

Priority Water Issues in the Pacific Islands

Carl Evensen & Luisa Castro
University of Hawaii at Manoa
College of Tropical Agriculture & Human Resources

Purpose

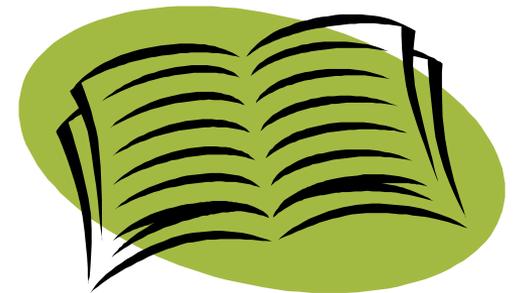
Conduct a Needs Assessment survey to collect base line water resources information



- Public attitudes
- Public awareness
- Public priorities

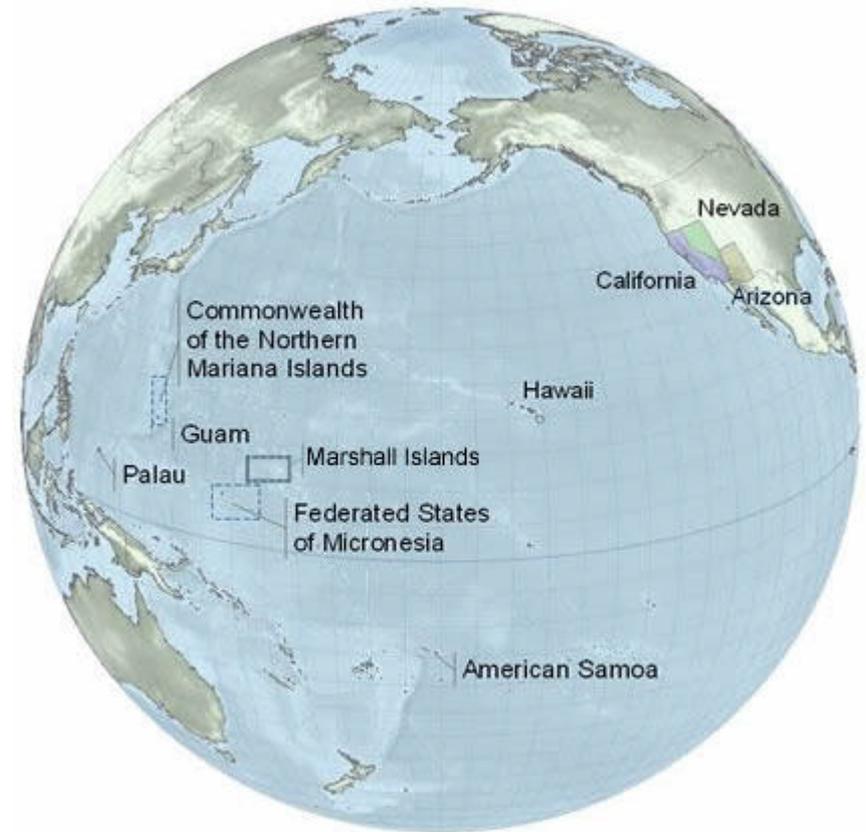
Methods

- 38-question survey developed
- Questions deal with:
 - Importance of water issues
 - Water quality
 - Water quantity
 - Common pollutants



