



Public Attitudes and Aptitudes Regarding Water Issues in the Pacific Northwest



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Introduction

A major mission of the Pacific Northwest Water Quality Team is to document public attitudes and aptitudes regarding water resource issues in Alaska, Idaho, Oregon, and Washington. The team completed its second major survey in 2007 (the first was completed in 2002) using a Dillman mail-based survey instrument completed by 1,012 of the 1,800 Pacific Northwest residents who were randomly selected to take part in this effort. This poster highlights public responses to questions concerning water resource priorities, surface and groundwater quality, and the availability of water resource learning opportunities for residents of the Pacific Northwest. Throughout this poster 2002 survey data is compared to current 2007 survey data in an effort to examine any significant changes in public response and to begin to identify trends to better serve education and extension services.

Methods

A survey instrument was developed to provide base-line information on public attitudes regarding water resources in 2002 from which future Extension programming outcomes can be measured (Mahler, Simmons, Sorensen, & Miner, 2004). At that time it was anticipated that follow-up water resource surveys would be conducted at 5-year intervals. The focus of this poster, the 2007 follow up survey, consisted of a 48-question mail-based survey instrument similar to the survey conducted in 2002. The specific survey questions were intended to quantify:

1. Public attitudes regarding water resources in the Pacific Northwest
2. Sources of water resource information most often used by the public
3. Preferred learning opportunities the public has used in the past and are likely to use in the future to address water resource issues

In addition, demographic information including state of residence, community size, length of time residing in the region, gender, age, and educational level were also collected from survey respondents.

The mailing strategy used in this survey instrument was based on the Dillman total design survey method (Dillman, 2004). This four mailing process was identical to that of the 2002 sampling (Mahler, Simmons, Sorensen, & Miner, 2004). Addresses were obtained from a professional social science survey company (SSI, Norwich, CT). The necessary return rate was 50% (900 surveys) in order to achieve a sampling error of 4 to 6%. The data were analyzed at two levels using SAS (SAS, 2004). The first level of analysis generated frequencies, while the second level evaluated the impacts of demographic factors. Significance ($P < 0.05$) to demographic factors (used in Tables 5 & 6) was tested using a chi-square distribution (Babbie, 1983).



Results

Public Attitudes Toward Water Resources in the PNW

1. Respondents felt that state governments should be most responsible for protecting community water quality (Table 1).
2. The majority of respondents cited that local governments do the best job of protecting water quality.
3. Drinking water, clean rivers, and clean groundwater respectively were the top three most important issues to residents of the PNW in both 2002 and 2007 with no significant percent change in their ranking between surveys (Table 2).
4. Water for salmon, water for wetlands, and watershed restoration have become more important issues in the last five years.
5. Water for agriculture, economic development, and water for recreation have become less important issues in the last five years.

Sources of Water Resource Information

1. PNW respondents cited newspapers and television as the media most frequently used to receive water resource information (Table 3).
2. Municipal governments (51%), environmental agencies (47%), and environmental groups have all provided over 40% of the surveyed adults in the region with water resources information in the past five years. Extension, universities, the Internet, and public schools have a lesser reach.
3. Except for the Internet, all sources of water resource information are being used less frequently since 2002.
4. The Internet's reach has increased from 15 to 20% in the last five years.

Learning Opportunity Preferences

1. A majority of respondents indicated that they had learned about water resource issues via the newspaper (60%), television coverage (58%), and/or by reading printed fact sheets (57%) in the last five years (Table 4).
2. The use of newspapers, television, and printed facts sheets for water resources information was significantly more common than the other media choices provided.
3. Even though the Internet increased as a source of information, only 18% of respondents cited visiting a web site for information as a learning activity.

Future Learning Opportunities

1. When asked to cite three preferred water resources learning opportunities in the 2007 survey, 62% of respondents cited reading printed fact sheets, bulletins, or brochures as their most preferred sources. This preference for printed materials increased from 53% in 2002 (Table 5).
2. Almost half of the 2007 survey respondents cited newspapers and television as preferred learning opportunities for water resource information. These choices declined by 6% and 8% respectively since 2002.
3. Significant declines in preferred learning opportunities between 2002 and 2007 were observed for viewing a display, watching a DVD, attending a short course, and taking a course for credit.

Group	Most Responsible	Well	Neither	Poorly
percent responding				
Federal Government	9.5	27	22.4	24.8
State Government	39.0	42.9	19.3	17
Local Government	37.3	55.6	16.3	15.6
Individual Citizens	10.6	27.2	22.9	25.4

Table 1. PNW opinions regarding who is most responsible for protecting community water quality and who does the best job.

Issue	Very or extremely important		Change
	2007	2002	
percent			
Drinking water	99	99	--
Clean rivers	94	94	--
Clean groundwater	93	93	--
Water for agriculture	77	84	-7
Water for salmon	74	69	+5
Wetlands	73	69	+4
Watershed restoration	72	68	+4
Power generation	71	72	-1
Economic development	65	70	-5
Recreation	49	58	-9

Table 2. The percentage of PNW respondents rating specific water resource issues as very or extremely important in 2002 and 2007.

Information source	Year		Change
	2007	2002	
percent			
Newspapers	65	68	-3
Television	56	59	-3
Municipal government	51	NA	NA
Environmental agencies	47	51	-4
Citizen groups	41	46	-5
Extension	25	28	-3
Universities	24	25	-1
Internet	20	15	+5
Schools	18	20	-2

Table 3. Water resource information sources reported by PNW respondents in the 2002 and 2007 surveys.



References

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Discussion

Results from this 2007 survey indicate that water resource issues are as important today as they were five years ago. Specific issues such as watershed restoration, wetland preservation, and saving salmon runs are more important to Pacific Northwest citizens today according to this survey data. Almost half of Pacific Northwest residents living in communities with populations less than 25,000 in 2007 cited extension as a water resources information source. Extension continues to make a measurable information impact on the citizens of rural communities.

The survey data analyzed regarding past learning opportunities and preferred learning opportunities is of extreme relevance to education and extension programmers. Age and education level affected both type and frequency of water resource learning opportunities since 2002. Increased education level was positively related to the use of newspapers, printed materials and the Internet as a learning opportunity. Older survey respondents (>60) preferred to use newspapers and television to learn about water resources while younger respondents (<40) preferred the Internet. Respondents aged 40 to 60 years old preferred the use of printed materials and of this age category, 93% of respondents took advantage of at least one listed water resource learning opportunity in the last five years.

Learning opportunities that require the most time expenditure by the public have declined by the greatest percentages in the last five years. It should be concluded that the public is interested in water resource information, but efficient and time effective education methods may be more appropriate to reach today's Pacific Northwest citizen.

Summary of Conclusions

- Specific water resource issues have increased in public importance including wetland preservation, watershed restoration, and saving salmon runs
- Printed fact sheets, newspapers and television continue to be the water resources information source of choice in the Pacific Northwest
- All other evaluated information sources have declined in public preference since 2002, except for the Internet
- Traditional Extension delivery methods including short courses, volunteer training displays at fairs, and providing courses for credit continue to decline significantly in popularity with the public
- Extension needs to be wary of complete electronic materials dissemination, because at least in the Pacific Northwest, the demand for printed materials is still very present

