How New Hampshire Produced Films On Water Pollution

By TERRENCE P. FROST, B.S.

SKILLED AMATEURS enabled New Hampshire to bypass the major cost of film production, the cost of professional labor, in preparing three films on water pollution control. Volunteers in the State health department and the water pollution commission enabled the State to save 95 percent of the ordinary costs of film production. Otherwise, the films could not have been made within the commission's cash budget.

Why did the New Hampshire Water Pollution Commission go into the business of producing films?

It realized the value of visual aids in telling a quick and vivid story. Better a technicolor picture of a New Hampshire watershed than too many statistics and too much technical detail at public hearings, the commission's staff reasoned—the technical data are necessary, yes, but a brief film would bolster their meaning.

Consequently, the water pollution commission engaged in the production of "The Laconia Sewage Treatment Plan," which pictures the construction of a modern, well-designed sewage treatment plant from the time when the excavation was begun to the completion of the plant. It tells why the plant is needed and what it means to the thriving lake city of Laconia, N. H. The two other color films produced by the commission were both developed specifically for practical use at public and legislative hearings to get across a quick picture, in each instance, of an entire watershed.

Both the other two films, "The Sugar River" and "The Mascoma Speaks," show the multiple water uses and abuses of the entire basins of the two rivers, starting in sequence near the headwaters. They each run about 20 minutes.

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Value of the Films

Audiovisual presentation of this kind materially helps in establishing a sound basis for discussion leading to stream classifications and concrete watershed policies for pollution control. The intent in producing these films was not to emphasize or minimize existing pollution but to orient the audience so that a later discussion of staff recommendations for pollution control and legislation could be readily understandable, more concise, and less time consuming than oral reporting of a mass of technical facts.

These films have a high secondary value in familiarizing the general public with the problems of water pollution control and abatement. Other than their low cost, there is a sound justification in the value of the intimate feeling an audience gets from seeing familiar scenes and locales, and the relative increase in attention, interest, and recall derived from this fact.

Occasionally, the films have been sent outside New Hampshire. They are widely circulated locally. Public schools, service clubs, fish and game groups, women's clubs, and others are requesting the films routinely. The commission's latest film, "The Mascoma Speaks," in circulation since early 1953, has gone to the Federated Sewage Works Association, the New England Water Works Association, the New England Interstate Water Pollution Control Compact group, and Purdue University. It has been viewed at a legislative hearing and at hearings of the water pollution commission and by the general public through arrangements made by service and social clubs.

An Amateur Production, Strictly

What are the mechanics of amateur production from start to finish? As an illustration, let us follow the commission's production of "The Mascoma Speaks."

An associate sanitary engineer with the New Hampshire State Health Department, Francis J. Lariviere, who had extensive amateur experience with film photography, was available for the filming, film cutting, editing, and other technical work. He also recorded sound on the film. Comments on the photography of "The Mascoma Speaks" indicated it approaches professional levels.

Essential, before shooting a single foot of film, was an intimate knowledge of the watershed to be depicted. Members of the water pollution commission staff gained this by hiking over the terrain. Some of the shots to be taken later were selected during these walks.

There could be no set schedules for completion of the film since all of the amateur production crew had other duties and assignments which came first. Usually, a commission staff member and Lariviere went out together on good clear days and filmed as much as possible while the weather held.

Film rolls were sent to a processing laboratory as soon as they had been exposed. It took 2 seasons of a day here and a day there to film the watershed. In the meantime and incidental to the technical and engineering study of the Mascoma basin, in informal conferences and on other occasions when time permitted, the commission staff members developed a script. There were numerous rewrites and drafts before a suitable final draft was worked out. More filming was needed to get the unforeseen shots that developed during the scriptwriting sessions.

Ultimately, 2,000 feet of film were ready for editing. The script was timed for each scene by reading aloud. The best film shots were integrated with the script.

At home, on his own time, Lariviere experimented with and filmed the title heads which would be superimposed on the final film. He also tape-recorded suitable background music to match the mood of the script and photography.

When the best job possible of matching film and script had been done, the film was sent to a laboratory to be copied. The copy included a magnetic sound track.

"Talking" the script onto the magnetic sound track was the last step in production. Clarence W. Metcalf, director of the health department's bureau of health education, perfected the commentary and recorded it on the film.

To incorporate the narration on film, synchronize the script with the photography, and eliminate background and projection noises, the crew borrowed facilities of a local radio station. In a soundproof room, they set up the projector and the tape recorder containing the tape of the background music. Through a window in the soundproof room, the film was projected onto the wall of an adjacent room in which Metcalf, as narrator and commentator, watched the film and "talked" the script into the recorder microphone of the projector. Lariviere operated both the projector and tape-recorder volume controls from the soundproof room. Both men wore headsets for monitoring (see picture). When the commentary was perfected, the film was finished.