The Survey

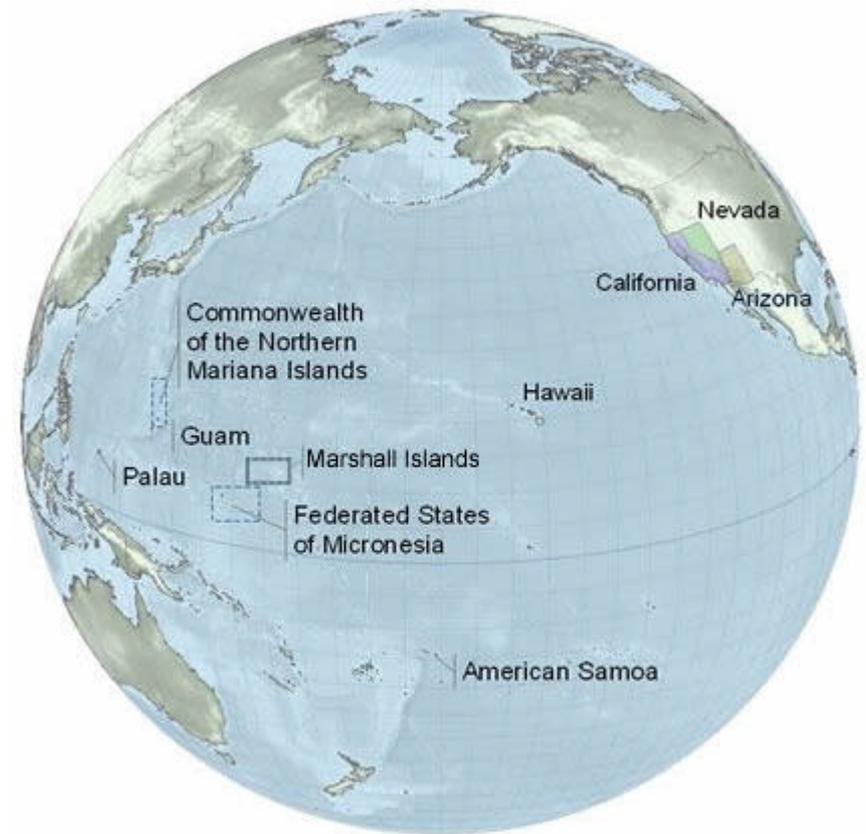
- 50 residents from each of these locations:
 - Commonwealth of the Northern Mariana Islands
 - Republic of the Marshall Islands
 - Federated States of Micronesia
 - Republic of Palau
 - Guam
 - American Samoa

