

Providing Resource Information Through Radio Public Service Announcements

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According to the *Broadcasting Yearbook* (1980), radio has been at a saturation level in American homes since the early 1960's, yet there is a continued growth in the number of licensed radio stations and the number of radio sets per household. In addition, virtually all automobiles have radios which provide access to a large mobile audience for part of every day. The Radio Advertising Bureau (RAB) reports a total of more than 456.2 million radios in the United States, with almost 112 million in automobiles ("Radio," 1980). The dollar value to advertisers of drive time broadcasting is documented evidence that radio has the capability of reaching millions and having an effect upon them ("Who's Listening," 1977).

In order to inform the public of the characteristics and value of natural resources and to fulfill advisory and extension functions, a number of agencies are making use of public service announcements (PSAs) and donated radio time. Many agencies also rely on no-cost radio programming to provide public information on vital issues.

Despite the pervasiveness of public service announcements and their growing importance as a form of institutional advertising, little is known about the effects of PSAs

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on audiences. To date, none of the resource-oriented radio broadcasts contacted in the northcentral United States have been methodically evaluated for their effects on audience knowledge, attitudes or behavior. Actual audience contact occurs only when a listener calls or writes in for literature or information based on what has been heard. This serves as the only means of evaluating program impact. The success of attempting to impact an audience through radio has been shown for other types of broadcasts, however; Western Union, for example, attributes the success of the "Mailgram" to radio advertising ("Who's Listening," 1977), and Revlon's OXY 5 used radio as its primary medium to become number one in the skin treatment field in four years (CBS Radio Network, 1979).

In 1980 a study was funded through the Office of Sea Grant to explore the potential for developing an ongoing informational radio series originating with Ohio Sea Grant. The project was designed to fulfill the following objectives:

- develop a series of one-minute PSAs to provide information about the Great Lakes and especially Lake Erie as a resource,
- broadcast a different announcement each day for one month on ten radio stations in central Ohio,
- make available to listeners the printed scripts and further information on each topic,
- conduct a pre- and postbroadcast telephone survey in the listening area to measure audience contact level, interest and message effect,
- indicate the feasibility of and best format for a continuing radio series, and
- train environmental communications students in the production of radio PSAs and associated literature.

The rationale for the project was founded on a perceived need to provide public information about the Great Lakes toward the end of producing an informed citizenry capable of making wise decisions concerning the management of the resource.

It is frequently stated that "we know more about the backside of the moon than we do about the drop of water upon which each of us, and all living organisms, depend for survival." A number of surveys have provided discouraging information about student knowledge regarding marine and aquatic topics. Howe and Price (1976) found that Ohio's tenth and twelfth graders could answer about 40% of questions pertaining to the oceans and Great Lakes. Fortner's

(1981) survey of fifth and ninth graders in Ohio indicated knowledge levels of 38% and 47% , respectively, on similar topics.

An overwhelming majority of students in both studies had positive attitudes toward the water environment, however. Research of this nature involving adults is not reported in the literature, but if we use the National Environment Test of 1970 as an indicator, the voting public is no better informed in resource areas than Ohio students. In that test, mean scores in age groups over 18 were 52% or less (Lynch and Chandler, 1971).

Phase 1. Preparation of Radio Scripts and Recordings

During the autumn and winter academic quarters, students in Ohio State University's environmental communications courses developed appropriate scripts, interview techniques and recording skills to prepare thirty one-minute radio tapes. Script production required library research on designated topics (Figure 1) the development of a conversational style in script writing, practice in interview skills and field recording, and several read-through sessions to achieve exact timing. These activities are among those normally included as course requirements. Quality control was assured by monitoring and editing of materials and by frequent consultation with content experts and the public relations director of WOSU-Radio, a noncommercial station originating at Ohio State.

