
| b. <input type="checkbox"/> | Grey | f. <input type="checkbox"/> | Green |
| c. <input type="checkbox"/> | Brown | g. <input type="checkbox"/> | Milky white |
| d. <input type="checkbox"/> | Red | h. <input type="checkbox"/> | Other (Please describe): _____ |

1b. Where in the home or business have you observed the discolored water? (Check all that apply.)

- | | | | |
|-----------------------------|------------------------|-----------------------------|--------------------------------|
| a. <input type="checkbox"/> | Kitchen | e. <input type="checkbox"/> | Spare Bathroom (Tub) |
| b. <input type="checkbox"/> | Master Bathroom (Tub) | f. <input type="checkbox"/> | Spare Bathroom (Sink) |
| c. <input type="checkbox"/> | Master Bathroom (Sink) | g. <input type="checkbox"/> | Toilet tank(s) |
| d. <input type="checkbox"/> | Laundry Room | h. <input type="checkbox"/> | Other (Please indicate): _____ |

1c. Where in the home or business is the discoloration most noticeable?

- a. Kitchen
- b. Master Bathroom (Tub)
- c. Master Bathroom (Sink)
- d. Laundry Room
- e. Spare Bathroom (Tub)
- f. Spare Bathroom (Sink)
- g. Toilet tank(s)
- h. Other (Please indicate): _____
- i. Can't tell where it is most noticeable

1d. When did you first observe the discoloration?

- a. Prior to 1990
- b. Between 1990 and 1994
- c. In 1995 (Please indicate the month): _____
- d. In 1996 (Please indicate the month): _____
- e. In 1997 (Please indicate the month): _____

1e. Have you noticed any improvement in the past twelve months?

- a. Yes
- b. No

1f. Which of the following apply?

- a. The discoloration appears in hot water only.
- b. The discoloration appears in cold water only.
- c. The discoloration appears equally in both hot and cold water.
- d. The discoloration appears in both hot and cold water but is worse in the hot water.
- e. The discoloration appears in both hot and cold water but is worse in the cold water.

1g. How often do you experience discoloration problems?

- a. Daily
- b. Weekly
- c. Monthly
- d. Other (Please indicate): _____

1h. When you experience incidents of discolored water, how long is the duration of the discoloration?

- a. Less than one minute
- b. Between one and five minutes
- c. Between five and fifteen minutes
- d. Between fifteen minutes and one hour
- e. Longer than one hour

1i. Is the discoloration worse if the fixture has not been used for two days or more?

- a. Yes
- b. No

2. In the past twelve months, have you found the odor and taste of the water delivered to your home or business acceptable?

- a. Yes
- b. No

If no, please respond to questions 2a and 2b. Otherwise, skip to question 3.

2a. Please describe the odor.

- a. Rotten Egg (Hydrogen sulfide)
- b. Chlorine
- c. Musty
- d. Other (Please describe): _____

2b. How often do you notice the unpleasant taste or odor?

- a. Daily
- b. Weekly
- c. Monthly
- d. Other (Please indicate how often): _____

3. In the last twelve months, have you found the pressure of the water delivered to your home or business to be acceptable?

- a. Yes
- b. No

If no, please respond to questions 3a through 3c. Otherwise, skip to question 4.

3a. When do you typically experience pressure problems?

- a. Between 6 am - 10 am
- b. Between 10 am - 4 pm
- c. Between 4 pm - 8 pm
- d. Between 8 pm - 6 am

3b. How often do you experience pressure problems?

- a. Daily
- b. Weekly
- c. Monthly
- d. Other (Please indicate): _____

3c. When you experience low pressure, what is the length of time it lasts?

- a. Less than one hour
- b. One hour to two hours
- c. Two hours to three hours
- d. More than three hours

4. Would you be willing to pay increased rates to improve the water quality?

- a. Yes
- b. No

If yes, please respond to question 4a. Otherwise, skip to question 5.

4a. How much of an increase in your water bill would you be willing to pay for improved water quality?

- a. 0%-50%
- b. 50%-100%
- c. 100%-200%
- d. 200%-300%
- e. Greater than 300%

6. Which of the following best describes your billing location.

- | | | | | | |
|----|--------------------------|---------------------|----|--------------------------|-----------------|
| a. | <input type="checkbox"/> | House | c. | <input type="checkbox"/> | Townhouse |
| b. | <input type="checkbox"/> | Apartment | f. | <input type="checkbox"/> | Condominium |
| c. | <input type="checkbox"/> | Manufactured Home | g. | <input type="checkbox"/> | Office/Business |
| d. | <input type="checkbox"/> | Duplex or Triplexh. | | <input type="checkbox"/> | Other: _____ |

5. When was your home or business constructed?

- a. Prior to 1975
- b. 1975 to 1980
- c. 1981 to 1985
- d. 1986 to 1990
- e. 1991 to 1995
- f. 1996 to present
- g. Don't know

7. How long have you lived in your home or operated the business?

- a. Less than one year
- b. One year to three years
- c. Three years to five years
- d. Five years to ten years
- e. More than 10 years

8. What is the approximate living area of your home or size of your business?

- a. 1,000 sq. ft or less
- b. From 1,001 to 1,500 sq. ft.
- c. From 1,501 to 2,000 sq. ft.
- d. From 2,001 to 3,000 sq. ft.
- e. From 3,001 to 4,000 sq. ft.
- f. Greater than 4,000 sq. ft.

9. How many people live in your home?

- a. One
- b. Two
- c. Three
- d. Four
- e. Five or more
- f. Not applicable

10. On average, how much time during the year are you away from home?

- a. Two weeks or less
- b. More than two weeks but less than one month
- c. More than one month but less than three months
- d. More than three months but less than six months
- e. More than six months
- f. Not applicable

11. How many bathrooms does your home or business have?

- a. 1
- b. 1½
- c. 2
- d. 2½
- e. 3 or more

12. What type of water system piping is in your home or business? [Please note that many homes have PVC piping for undersink drains which you should not consider in answering the question.]

- a. All Copper
- b. All CPVC
- c. Both CPVC and copper
- d. Other (Please indicate): _____
- e. Don't know

13. Have you ever used a home water treatment unit or water softener in your home or business?

- a. Yes
- b. No
- c. Don't know

13a. If the answer to 13 is yes, please identify the type of water treatment unit.

- a. Water Softener
- b. Reverse Osmosis
- c. Carbon Filtration
- d. Other (Please identify): _____
- e. Don't know

14. Does your home or business have an underground lawn sprinkler system?

- a. Yes
- b. No

14a. If yes, how is water supplied to that system?

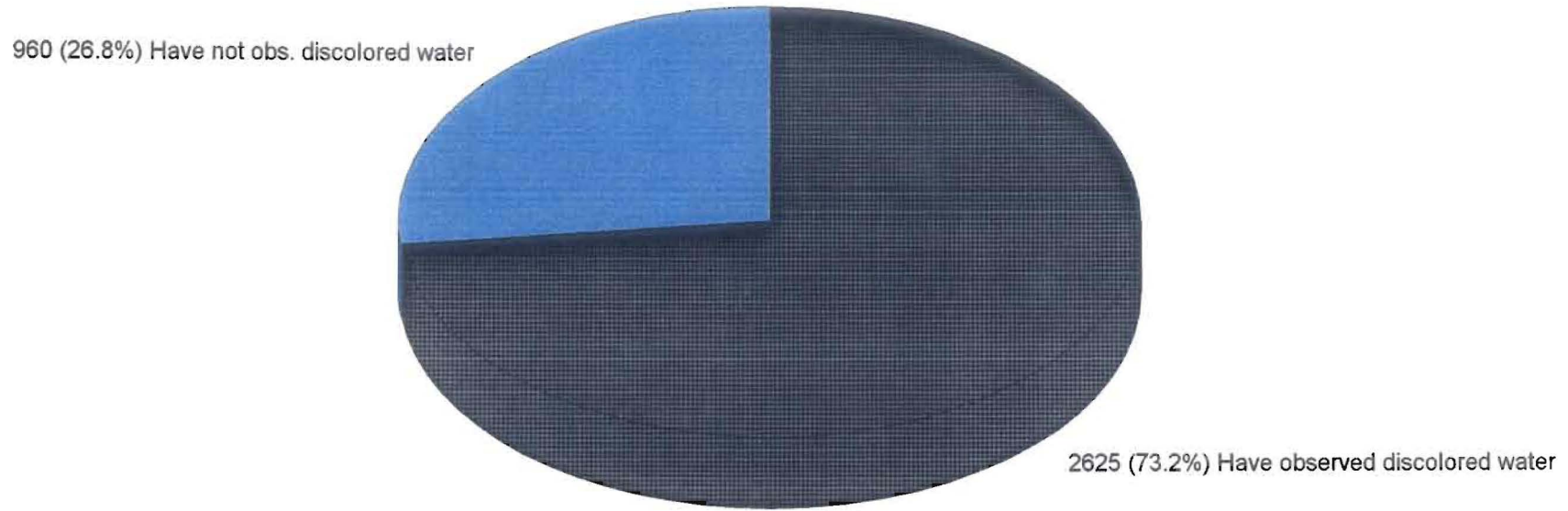
- a. Aloha Utilities
- b. Private well
- c. Other (Please identify): _____
- d. Don't know