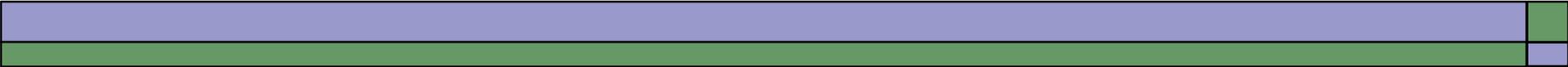


The Survey

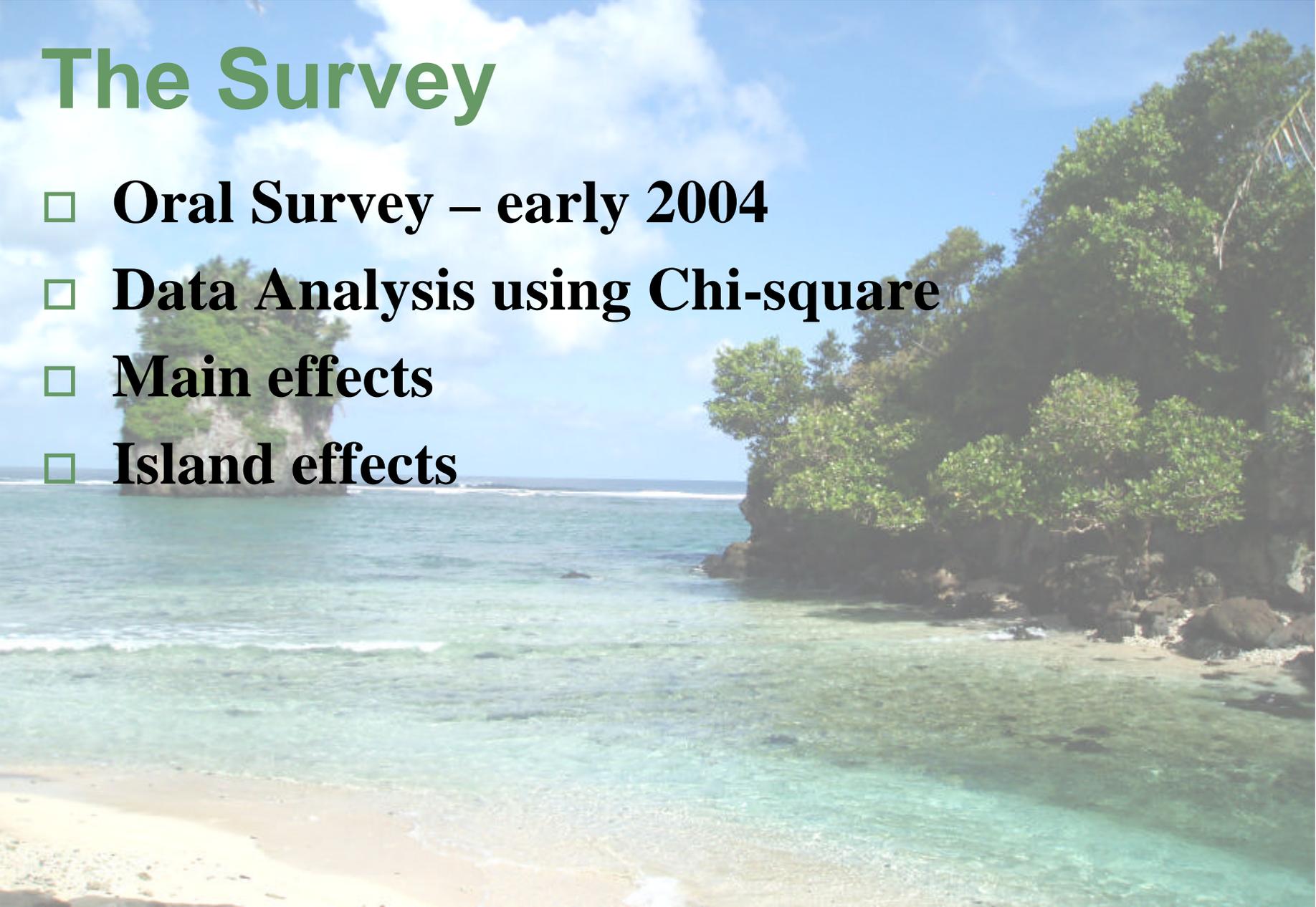
AND

- 163 residents from Hawaii





The Survey

- ❑ **Oral Survey – early 2004**
 - ❑ **Data Analysis using Chi-square**
 - ❑ **Main effects**
 - ❑ **Island effects**
- 

Question #1

- How important are the following water issues to you?



High Priority Issues

RANK	ISSUE	PRIORITY, %
1	Clean drinking water	100
2	Household water supply	96
3	Clean groundwater	87
4	Water for agriculture	86
5	Aquatic organism protection	85

CNMI, RMI, Guam, Palau, FSM, American Samoa

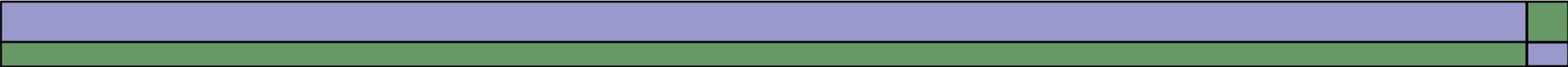
High Priority Issues (contd.)

RANK	ISSUE	PRIORITY, %
6	Water for recreation	78
7	Clean rivers, streams, lakes	76
8	Water for industry	75
9	Watershed restoration	66
10	Wetlands	60

CNMI, RMI, Guam, Palau, FSM, American Samoa

RANK	ISSUE	PRIORITY, %
1	Clean drinking water	98
2	Clean groundwater	97
3	Household water supply	95
4	Clean rivers, streams, lakes	93
5	Water for agriculture	83
6	Aquatic organism protection	83
7	Watershed restoration	81
8	Wetlands	78
9	Water for industry	66
10	Water for power generation	58

Hawaii



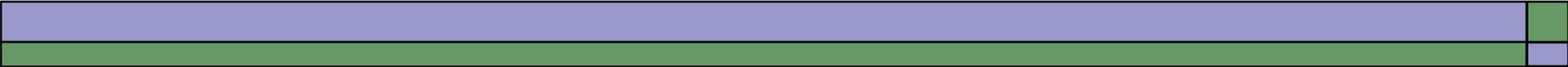
Island Issues – Question 1

Island	Drinking Water	Water for Agriculture	Aquatic Organism
CNMI	1	3	6
RMI	1	4	5
Guam	1	5	6
Palau	1	8	3
FSM	1	8	6
AS	1	5	6
Hawaii	1	8	7

Question #2

- Where do you get your drinking water?

