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**A Report on the Effectiveness of
Texas Water Resources**

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A REPORT ON THE EFFECTIVENESS OF
TEXAS WATER RESOURCES

by

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ABSTRACT

A readership survey conducted in May 1977 found that readers of Texas Water Resources find it useful, attractive and informative. The bulletin is published by the Texas Water Resources Institute to generate public awareness and understanding of water resources issues.

The 31 percent response rate from the survey was evidence that the publication is well received. Results indicate that each copy is read by an average of three individuals. Ninety-eight percent of all responses were in favor of the publication.

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INTRODUCTION

Texas Water Resources is a four-page bulletin written to generate public awareness and understanding of water resources issues in the state. It is published ten times each year by the Texas Water Resources Institute and is distributed at no charge to 6,500 Texans.

In its third year of publication, Texas Water Resources reports on research conducted through the Institute and on other water-related topics. It is written in a nontechnical, easy-to-read style to appeal to a broad range of readers.

A survey was conducted in May 1977 to determine the effectiveness of the publication as well as to identify types of readers. Another purpose of the survey was to gain reader input for selection of future topics.

A one-page questionnaire (Appendix A) was developed to measure: (1) frequency of readership, (2) usefulness of information, (3) readership per single copy, and (4) general impressions. Requested information also included the type of employment and position held by the reader.

Open-ended questions were limited to three: one asked the reader to recall one topic which had been especially helpful to him and another asked what topic he would like to see reported in the future. The third question gave the respondent an opportunity for any comments he wished to make.

Surveys were sent randomly to 640 individuals, ten percent of the mailing list. One hundred and ninety-six surveys were returned for a response rate of 31 percent.

RESULTS

Survey results indicate that the publication is reaching a broad cross-section of readers in the state. Twenty percent of all respondents are public school teachers, while another 20 percent are government employees at the local, state, or federal level (Table 1). The next largest group (16 percent) listed business as the employing organization. Fifteen percent of respondents are associated with universities or colleges and 12 percent with industry.

Table 1. Respondents by Type of Organization

Organization	Number	Percent
Business	31	16
Industry	24	12
Local government	9	5
State government	15	8
Federal government	13	7
Public education	38	20
University or college	30	15
River authority	1	-
Self-employed	10	5
Other	22	11
No response	3	1
TOTAL	196	100

Data presented in Table 2 show 28 percent of all respondents hold managerial positions; another 25 percent are educators.

Table 2. Respondents by Type of Position Held.

Position	Number	Percent
Researcher	10	5
Educator	47	25
Manager	53	28
Administrator	25	12
Elected official	2	1
Engineer	14	6
Planner	6	3
Other	34	17
No response	5	3
TOTAL	196	100

Sixty-five percent of those who answered read at least part of each issue; 24 percent read the entire article each issue. Three-quarters of those responding share their copy of Texas Water Resources with at least one other person. Thirty percent say that three or more people read their copy. According to the survey results, an average of three people read each copy for an effective circulation of 19,500. (See tables 3 and 4.)

Each respondent was asked to rate the publication on a seven-point Leikert Scale as to its informativeness, attractiveness, usefulness, and timeliness; however, 97 percent of all ratings were favorable to the publication (Table 5)

Table 3. Respondents by Frequency of Readership

Response	Number	Percent
Entire article every issue	47	24
Entire article occasionally	44	23
At least part of each issue	78	41
At least part occasionally	17	8
Only titles and picture cutlines	5	2
Never read	1	-
No response	4	2
TOTAL	196	100

Table 4. Respondents by How Many Others Read Copy Received.

Numbers of Others	Number	Percent
One	39	20
Two	49	26
Three	22	12
Four	14	7
Five or more	21	10
None	44	21
No response	7	4
TOTAL	196	100

Table 5. Percent Response by Rating Given.

	Extremely	Very	Slightly	Neither	Slightly	Very	Extremely	
Informative	10	69	20	1	-	-	-	Uninformative
Attractive	10	63	20	5	2	-	-	Unattractive
Useful	11	41	42	3	3	-	-	Useless
Timely	21	58	18	3	-	-	-	Out of date
Short	11	40	17	29	2	1	-	Long
Easy to read	32	56	7	4	1	-	-	Hard to read

The bulletin was considered often useful by 29 percent of those responding and an additional 58 percent felt it to be at least occasionally useful (Table 6).

Table 6. Respondents by How Useful Texas Water Resources Has Been.

Response	Number	Percent
Often useful	56	29
Occasionally useful	112	58
Seldom useful	20	9
Never useful	4	2
No response	4	2
TOTAL	196	100

Seventy-one respondents made suggestions on topics for future issues of the bulletin and nine different issues were listed as especially helpful. The one featuring the Edwards Underground Reservoir was the issue mentioned most often.

Most of the 75 who added additional comments did so to commend the publication or to suggest ways to improve it. All comments are included as Appendix B.