15. At what temperature is your hot water heater typically set?

- a. 120-130 degrees (Low)
- b. 131-140 degrees (Medium)
- c. 141-150 degrees (High)
- d. Greater than 150 degrees (Maximum)
- e. Don't know

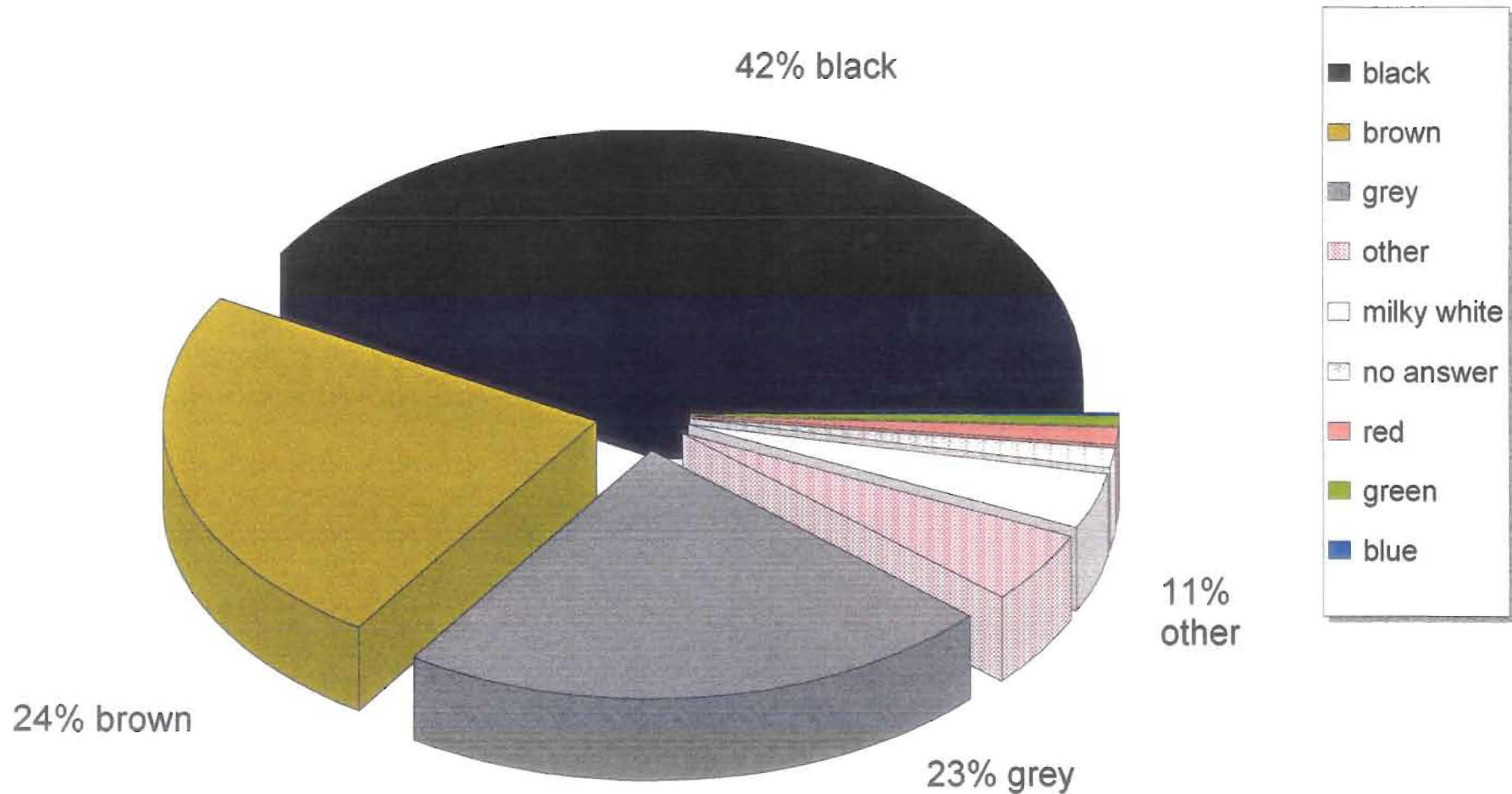
16. Please provide any additional comments or concerns you may have regarding Aloha's water quality?

Have You Observed Discolored Water In The Past 24 Months?



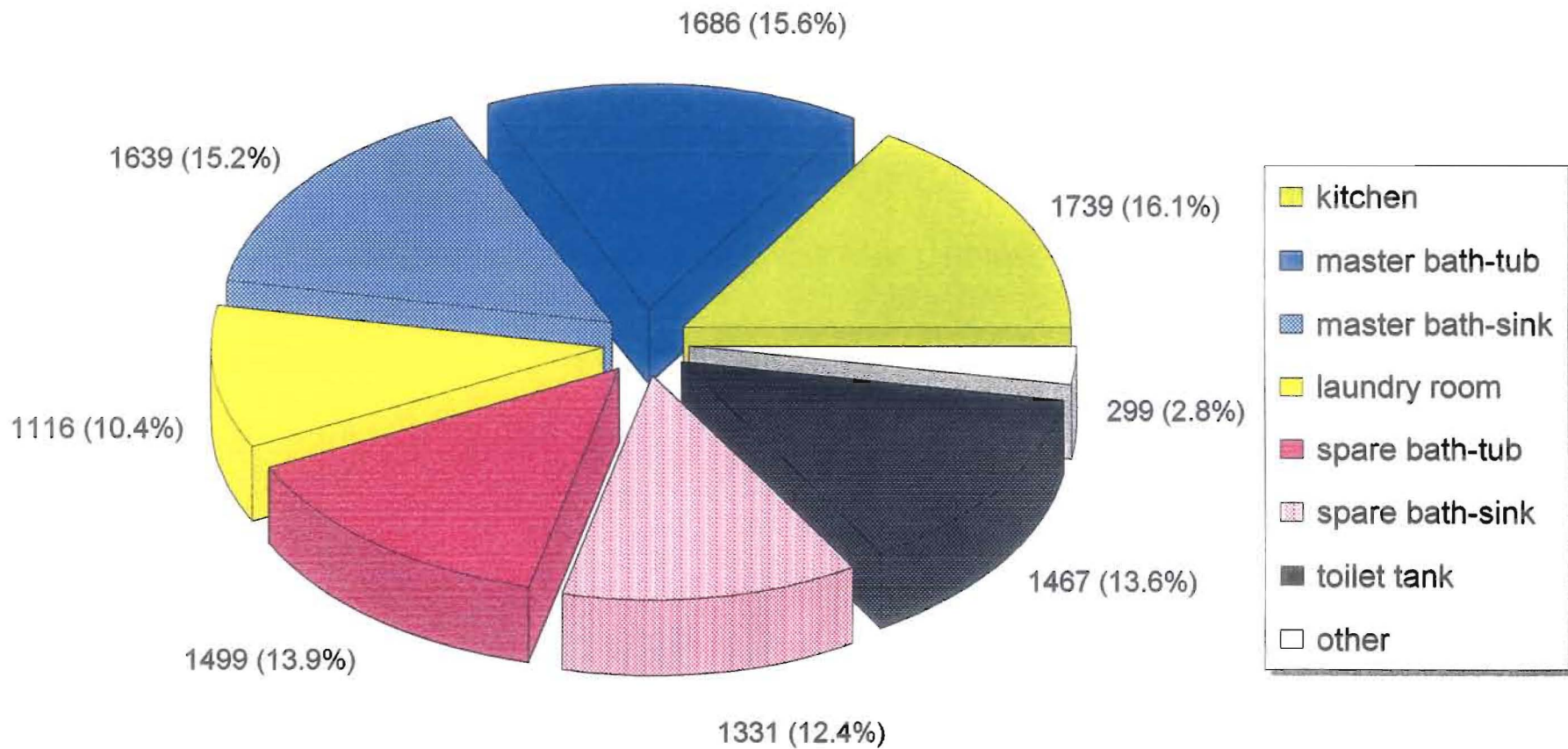
Note: 3,585 responded to this question.