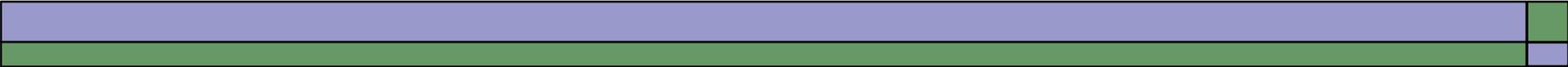




Drinking Water Source

SOURCE	PERCENT
Bottled water	29.4
Rainwater	29.0
City water system	23.1
Community well system	6.7
Other	11.8

CNMI, RMI, Guam, Palau, FSM, American Samoa

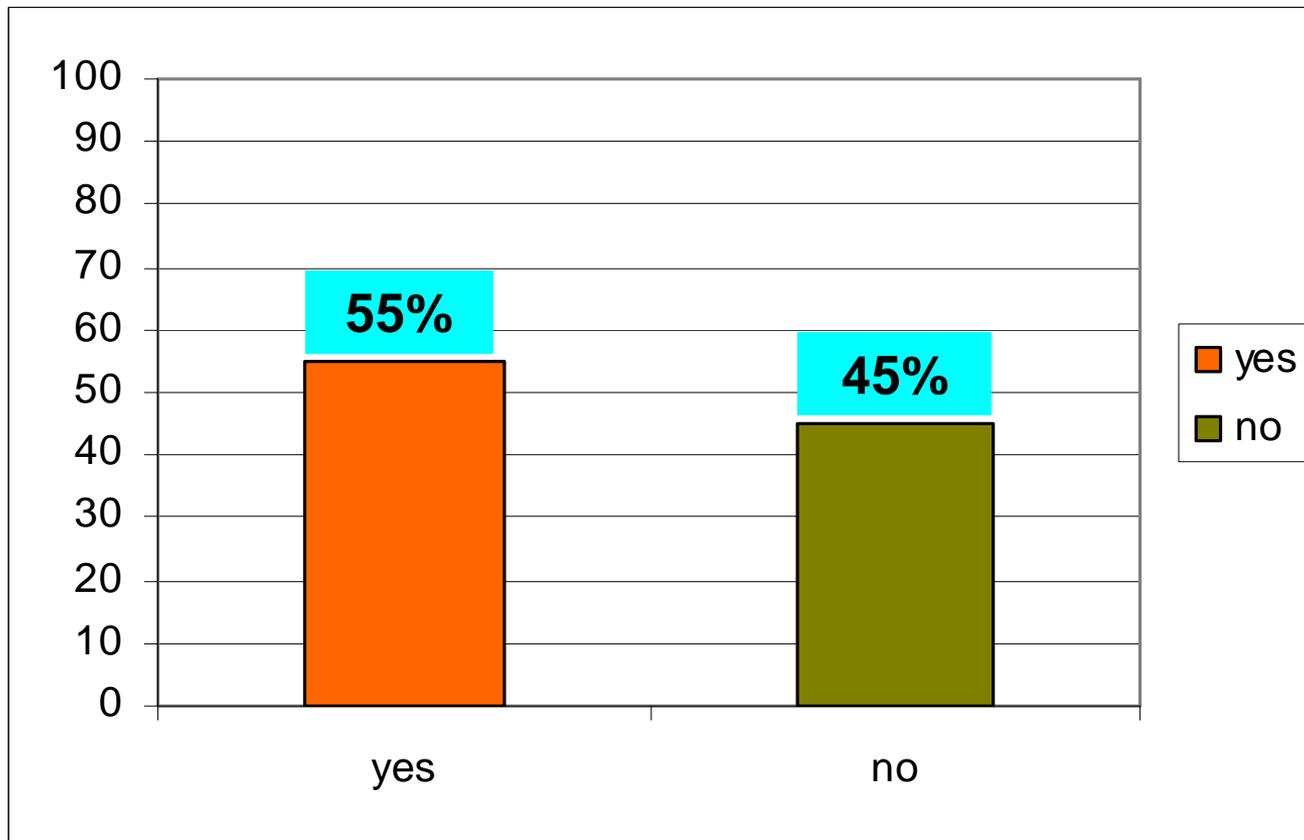


Island – Main Drinking Water Source

ISLAND	SOURCE
CNMI	Bottled water
Guam	Bottled water
RMI	Rainwater
Palau	Rainwater
FSM	Rainwater
American Samoa	City water system
Hawaii	City water system