Figure 1: Scripts Broadcast April 1981

1. By the "Sea" (Introduction to program)
2. Ohio Sea Grant
3. The Lake Effect
4. Fishing Lake Erie
5. Fish Farming...in Ohio!
6. Warning: Storm Surge
7. Lake Erie Wineries: Sweet Success
8. Perry's Lake Erie Victory
9. Lake Erie and Phosphorus
10. Old Women Creek: Your Estuary
11. Great Lakes Agencies
12. Beach Ridges: Keys to the Past
13. Lake Erie Shoreline—Not Just Another Beach
14. Marine Education in Ohio
15. The Lake Erie Marshes: Here Today, Gone Tomorrow?
16. Shipping on the Great Lakes
17. Yellow Perch (and Other Trash)
18. PCB's in Lake Erie
19. The Erie Invasion of the Sea Lamprey
20. The Mystery of the Great Lakes Triangle
21. Lake Erie: Problems and Prospects
22. Ohio Canals
23. How Water Serves Living Things
24. Lake Erie Has Gas—Natural Gas, That is
25. The Ohio Fleet
26. Eutrophication: The Aging of Lakes
27. The Controversy Over the Walleye in Lake Erie
28. Ohio's Energy Savings Account—Lake Erie Natural Gas
29. Water Power
30. Lake Erie is Alive and Well

For copies of any of these materials, contact the author:
OSU School of Natural Resources, 246 Lord Hall, 124 W.
17th Ave., Columbus, OH 43210.

Students also located supplementary materials including original art work or referenced photographs related to script topics. These materials were incorporated into packets of information that were to be mailed to listeners who called in using the phone number tagged on each PSA. A sample of the materials is reduced as Figure 2.

When student projects were completed, it was possible to identify two voices capable of a polished radio performance. These students were then responsible for recording the actual tapes to be broadcast. After all scripts had been recorded, they were grouped by week onto single tapes so that each week would provide a variety of topics and an alternation of male and female voices.

Phase 2. Radio Station Contact

An attempt was made to secure participation from a varied group of stations that could reach a diverse audience all within a range that would not require long-distance calls for the telephone survey. Eighteen radio stations were contacted and asked to participate in the study by airing one sixty-second PSA per day during April 1981. Sample tapes were submitted for their consideration. Since the format of the broadcasts was the PSA, stations were not requested to air them at a given time, but to report the actual broadcast time for project records.

Twelve stations agreed to cooperate as much as they were able, though some requested a printed script to be read by their own announcers. Each station provided information on its format, music type, audience age and coverage area, as shown in Table 1. No FM stations felt they were able to make the commitments required by the project and three of the original participating stations ultimately were eliminated when they failed to return any materials to the project office. The effective coverage area for the broadcasts on nine stations is estimated in Figure 3.

FIGURE 2 (Continued)

just a small fry...



Ever have a 20-pound walleye on your fishing line? It probably fought so hard that you'd have a hard time believing that it started out life as a small fry!

Walleye, sauger, northern pike, and striped bass are game fish that are farmed in Ohio. They start life when eggs from the female and milt from the male fish are mixed from adult fish at fish hatcheries. When eggs and the sperm in the milt unite, a fertilized egg results.

The egg hatches into a fry or larval fish. In these species, the fry carries its own temporary food supply -- a large yolk sac. Later, the fry will change to a diet of zooplankton.

Soon the fry will enter the "swimming up stage." It will swim to the water surface and fill its air bladder for the first time, enabling it to move and steer during swimming.

The fry are shipped to hatcheries around Ohio. There they are put into ponds, often an acre in size and four feet deep. Each acre of pond stocks 75-100,000 fish.

In the pond, their huge appetite enables them to increase in weight 260 times in six weeks. When they reach two or three inches in length, they have the best chance of surviving in the wild. Transported to lakes and rivers in tanker trucks, they are released to provide sport for Ohio fishermen.



Zooplankton: the miniature monsters

Although they look fierce, these beasts are pretty gentle. Their name even says so: zoo means "animal" and plankton means "drifters." That's what they spend their lives doing -- drifting around in the ocean, lakes, and puddles.

Most of them are microscopic, but they are important. Aquatic animals depend on zooplankton directly or indirectly for food. With so many hungry mouths to feed, it's a good thing that plankton are the most abundant of all organisms.

Many zooplankton won't drift all their lives. Some are larval forms of squid, fish, or other animals and will eventually grow into entirely new forms. And chances are, they won't look as much like monsters!

REFERENCES

Gray, Peter. THE ENCYCLOPEDIA OF THE BIOLOGICAL SCIENCES. Van Nostrand Reinhold Co., NY. 1970.

Slofer, Tracy and Robert Dalinger. GENERAL ZOOLOGY. McGraw-Hill Co., NY. 1965.