Color of Water



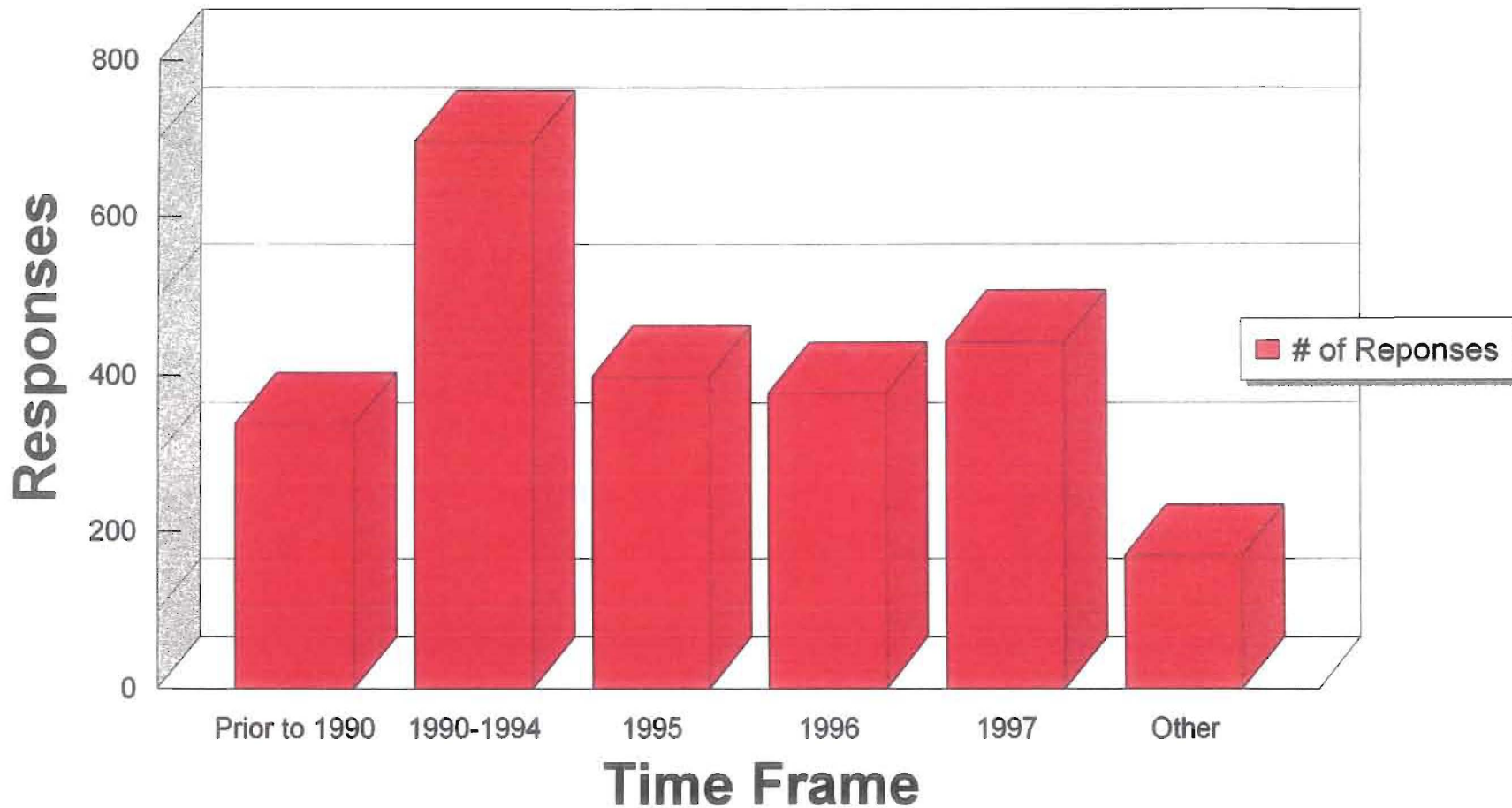
Note: 3,706 responded to this survey. Of those, 2625 (71%) observed colored water. Of those observing colored water, 1,689 claimed either black or grey water (64%).

Location of Discolored Water



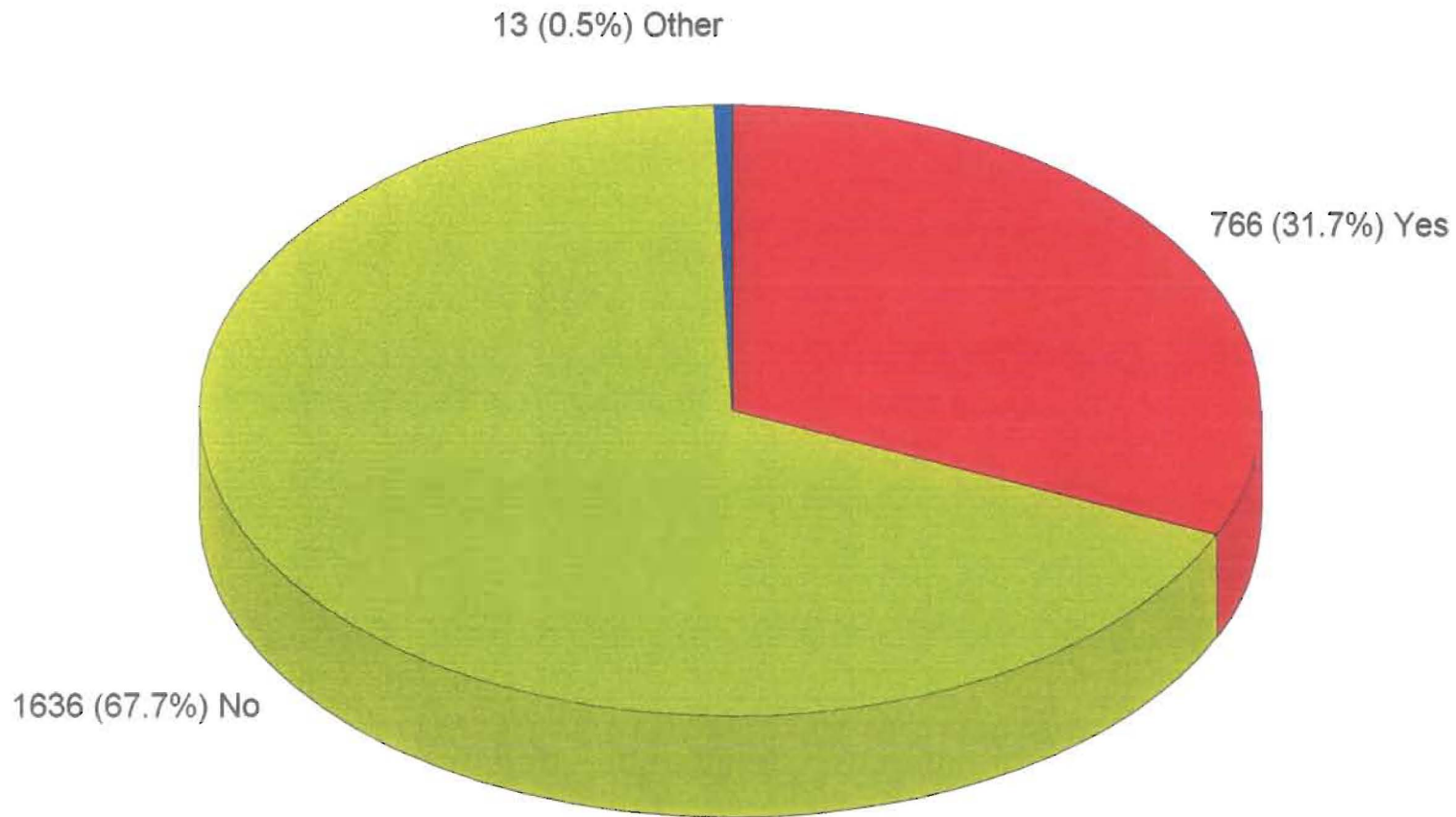
Note: 10,776 "citings" of locations of discolored water were reported.