Question #3

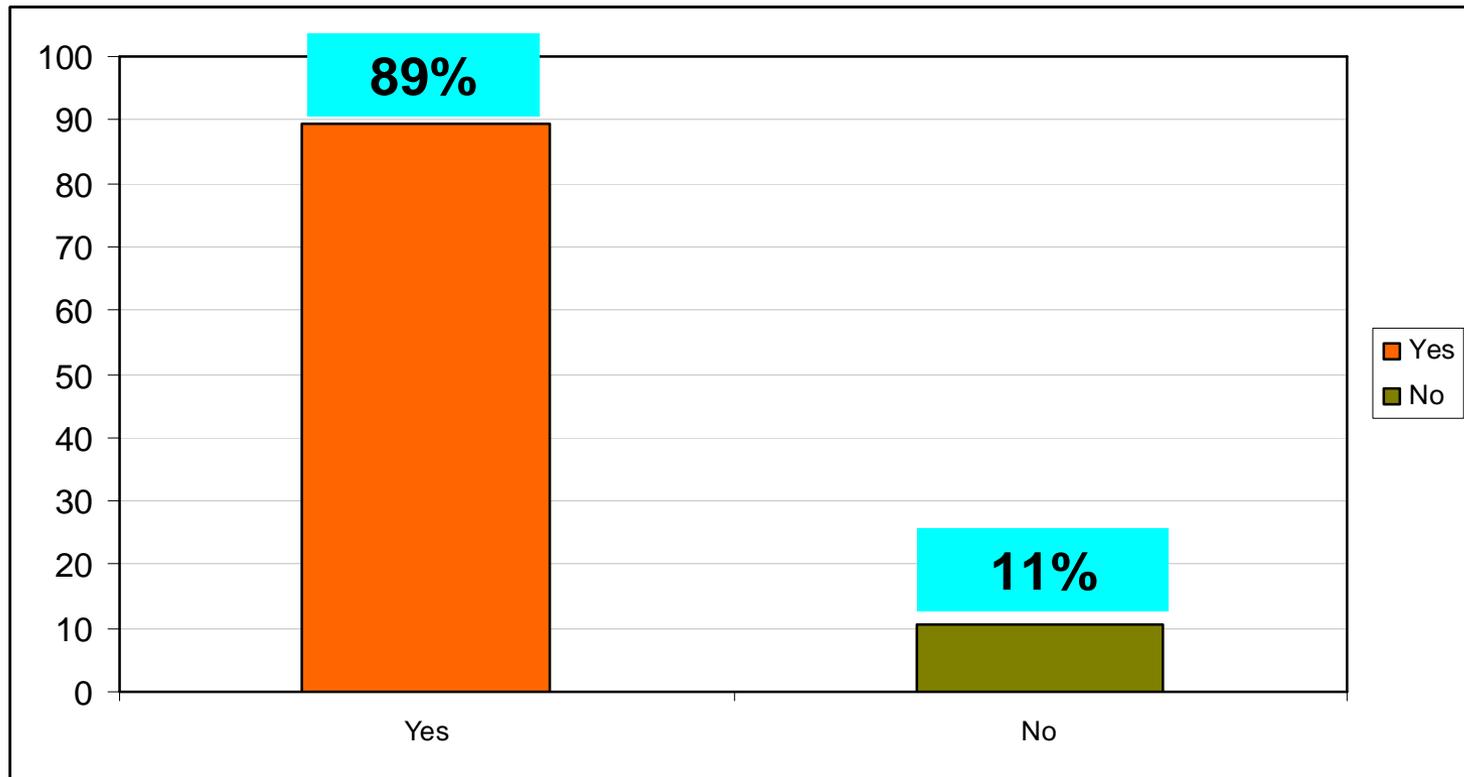
□ Is your drinking water safe to drink?