FIGURE 3

TARGET AUDIENCE



TABLE 1
 CHARACTERISTICS OF COOPERATING RADIO STATIONS

<u>Station #</u>	<u>Broadcast Range (miles)</u>	<u>Audience Size (1000's)</u>	<u>Audience Type</u>	<u>Programming Type</u>
1	120	200	Age 25-49	Contemporary music
2	60	200	Age 25-54	Contemporary light
3	65	24-30 Adult 40 Student	School classes and incidental general population	Classical music and School programs
4	50	200	Age 25-54, general adult	60% public affairs, 40% religious programs and music
5	60	85	Age 30+ targeted	Country and western
6	80	200	Age 18-49	Modern rock
7	5	20	College students, Ohio State	Progressive rock
8	90	50	Median age 54.5	Weekend music (jazz, bluegrass) Weekdays all news, public affairs
9	90	60% of farm audience	Farm audience, age 25-55	Adult contemporary music, farm reports

Phase 3. Broadcasting and Materials Distribution

During April 1981 the twelve stations received weekly packets which included the PSA tapes, single copies of the materials being offered to call-in responders, a form for recording time of broadcast, and a pre-paid mailer for return of the tape and the record of use.

After the first week all stations were contacted for their comments and suggestions for continuation of the project. Four stations reported that they had not used the tapes yet but still planned to participate in the project. Several others requested shorter formats (Figure 4) for live broadcast in future weeks, and this request became more frequent as the project continued. By week four, three stations were receiving thirty-second scripts, four were using fifteen-second scripts and five were receiving the taped spots.

As noted previously, each PSA had a tag with information on how to learn more about the day's topic. Call-in responders to the PSAs were only recorded during regular office hours because of budgetary constraints. Each person who called was asked a series of questions regarding the time and station on which the broadcast was heard, the topic that generated interest and the person's own level of contact with Lake Erie. The prepared supplementary materials on the topic of interest were then mailed to the caller.

Phase 4. Evaluation

The call-in response rate was considered as one form of evaluation of the project. This was supplemented by a pre- and postbroadcast telephone survey in the listening area.

Of all the major communications media, radio was undoubtedly the pioneer in the widespread use of research methods for the audience it serves. While the focus of radio research has largely been management and marketing questions initiated by advertisers or the medium itself, the techniques of audience analysis have become standardized through repeated use (Belden, 1976; Schultz, 1978). Almost all involve the use of telephone interviews with the minimum number of questions needed to provide desired information.

The survey samples were drawn from the Columbus telephone directory according to guidelines of the National Association of Broadcasters (Belden, 1976). A survey instrument, or branching questionnaire, was developed and validated using a sample of OSU students drawn from the campus directory by the same techniques.

FIGURE 4

PUBLIC SERVICE ANNOUNCEMENT FOR 3M22D

From: Ohio Sea Grant
 112 Blankenship Building
 414 W. 12th Avenue
 Columbus, Ohio 43210
 Phone (614) 432-0475

TELE FARMING IN OHIO
 For use: April 5, 1981

Time: 30 seconds

Aquaculture, the raising of fish for food and sport, is a growing industry in Ohio. Our research efforts at Ohio Sea Grant is to determine the maximum number of fish that a pond will support. The results will help to provide more fish to stock Ohio lakes.

For more information on aquaculture in the state, call Ohio Sea Grant, 432-0475. That's Ohio Sea Grant, 432-0475. This has been a public service announcement.

Time of broadcast: _____ AM/PM

PUBLIC SERVICE ANNOUNCEMENT FOR 3M22D

From: Ohio Sea Grant
 112 Blankenship Building
 414 W. 12th Avenue
 Columbus, Ohio 43210
 Phone (614) 432-0475

TELE FARMING IN OHIO
 For use: April 5, 1981

Time: 35 seconds

Aquaculture, the raising of fish for food and sport, is a growing industry in Ohio. For information on the aquaculture research being done in the state, call Ohio Sea Grant, 432-0475. That's 432-0475.

Time of broadcast: _____ AM/PM

The prebroadcast survey attempted to:

- (1) identify prevailing attitudes as to the importance of Lake Erie to the state and to the nation,
- (2) get an indication of the knowledge level of the public on Lake topics,
- (3) determine what proportion of the public listened to radio stations that would be participating in the project (thus assessing potential audience size), and
- (4) discover how many people were aware of the existence of Ohio Sea Grant (a relatively new resource agency).