First Observation of Discoloration



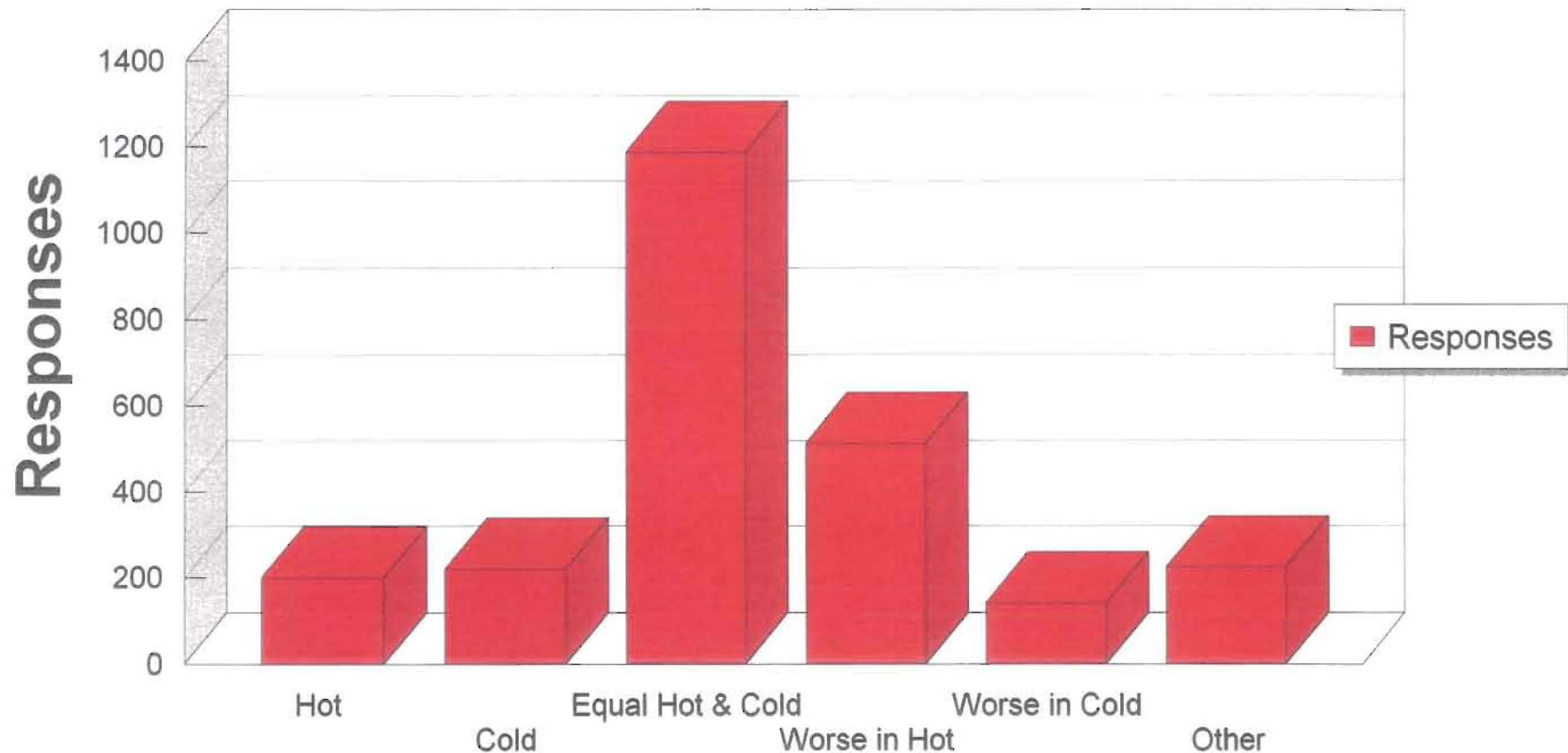
Note: 2,420 responded to this question. Approximately 400 respondents per year have "first observed" this problem for each of the years 1995, 1996, and 1997.

Has The Color Improved In The Past 12 Months



Note: 2,415 ratepayers responded to this question. By a margin of two to one, they claimed the discoloration problem has not improved in the past twelve months.

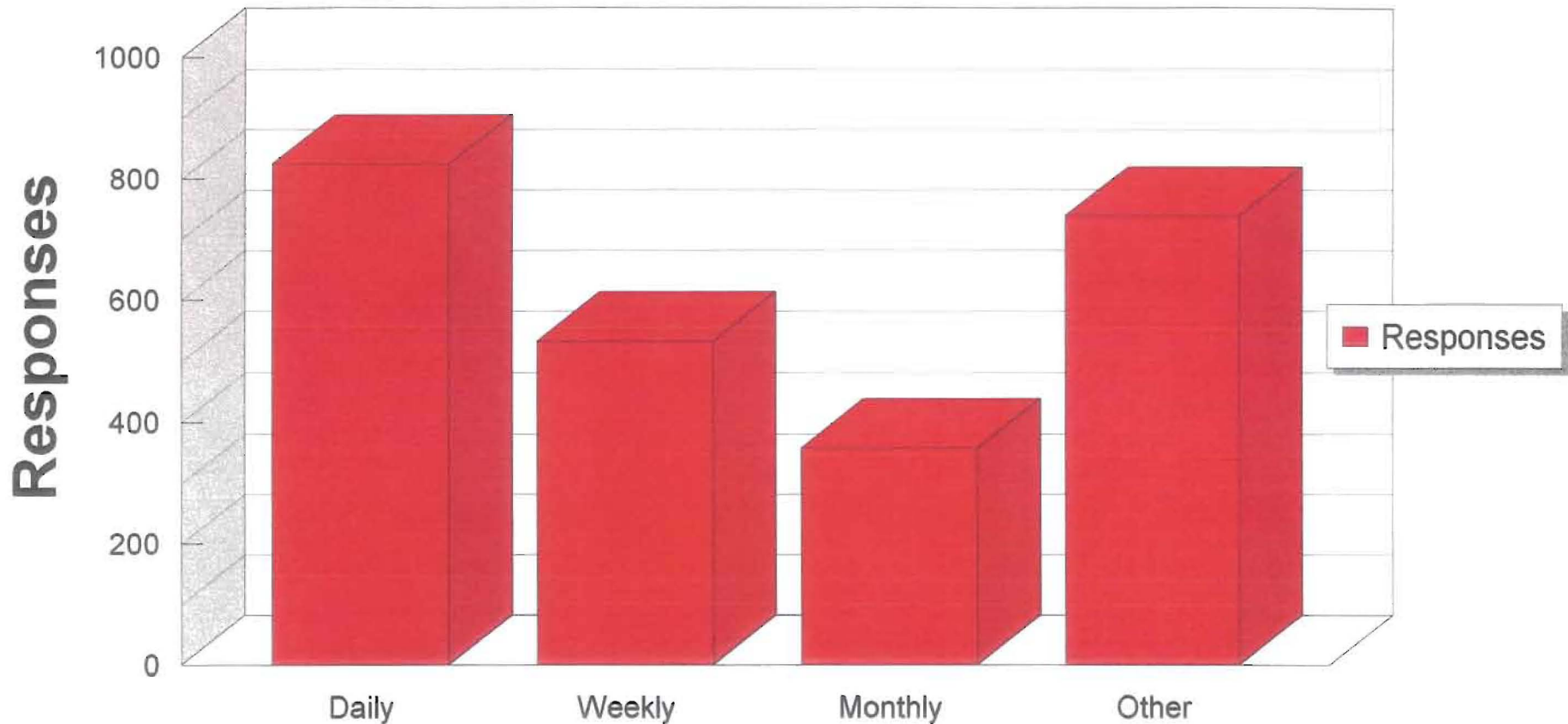
Cold vs. Hot Water



Hot vs. Cold Water and Discoloration

Note: 2,478 ratepayers responded to this question. Of those responding, 48% observed that the discoloration problem was the same in either hot or cold water.