CNMI, RMI, Guam, Palau, FSM, American Samoa

Question #3

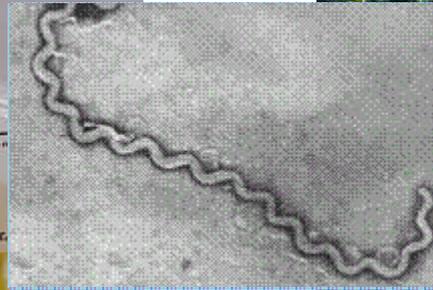
□ Is your drinking water safe to drink?



Hawaii

Question #4

- Which of the following contaminants do you know or suspect as a problem in your local water?



Contaminant Sources

CONTAMINANTS	KNOW OR SUSPECT, %
High bacteria counts	66
Toxic wastes	50
Heavy metals	45
Fertilizers	44
Pesticides	43
Minerals	41
Salt water intrusion	40

CNMI, RMI, Guam, Palau, FSM, American Samoa

Contaminant Sources

CONTAMINANTS	KNOW OR SUSPECT, %
Pesticides	49
Fertilizers	45
Minerals	35
High bacteria counts	30
Heavy metals	28

HAWAII

Question #11

- In your opinion, who should be most responsible for protecting water quality in your community?



Responsible for water protection?

Should be most responsible	Percent
Individual citizens	33
State/territorial government	28
Local village, city or town	21
Federal/national government	10
Other	5
Don't know	2

CNMI, RMI, Guam, Palau, FSM, American Samoa

Responsible for water protection?

Should be most responsible	Percent
State government	53
City and county	19
Individual citizens	13
Federal government	12
Other	2
Don't know	1

Hawaii

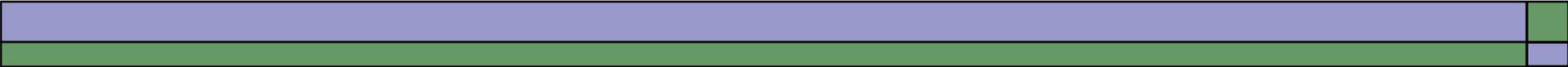
Islands – Responsible for water protection?

ISLAND	RESPONSIBLE
Guam	Individual citizens
Palau	Individual citizens
FSM	Individual citizens
American Samoa	Individual citizens & State/territorial govt. (tie)
CNMI	State/territorial govt.
RMI	State/territorial govt.
Hawaii	State government

Question #13

- If you had the following kinds of learning opportunities available, which would you be most likely to take advantage of for water quality issues (check up to 3 items)





Learning Opportunities

OPPORTUNITY	Percent
Read a newspaper/watch TV coverage	38
Look at a demo or display	37
Read printed fact sheets, bulletins, or brochures	36
Radio messages	31
Take part in a volunteer activity	27
Watch a video of information	26

CNMI, RMI, Guam, Palau, FSM, American Samoa

Learning Opportunities (cont.)

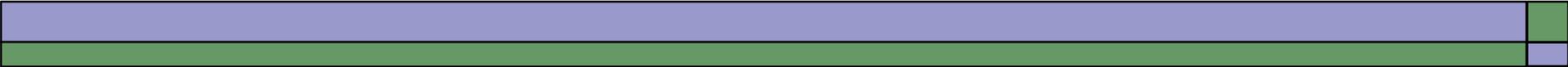
OPPORTUNITY	Percent
Attend short course (weekend, evening)	25
Visit a web site for information	23
Get trained for a regular volunteer position	17
Take a course for credit/certification	16
Attend a fair or festival	11
Ask for a home, farm, or workplace water assessment	11
Advertising on billboards, at movie theaters	6

CNMI, RMI, Guam, Palau, FSM, American Samoa

Learning Opportunities (cont.)

OPPORTUNITY	PERCENT
Read printed fact sheets	62
Read newspaper articles or watch TV	57
Visit web sites	39
View demonstration/display	25
Watch a video	22
Volunteer activity	19
Attend fair/festival	15
Home, farm water practices assessment	8
Training for volunteer position	7
Attend short course	6

Hawaii



Conclusions

- Drinking water the highest priority water issue throughout the Pacific.
- Water quality problems are not uniform across the Pacific Islands.
- Most in Hawaii feel drinking water is safe, while 45% in other Pacific Islands believe it is not.
- Priority programming areas are:
 - drinking water and human health
 - pollution assessment and prevention