The postbroadcast survey tested for objectives 1, 2 and 4 above with a new sample chosen in the same way as the prebroadcast sample. Objective 3 was modified to gain information on the proportion of the sample that actually heard any of the broadcasts. This survey was presented to 239 adults as compared with 244 in the prebroadcast survey.

Results

Table 2 summarizes the data collected in the telephone surveys before and after the radio broadcasts. The broadcasts appear to have reached nearly 5% of the people who listened to the cooperating stations. It should be noted that among those in the postbroadcast survey, 55.7% named cooperating stations, but many added comments such as "when I listen at all," indicating that use of the station was probably infrequent. In light of these comments, radio contact with about 5% of the sample was considered to be a good rate of success.

On knowledge scores of those surveyed, and on awareness of importance of Lake Erie, pre- and postbroadcast results did not differ significantly even at the $P = .1$ level. The increase in awareness of Ohio Sea Grant, however, was significant at a level of $P < .001$.

During the telephone surveys, an offer was made to supply information about Ohio Sea Grant (prebroadcast) and about program topics (postbroadcast). Interest levels among those surveyed resulted in the mailing of 135 Sea Grant brochures and 85 packets of information on radio topics. The interviewers reported that numerous others expressed interest in receiving materials but declined to provide addresses.

The substance of the survey questions and the voluntary comments of participants provided some insight into the nature of the general public with regard to the Lake Erie resource. For example, when approached with the initial

Table 2: Survey Results

<u>Item Description</u>	<u>Pre-Broadcast</u>	<u>Post-Broadcast</u>
Importance of Lake Erie to Ohio (4 = very important)	3.0	3.3
Importance of Lake Erie to U.S. (4 = very important)	3.3	3.2
Knowledge score (% correct, based on 3 survey forms, 2 questions each)	53.0%	52.4%
Awareness of Ohio Sea Grant	6.0%	9.1%
Interested in learning about Lake Erie	45.3%	—
Heard Ohio Sea Grant PSA(s)	—	4.6%
Using a participating station	55.9%	55.7%
N: Females	132	146
N: Males	112	93

question, "May I ask you a few questions about Lake Erie?" a large number of people said they knew nothing about the lake but went on to tell how often they had been there. This was also reflected in the fact that most people felt that Lake Erie must surely be important to central Ohio and the United States, but they were undecided as to *how* important. Numerous comments on how many people go to the lake for recreation indicated that in many cases even those who chose "very important" as their answer were acting on the basis of the lake's importance to those who *go* there, rather than its importance to inland or other areas.

Interviewers reported that those surveyed seldom perceived the far-reaching impact of the lake in terms of climate modification, transport of goods, historical importance and such. When these factors were presented as knowledge questions, that lack of perception was verified.

A knowledge question about pollution problems in Lake Erie indicated that only 39% were aware of improved conditions. Seven percent thought the problems were worse now; 18% claimed they were unchanged over the last few years, and 35% answered "Don't know." Some who had heard of improvements were skeptical as to their reality, but

numerous respondents volunteered comments of concern about cleaning up the lake. This knowledge question more than any other provided insight into popular perception of Lake Erie's image.

As previously described, project evaluation included not only the telephone surveys but an active response option. Each broadcast included an offer of additional materials on the topic. Only 22 listeners called the given number to request such materials and nearly half of the calls dealt with one topic, "The Great Lakes Triangle." Station 2, one of the most popular in the area, had chosen to run a 15-second "Triangle" spot several times a day for two weeks. The combination of station popularity, favorable air time, and the lure of the Triangle mystery can account for this large influx of calls.

The number of call-in responses recorded was lower than expected probably because of the financial constraints of the project. Phones were being answered only during regular office hours, while data provided by the stations indicated air times that were frequently outside this range.

Discussion

Considering the program objectives listed in the introductory statement, the project was a successful one which has provided considerable insight into the mechanisms of using radio PSAs for public information. The environmental communications students who participated in program development, content research and project evaluation were unanimous in their opinion of the high value of the experience and its usefulness in their future careers. The set of PSAs and accompanying materials has been transmitted to the three Ohio Sea Grant Advisory Agents in the lake counties, and these individuals report use of the materials not only for radio but as public information leaflets.