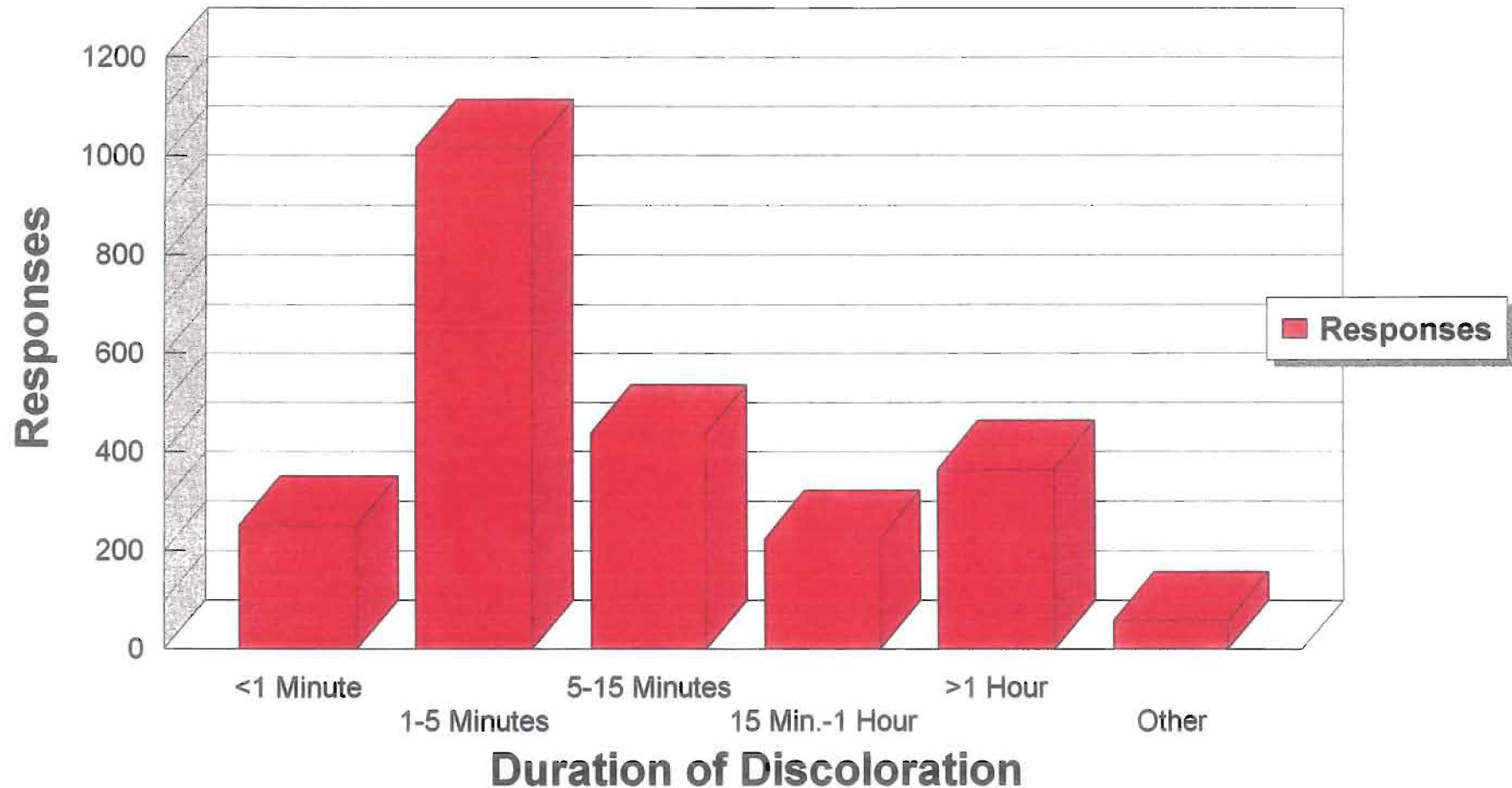
How Often Is Discoloration Noticed



Hot vs. Cold Water and Discoloration

Note: 2,453 responded to this question and 825 mentioned seeing discolored water on a daily basis (34%). Of the total population of the survey (8,577), 1,715 (20%) claimed a discoloration problem on either a daily, weekly or monthly basis.

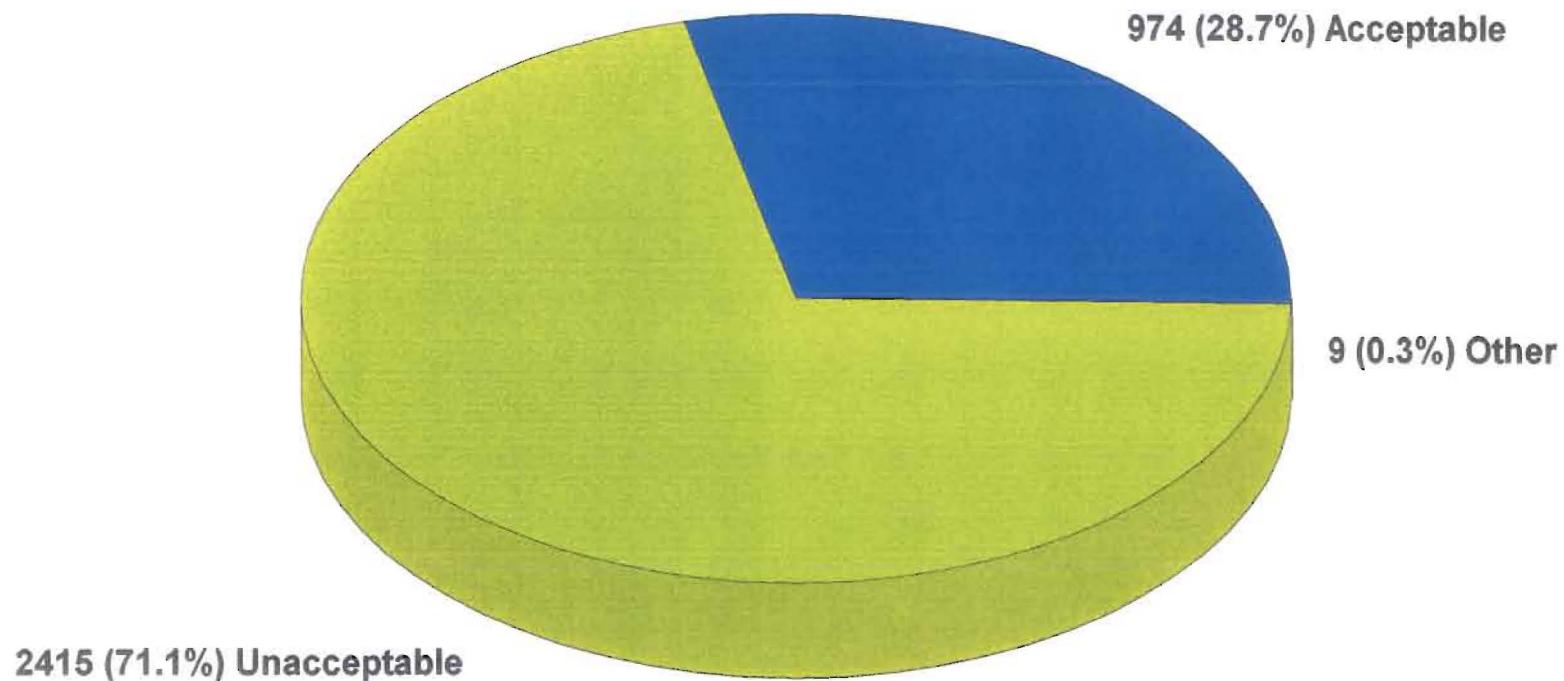
Duration of Discoloration



Note: 2,344 responded to the question regarding the duration of colored water. Of the affirmative responses to this question, 1,015 (43%) claimed the duration of discoloration is between 1 and 5 minutes.