CONCLUSIONS

Results of the survey show that Texas Water Resources is indeed reaching its intended audience--decision makers and opinion leaders in Texas. It is considered informative, attractive, useful, and timely.

Seventy-seven percent of those responding to the survey think highly enough of it to share with at least one other person.

Forty percent of those who responded believed strongly enough in the publication to suggest a future topic (Appendix C). The fact that there were 44 different topics named emphasizes the opportunity and importance of such a publication as Texas Water Resources.

Texas Water Resources Survey

Please circle the numbers that represent your answers to the questions. Disregard the boxes in the right-hand margin.

DO NOT
WRITE
IN THIS
SPACE

1. In general, how useful has *Texas Water Resources* been for you?

- 1. Often useful
- 2. Occasionally useful
- 3. Seldom useful
- 4. Never useful

1 2
 3 4

2. What portion of each issue do you read?

- 1. Entire article every issue
- 2. Entire article occasionally
- 3. At least part of each issue
- 4. At least part occasionally
- 5. Only titles and picture cutlines
- 6. Never read

5
 6

3. How many other people read the copy you receive?

- 1. One 4. Four
- 2. Two 5. Five or more
- 3. Three 6. None

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4. For each of the following dimensions please circle the number that best represents your feelings about *Texas Water Resources*. For example, with respect to informativeness, if you feel that the articles in *Texas Water Resources* are "slightly informative," then circle the "3" on the informativeness scale.

	Extremely	Very	Slightly	Neither	Slightly	Very	Extremely	
Informative	1	2	3	4	5	6	7	Uninformative
Attractive	1	2	3	4	5	6	7	Unattractive
Useful	1	2	3	4	5	6	7	Useless
Timely	1	2	3	4	5	6	7	Out of date
Short	1	2	3	4	5	6	7	Long
Easy to Read	1	2	3	4	5	6	7	Hard to Read

8

9

10

11

12

13

5. Has one issue been especially helpful to you? If so, which one? _____

14

6. What topic would you like to see reported in the future? _____

15

7. In which type of organization are you employed?

- 1. Business 6. Public education
- 2. Industry 7. University or college
- 3. Local government 8. River authority
- 4. State government 9. Self employed
- 5. Federal government 10. Other _____

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8. What type of position do you hold?

- 1. Researcher 5. Elected official
- 2. Educator 6. Engineer
- 3. Manager 7. Planner
- 4. Administrator 8. Other _____

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9. Are there any comments you wish to make? _____

Please return to *Texas Water Resources Institute*, Texas A&M University, College Station, Texas 77843, in the enclosed self-addressed envelope by May 9, 1977.

Appendix B

Comments From Respondents

Articles are very factual - sometimes dry and dull -- report type format a bit conservative -- colors are nice! Enjoy long article like this last one! Would like to continue receiving copies -- Thanks!

All materials are housed in our library and made available as source and reference material to staff and public. It is therefore difficult to respond as an individual.

I am interested in rice farming. I think your publication of great interest to our future.

If someone is in the water related business the publication would be very informative and useful.

The publication is very well done. I enjoy reading it for my personal information but little application to my industry.

My only question is how much does your department overlap with the Texas Water Development Board?

As a Chamber of Commerce manager for a small but developing town, I have no direct interest in much of the information presented in your paper. However, we do have a growing water supply demand and are planning a sewage treatment system. Also, our main industry of tourism depends on keeping our rivers and streams clean and appealing.

My interest is not a business but personal concern with regard to long range water supplies. Also have an interest in the many man-made lakes in Texas.

Keep up the good work.

You do a good job.

You have a very fine publication. It is well-written, interesting, and --so far as I can determine--accurate. Thanks for sending it.

I also farm rice. I gain a needed insight into the many problems involved in keeping our water drinkable from your fact sheet.

I use Texas Water Resources in teaching earth science and Texas Geography in grades 7-12. It is very informative and an added resource in teaching. Thank you very much.

Keep up the good work.

We were visited upon by members of TWQB for a presentation and found the

experience very informative, thorough, and useful.

Keep up the good work and expand it to include the mineralized waters shallow enough to be considered as alternate sources, by cleaning it up.

Your publication is very useful to classroom teachers who are trying to make their science courses relevant and meaningful to students.

Thanks.

I do like the publication.

Policy issues of water supply and water quality are needed for greater in-depth discussion.

I hope to use your paper more next year in a new Biology II course we will have at Terrell High.

Keep up the good work.

Congratulations on a helpful, easy to read publication.

Since I have been with the Mercedes Chamber of Commerce only a short time I am not in a position to complete questionnaire and make a fair evaluation.

Thanks. Keep up the good work!

It is a well done newsletter and I enjoy reading it.

I think the information is educational and informative.

Enjoy the TWR very much.

Keep telling us that Texas will have to get more usable water to keep growing.

Enjoy reading about research in Texas and major water decisions.