The broadcasts themselves may have had some effect on the listeners in terms of increased awareness of Ohio Sea Grant. Other audience characteristics were so similar in pre- and postbroadcast surveys that a general knowledge increase of attitude change cannot be documented. The 4.6% of the sample that claimed to have heard one or more of the PSAs actually had a low probability (20%) of hearing the particular message(s) that would have provided an answer to one of the knowledge questions. From a research standpoint, the similarity of the two groups surveyed is an indication of the validity of the sampling techniques used, and this information will be valuable in future studies.

As a pilot for a possible continuing radio series for a resource agency, this study indicated several problems in approach and format. First, the use of PSAs is at the discretion of the stations, and each station sets its own use policy: desired length of announcement, time of broadcast, live versus taped spot, and acceptability of the message to the audience.

Having to prepare material for nine stations for thirty days resulted in targeting a middle ground in PSA message format. The material could not be individualized for each station's program style and audience.

Second, the short duration of the project (one month of daily broadcasts) prevented stations from providing a standard air time slot for the messages. Two stations asked if we were willing to make a continuing commitment to programming, such as one five-minute program per week for a year. Presumably this type of program could be more easily accommodated into a completed schedule.

There were also indications of a perception problem by some stations regarding Lake Erie's importance. Ohio Sea Grant frequently encounters hesitancy when proposing Great Lakes oriented programs for central Ohio. It is apparently not clear to the general public, as noted in the surveys, that the lakes are very important even to those not in the lake watershed. According to Boutwell (1980) community relevance is a major factor in the acceptance or rejection of radio PSAs.

Finally, implicit in the project goals was the achievement of a saturation level of programming for the central Ohio listening audience. This would have facilitated data collection on message effect. Given the constraints attendant on the use of PSAs, however, this goal could not be achieved. The response to the Sea Grant program by the different radio stations often depended on the stations' format or how they typically handled PSAs. Some stations normally accept only a limited number of PSAs while others were more flexible as to the number and length they could accommodate. This latter group included the public service oriented stations such as the two affiliated with the University and the educational broadcast station (stations 3, 7 and 8). Commercial stations apparently had more difficulty fitting a one-minute broadcast into schedules which were already tight.

A well-produced short message containing resource information is generally acceptable to most radio stations. Producers of such programming can enhance its acceptability by (1) matching each station's format and image, (2)

being flexible in presentation style, and (3) maintaining consistent high quality in production. It was our experience that most stations will try to cooperate with resource agencies as much as they can without sacrificing their particular program goals. Therefore a program which is well produced and flexible can achieve the best exposure if the radio stations are approached in a spirit of cooperation and with a clear understanding of the goals of both parties.

REFERENCES

- Belden, Joe. *A Broadcast Research Primer*. Washington, D.C.: National Association of Broadcasters, 1976.
- Boutwell, W. Bryant, "Public Service Utilization by Texas Radio Stations" *Journalism Quarterly*, 54(4):674-6, Winter 1980.
- Broadcasting Yearbook 1980*. Washington, D.C.: Broadcasting Publications, Inc., 1980.
- CBS Radio Network. "Look What's Catching Fire," *Time Magazine*, November 5, 1979, p. 111.
- Fortner, Rosanne. "Knowledge, Attitudes, Experiences: The Aquatic Connection." *CURRENT: The Journal of Marine Education*, in press.
- Howe, Robert W. and Charles L. Price. "Survey of students' knowledge and attitudes regarding oceanic education," Unpublished survey, Columbus: The Ohio State University, 1976.
- Lynch, P. and Chandler, R., *National Environment Test*. New York: Pocket Books, 1971.
- "Radio": Who's Listening, When and Where," *Stores* 62:39, September 1980.
- Schultz, D.E. "Comparative study of radio audience measurement methodology." *Journal of Advertising*, 7(2):14:22, 1978.
- Slonim, Gilven, M. "Oceanic education: pathway to the frontier of the future." *Environmental Education Report*, 5(10):5-6, 1977.
- "Who's Listening in Drive Time?" *Media Decisions*, 12:70-71, November, 1977.