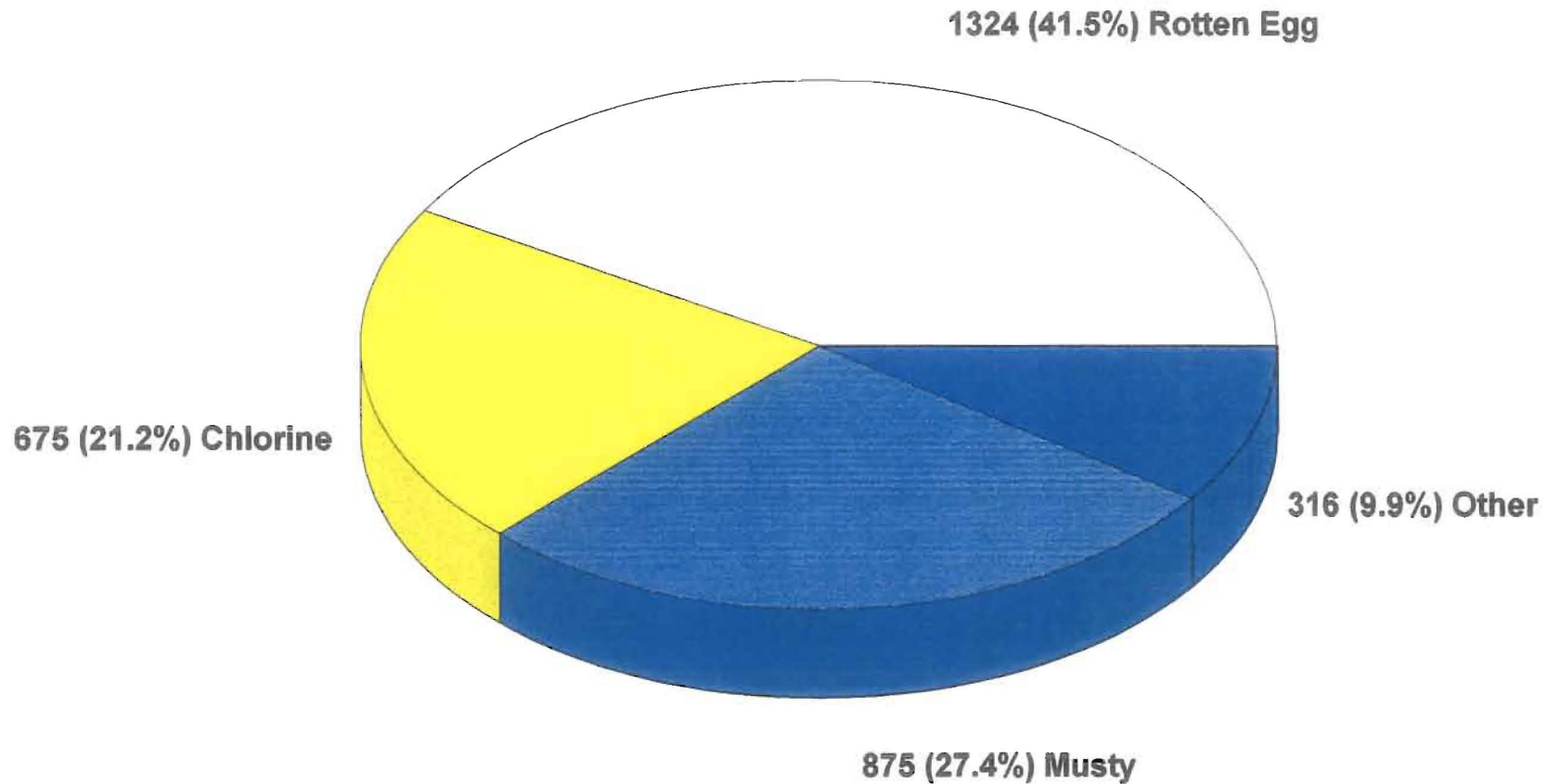
Have The Odor And Taste Been Acceptable

In The Past 12 Months



Note: 3,398 ratepayers responded to this question. The ratio was over 2 : 1 for those observing that the water odor and taste has been unacceptable in the past twelve months.

Description of the Odor



Note: 3,190 responded to this question. See attached page detailing selected answers for the "other" category.

OTHER ODORS REPORTED IN SURVEY

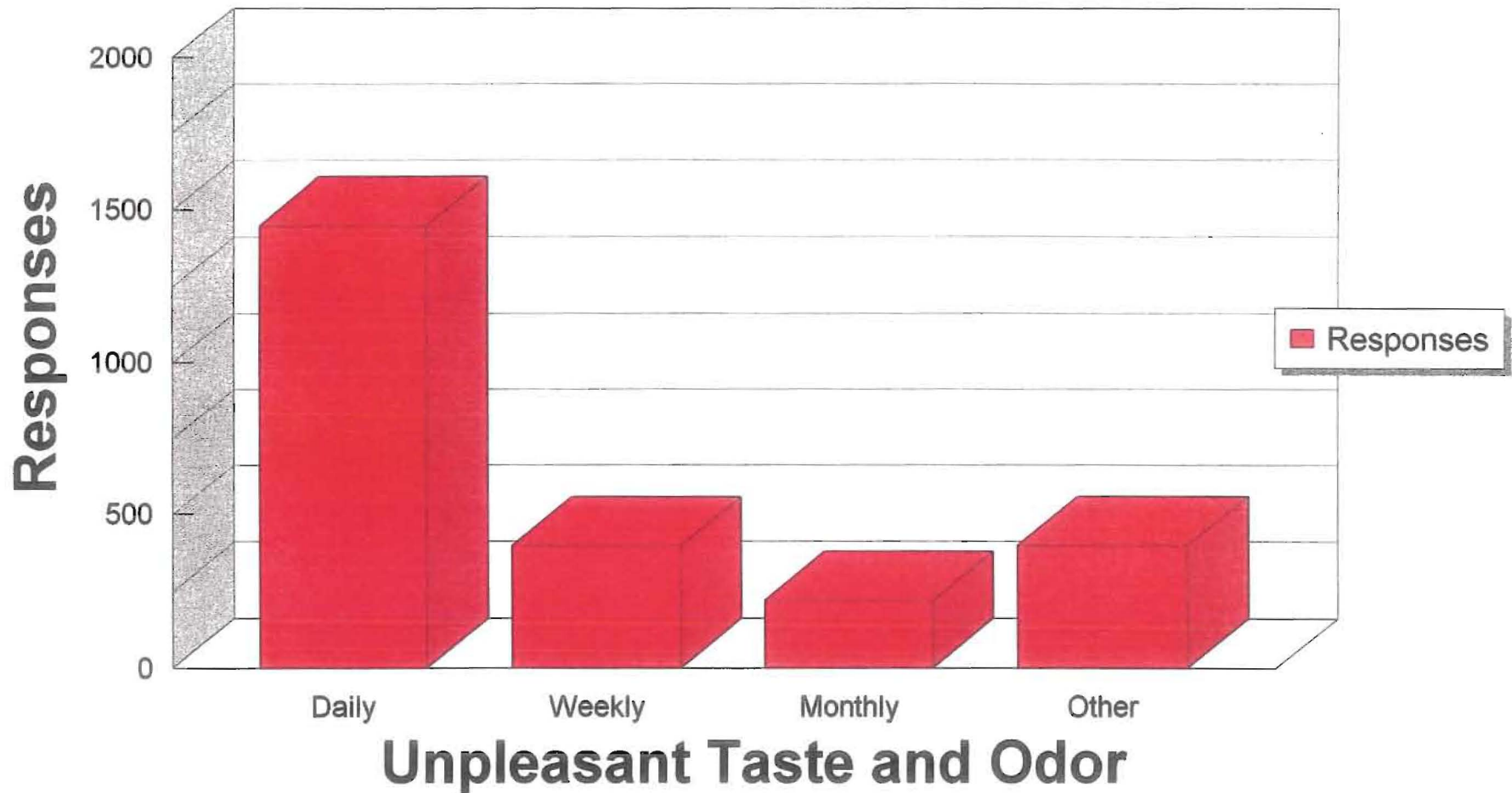
ACID
BITTER
BLACK WATER
BLEACH
BURN NOSE
BURNING METAL
CHEMICALS
CONCRETE
DECADED WOOD
DIRTY SOCKS
DOG
EARTHY
FISHY
FOUL
FOWL

FUNNY ODOR
GARBAGE
GARLIC
GASOLINE
GOOEY BLACK
GREASY
GROSS
HAIR BURNING
HORRIBLE CHLORINE
IRON
KITCHEN ODOR
MEDICINE
METALLIC
MOLDY
MUDDY WATER

MUSTY LAUNDRY
NASTY
NITRATE
ONION SMELL
PEAT
PETROLEUM
RAINWATER
RANCID
RAW SEWAGE
RIVER WATER
ROTTEN CABBAGE
ROTTEN EGGS
RUBBER
SEPTIC TANK
SEWER SMELL

SMOKEY
SOUR MILK
SULFER
SWAMP WATER
UGLY TASTE
URINE
WET DIRTY DOG

How Often Is Unpleasant Taste and Odor Noticed

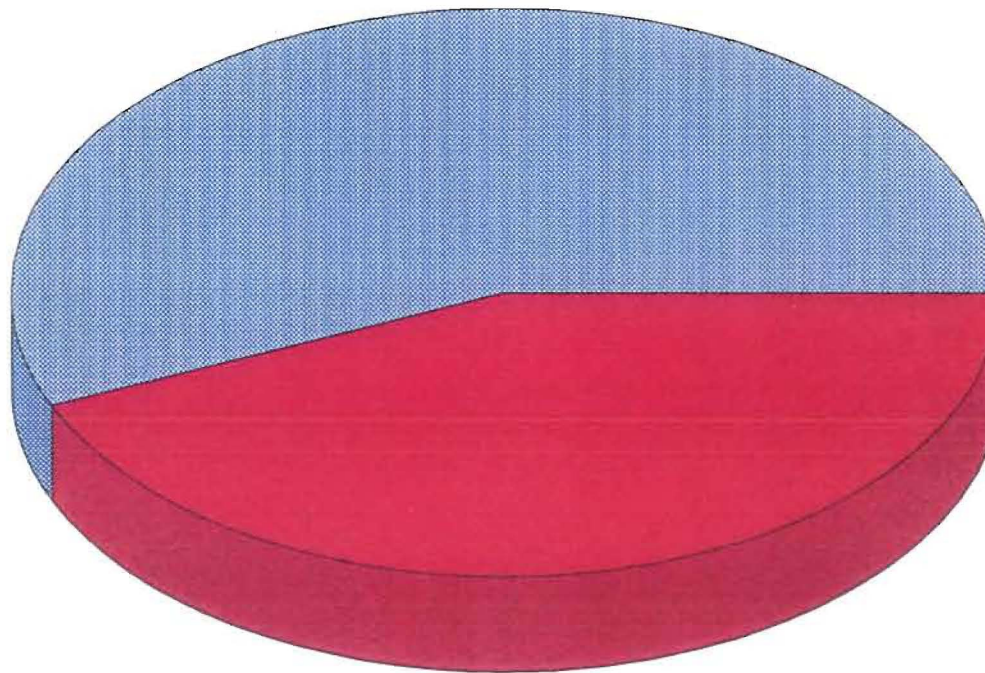


Note: 2,457 responded to this question and 1,447 observed unpleasant taste and/or odor. Of these respondents, 59% observed unpleasant taste and odor on a daily basis.

