

Water Issues in Hawaii

A 37-question survey was developed by the USDA-CSREES Southwest States and Pacific Islands Regional Water Quality Program Team to document public awareness, aptitudes, attitudes, and actions toward water quality across the region, results presented here are for Hawaii only. (Additional summaries are available for the Southwest States – Arizona, California, and Nevada – and for the Pacific Island territories and Freely Associated States.) Demographic data about survey respondents was also collected. This statistically designed survey was completed by 163 Hawaiian residents from August to October, 2003. The collected data was analyzed using the SAS procedure at the University of Idaho. The sampling error of these survey questions was ± 5 percent.

How Do You Feel About the Environment?

Survey respondents rated the importance of eleven water issues (Table 1). Clean drinking water appears to be the most important issue in Hawaii – 88% of respondents ranked the issue as extremely important, while 98% ranked it as either extremely or very important. Over 90% of respondents considered the following water issues as either extremely or very important: 1) clean drinking water, 2) clean groundwater, 3) water for household/private sector, and 4) clean rivers.

Table 1. The importance of water issues in Hawaii. (In ranked order of “Extremely or Very Important.”)

Issue	Importance	
	Extremely	Extremely or Very
	----- % -----	
Clean drinking water	88	98
Clean groundwater	62	97
Water for household/private sector	55	95
Clean rivers	52	93
Protection of aquatic organisms	42	83
Water for agriculture	32	83
Watershed restoration	50	81
Destruction of wetlands (riparian areas)	45	78
Water for commerce/industry	20	66
Water for power generation	22	58
Water for recreation	22	56

Water Issues

Reflective of how respondents rated various water issues, when asked to rank five water uses from most important to least important, respondents chose drinking/human use the clear choice for most important, followed by wildlife (fish, birds, wetlands), irrigation, power generation, and finally recreation.

Residents are evenly split on whether they consider having enough water to be a problem; 46% responded that they do not consider it to be a problem (sum of “no” and “probably not”) while another 46% responded that they do (sum of “probably” and “definitely”).

There exists a general lack of knowledge regarding potential pollutants. Over 40% of respondents indicated they did not know if four out of five given pollutants affect the water quality in their area (Table 2). Respondents were most aware of pesticides, with 49% indicating they know or suspect pesticides to affect their water quality.

Table 2. Respondents that do not know if the listed conditions affect water quality in their area.

Pollutant	% answering “don’t know”
Heavy metals (e.g., lead, arsenic)	51
High bacteria counts	48
Minerals (e.g., calcium)	46
Fertilizer/Nitrates	40
Pesticides	36

Given an option to choose three (from a list of twelve) sources most responsible for surface water pollution, almost two thirds (65%) included wastes from urban areas among their choices. Fewer than one third (30%) selected septic systems (Table 3).

Table 3. Responses to the question: “Which of the following are most responsible for the existing pollution problems in rivers and lakes in your state?” (Select three.)

Source	%
Wastes from urban areas	65
Erosion from roads and/or construction	43
Agriculture – crop production	36
Septic systems	30
Industry	25
Agriculture – livestock production	20
Military bases	17
Wild animals	10
Rangeland management	3
Erosion after wildfires	3
Forestry	1
Mining	1

Governance

Approximately one quarter of respondents (26%) feel that environmental protection receives about the right amount of emphasis from local government and elected officials while over half (52%) feel it does not enough receive enough emphasis (Table 4). Almost three quarters of respondents (72%) believe local government, either state or county/city/town, as opposed to the federal government, should be responsible for protecting water quality (Table 5).

Table 4. Responses to the question: "In your opinion, does the environment receive the right amount of emphasis from local government and elected officials in your state?"

Response	%
No, not enough emphasis	52
Yes, about right	26
No, too much emphasis	3
No opinion / don't know	20

Table 5. Responses to the question: "In your opinion, who should be most responsible for protecting water quality in your community?"

Response	%
Federal government	12
State government	53
County, city, or town	19
Individual citizens	13
Don't know	1
Other	3

Water Quality Education

A majority of respondents have received water quality information via newspapers, television, and environmental agencies (Table 6).

Table 6. "Yes" responses to the question: "Have you received water quality information from the following sources?"

Information Source	%
Newspaper	76
Television	73
Environmental agencies (government)	58
Environmental groups (citizen groups)	44
Universities	39
Consumer Confidence Reports	30
Schools (elementary & secondary)	26
Extension Service	20

A majority of respondents would like to learn more on the topic of drinking water and human health (Table 7). When given an option of how they would most likely take advantage of learning opportunities with regard to water quality issues, most respondents would like to read printed fact sheets, bulletins, or brochures; or read a newspaper article/series or watch television coverage (Table 8).

Table 7. Response to the question: “Would you like to learn more about any of the following water quality issue areas? (Circle all that interest you.)”

Issue	%
Drinking Water and Human Health	74
Watershed Management	43
Environmental Restoration	41
Water Conservation	37
Pollution Assessment and Prevention	36
Nutrients & Pesticide Management	33
Water Policy and Economics	30
Agricultural Water Management	18
Animal Manure and Waste Management	17

Table 8. Survey respondents learning opportunities of choice (select up to 3 items).

Opportunity	%
Read printed fact sheets, bulletins, or brochures	62
Read a newspaper article or series, or watch TV coverage	57
Visit a website	39
Look at a demo or display	25
Watch a video of information	22
Take part in a onetime volunteer activity to learn or do something (e.g., water monitoring)	19
Attend a fair or festival	15
Ask for a home, farm, or workplace water assessment	8
Get trained for a regular volunteer position (e.g., watershed steward, or water quality monitor)	7
Attend short course (weekend, evening)	6
Take a course for credit/certification	4

Demographics

Examples of the demographics of this survey are:

- Community sizes of: >100,000, 25,000 – 100,000, 7,000 – 25,000, 3,500 – 7,000, and <3,500 represented 35, 33, 15, 10, and 7% of the respondents, respectively.
- Approximately 65% of the survey respondents were male, while 35% were female.
- The education levels of: elementary or some high school, high school graduate, some college, college graduate, or advanced college degree represented 8, 11, 29, 29, and 24% of the respondents, respectively.
- Eighty-five percent of the respondents have lived in Hawaii for at least ten years.

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