Keep up the excellent work!

Keep it coming.

Looking good!

Suggest greater emphasis on technical content, perhaps as short articles in addition to the major lead policy discussion article.

I find that these publications are very interesting to myself and others on my science staff.

This is not generally in my field but information received is helpful in

many instances.

Give information on how to get more details on a topic reported, i.e., report citations and similar; or who to contact.

I have just started receiving TWR. This is only the 2nd issue.

I find the publication very educational - providing understandings necessary to assess the impact of policies and proposed policies.

Keep up the good work. Educating the public of industry is our only hope.

I feel that this newsletter is very informative. As an educator I find that it is valuable for discussions and educative analysis.

It was quite obvious the change in editorship a year ago and overall quality of information and subjects went down. However, this latest on Edwards Aquifer is excellent. Don't be afraid of controversial subjects as long as objective.

Not directly in my field but always interesting.

I knew that the underground reservoir existed (Edwards) but this is the most explanatory and comprehensive article that I have read.

Keep up the good work.

What effect will coal mining have on water resources - both electrically and pollution wise?

Useful in this context, hard to define. In my case your articles provide general background information.

This is an excellent public service activity.

This publication is written for non-technical persons and very useful.

I think the publication does remarkable job providing articles interesting to a variety of interests.

My area of activity has changed since my name was added to your mailing list. It would be more beneficial to you if my name were removed and a copy sent to someone else.

Please send any new information concerning water resources to PO box in Trinity, Texas. Because of the volume of mail sometime I will otherwise not receive it.

The apparent lack of interest of Texas Water Resources in water related problems in the coastal area makes this publication of less value in my work.

Pollution studies would be helpful!

I am a resident of Louisiana.

Information on Texas is interesting but not very often directly applicable to Maryland problems - your newsletter is one of the best I receive.

My evaluation may not be very meaningful since I live outside Texas and am not familiar with the various issues presented in the articles.

How can we as teachers of science make the student more aware of the critical need to conserve our waters from pollution?

Publication is interesting to use.

I look forward to your newsletter.

Very well written and edited!

I enjoy reading the publication.

Good bulletin.

Keep up the good work.

Appendix C

Future Topics Suggested By Respondents

Specific trouble areas of water pollution in our state.

Continue as now, covering a wide spectrum of water topics.

Trinity River Project.

TWDB's role in Sec. 404 and FIA regs.

Water supplies along the coastal areas, especially near Houston.

Irrigation, Gulf Coast.

Energy relationship.

Review registration of lake construction as required by TWRC.

Subsidence.

Lake development.

Increase fresh water supply.

The water table in the Panhandle and the rest of West Texas.

Energy and water.

Pollution-- underground, surface.

New water law.

Pollution.

Ecological implications from water development-- perhaps a series.

Private water well-- structure and use.

Water resources and formations that could be used by distillation methods.

Texas and water needs and uses.

Future of a coordinated water resource program for Texas and the Gulf Coast states.

More on resource developments.

Waste treatment.

Lakes.

State and federal regulations.

Urban drainage.

Water Supply/Environment.

Trinity River Project.

Continue present broad coverage.

Federal and state action to: 1) eliminate future flooding; 2) provide enough pure water.

Water Rights Laws.

I'd like to see a little more discussion of small businesses and industrial water problems.

More on water usage.

Importance of surface water reservoir.

Water treatment systems.

Geology.

Water quality/groundwater/sediment.

Future producing capabilities.

Individual Texas Lakes' study.

NPOES request US issued status report.

Water management and planning.

Effect of pollution in our national water systems - ecological implications.

Industrial water uses.

Water level in upper Gulf Coast.

Planning for future conservation.

Water treatment/water recycling.

Pollution.

Long range plans.

Industrial use of water in East Texas.

The true need for fresh water inflow to the coastal bays. Are the nutrients or low salt water of primary significance?

Drinking water.

Conservation (irrigation waste, etc.)

More on simple varigated test for mineral and impuritites.

Successful cloud seeding.

Hurricane coastal flooding.

Pollution studies.

"Getting small" projects - on farms, in cities, etc.

Water project on south plains

? - EPA influence

Requirement of Safe Drinking Water Act!

By looking at weather records what predictions can possibly be made concerning future water supplies.

Feasibility of aquifer recharge - particularly in Trinity Sands (D-FW area)

Water Table in West Texas.

Groundwater.

A brief news regarding Texas water resources activities.

Depletion of underground water.

More on utilization on waste heat, and "trickle irrigation."

Pollution control new reserviors desalination.

Water for agricultural use.

Radioactive waste in water table.

Drought related issues.

A clear concise presentation concerning water rights in Texas (surface and subsurface)

Safe Drinking Water Act.

Additional information on salt water intrusion due to hydrocarbon development and water withdrawal.

Water resources in Cypress Creek and Sulphur River Basins.

State of Texas Environmental Responsibility.