Acceptable Water Pressure

In Past 12 Months

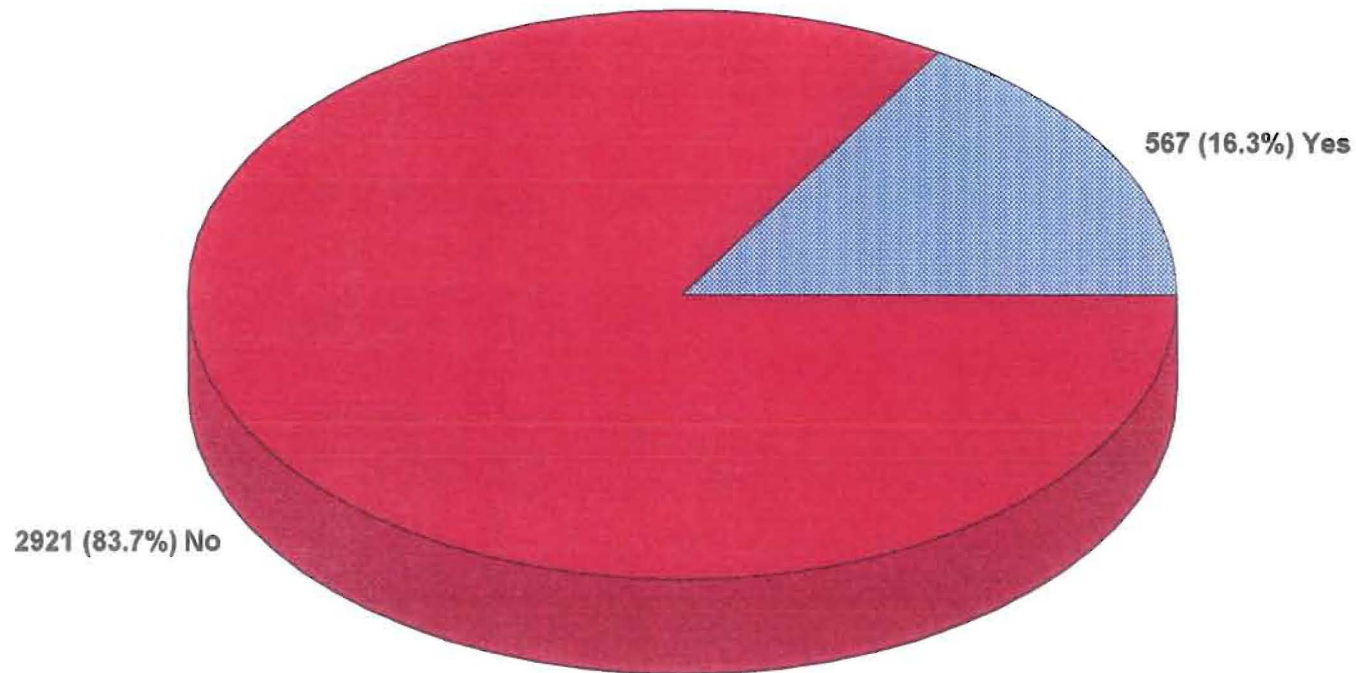
1980 (56.4%) Yes



1528 (43.6%) No

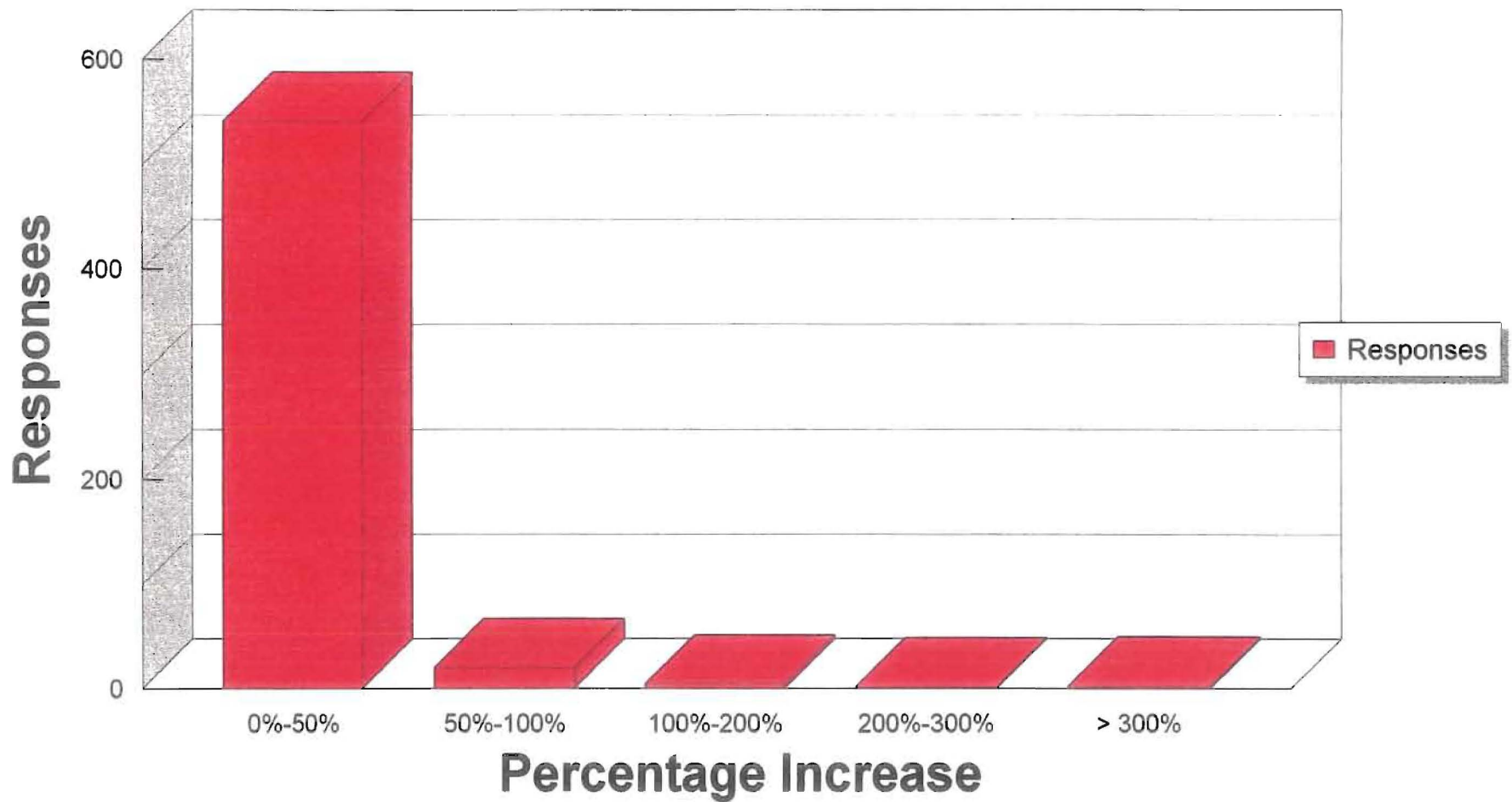
Note: 3,508 responded to this question.

Willing To Pay Increased Rates For Improved Water Quality



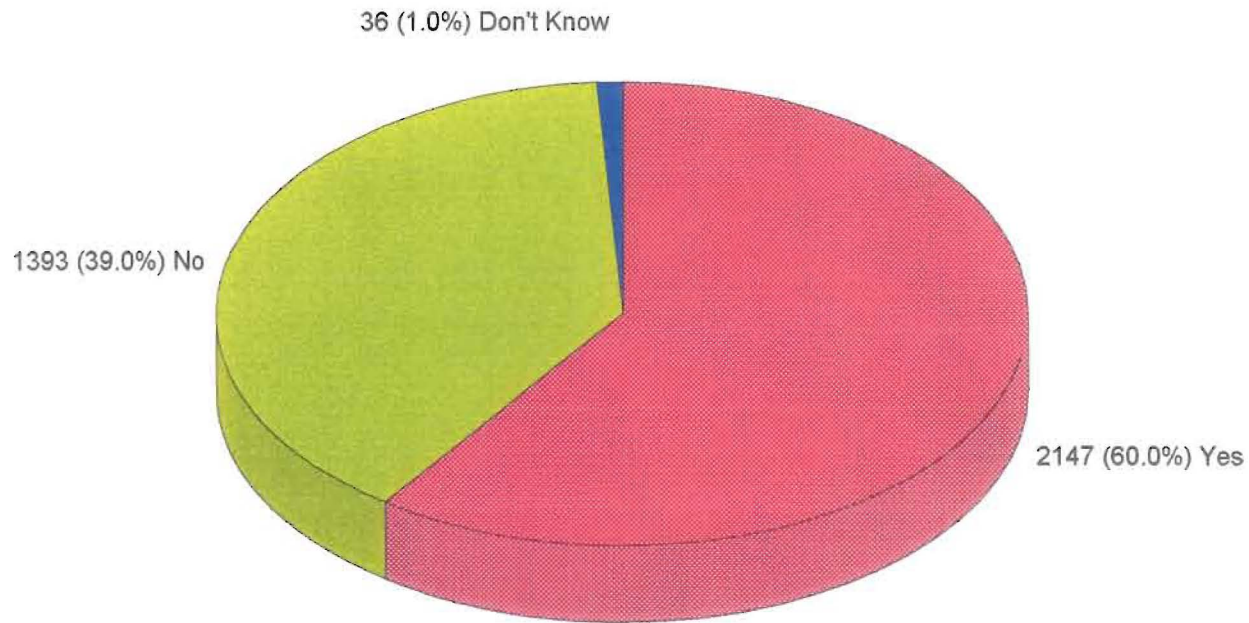
Note: 3,488 responded to this question. For every person who said they we're willing to pay more, slightly more than 5 said they would not be willing to pay more.

If Willing To Pay More, How Much More?



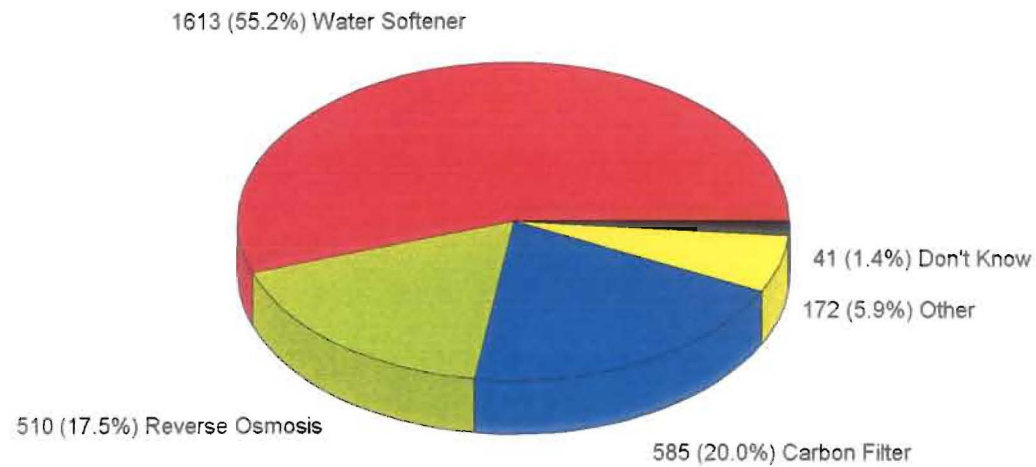
Note: Of the 567 respondents who claimed that they would be willing to pay more for improved water quality, 541 said they would be willing to pay 50% or less.

Does The Home Have Additional Water Treatment



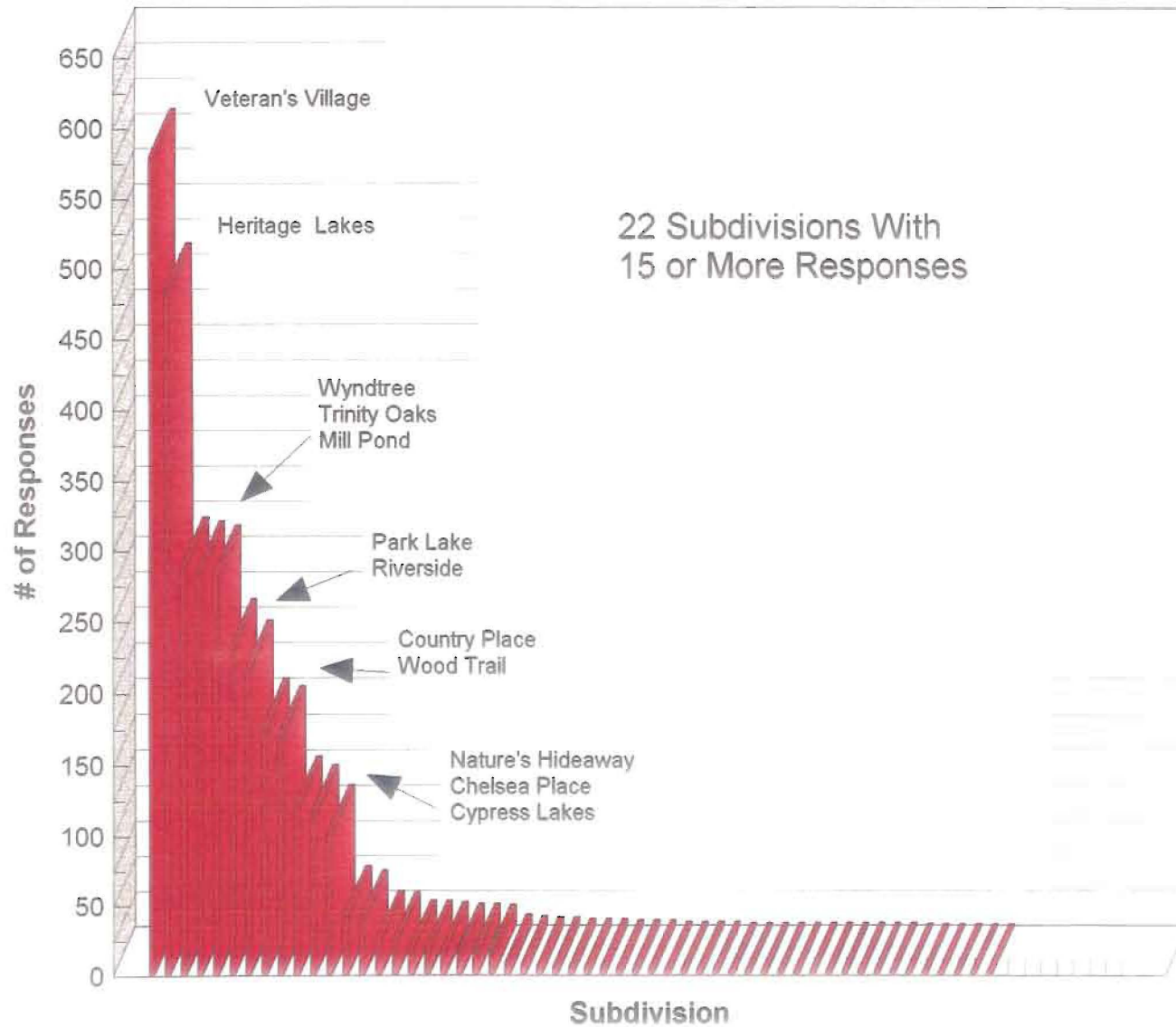
Note: Of the 3,706 surveys received, 3,576 answered the question regarding home water treatment.

Type of Home Water Treatment



Note: Of the 3,706 surveys received, 2,921 answered the question regarding type of home water treatment.

Responses By Subdivision



Responses By Subdivision

Veteran's Village	579
Heritage Lakes	483
Wyndtree	289
Trinity Oaks	286
Mill Pond	283
Park Lake	231
Riverside	216
Country Place Village	175
Wood Trail	170
Nature's Hideaway	121
Chelsea Place	115
Cypress Lakes	101