Production Cost Estimates

In actual cash outlay, how much did "The Mascoma Speaks" cost the New Hampshire Water Pollution Commission?

Less than $400 was actually spent. Two thousand feet of film cost $150. One copy of the finished film cost about $220.

It should be cautioned that these figures may appear somewhat unrealistic for estimating the actual cost of film production by a public group. Since labor constitutes by far the largest portion of the real cost of any film, in all fairness, it should be pointed out that it would take skilled amateur technicians, using borrowed facilities and working on a piecemeal basis, much longer than professional film producers to do a finished, creditable sound film.

The staff of the water pollution commission did the entire production job with the exception of the film processing and copying. Many of these hours were spent after the office day, in the evenings, and during weekends.

The film and sound projector and editing

From soundproof room film is projected through window to adjacent room where narrator reads from script. Note use of headsets by operator and narrator for monitoring.

equipment were borrowed from the New Hampshire State Health Department's bureau of health education. The tape recorder is part of the commission's regular office equipment. The camera, equipped with 17-mm., 1- and 3-inch telephoto wide-angle lenses, is the property of the New Hampshire Water Pollution Commission.

Even if the commission had purchased all the necessary equipment, it could have made its films at less than 10 percent of the estimated commercial cost, when the estimated cost of labor is disregarded. If purchased by the commission, the equipment used would have cost approximately $1,520, or separately, as follows:

Camera and accessories	$350
Projector (film and sound)	800
Film (2,000 feet)	150
1 copy of film	220

Some Disadvantages

Any group of people working cooperatively on film production can duplicate New Hampshire's efforts if they are fortunate in having available key employees who by avocation are expert photographers and take pictures for their own enjoyment, or who have talents approaching those of a film producer.

There are definite disadvantages to the use of magnetic sound film. Not many viewing groups own magnetic sound projectors. From a utilization standpoint, these films are limited to audiences which can procure magnetic sound equipment, publicly owned or otherwise, and projectionists, amateur or otherwise, who are skilled in its use. There is a significant limitation, too, in using magnetic sound recording on film—magnetic sound films are more difficult

to duplicate than the optical type film. The commission has, however, duplicated one magnetic film in every respect, with negligible loss.

However, New Hampshire's three color films have already admirably served their primary purpose in setting up stream classifications. The films have been well received by a variety of audiences. The experience of the water pollution commission indicates that many useful films could be made by health departments with a story to tell and a few people on the staff with the necessary talents to put the story on film. Although such films are of amateur origin, they can be practically produced at less cost than professional films, with which they merit favorable comparison.

Ideas

CD Control Format

POLK COUNTY, IOWA. A modification of the existing regulations for the control of communicable disease in Polk County, Iowa, has passed a successful 2-year trial period, according to Abraham Gelperin, M.D., Dr.P.H., director of the Des Moines and Polk County health departments, in the January 1954 issue of the *Journal of the Iowa State Medical Society.*

The program, as instituted in 1951, was summarized by Dr. Gelperin as follows:

1. The minimum period of isolation of patients with communicable diseases is unchanged.

2. The use of placards for all communicable diseases is at the discretion of the director of public health. They will not be used when there is adequate isolation of the patient and adequate medical attention. Tuberculosis is included in this group.

3. Antibiotic prophylaxis for familial and other intimate contacts to a case of scarlet fever or streptococcal upper-respiratory-tract disease is discretionary with the family physician. The doctor may employ any antibiotic with any regime, provided the contact is adequately protected for the 7-day quarantine period. Adequate isolation and treatment of the patient is the prerequisite to this routine.

4. Antibiotic or sulfa-drug prophylaxis of familial and other intimate contacts of a patient with meningococcal meningitis is also at the discretion of the family physician. Adequate isolation and treatment of the patient is again the prerequisite.

5. Contacts of a case of pertussis fall into two categories, those who have had previous vaccine prophylaxis and those with no history of specific immunization. In the former instance, a single booster is recommended, provided the prophylactic inoculations have not been administered during the previous year and the contact is under 12 years of age. These children may continue in school. In the second instance, child contacts are to be excluded for 2 weeks unless immunization is immediately initiated. The second and third injections are given at 2-week intervals, instead of 4 weeks apart.

Immunization against pertussis of unprotected familial or intimate contacts over 12 years of age is to be initiated with caution. The older teen-age contact may forego this preventive inoculation, on approval of the family physician.

6. A new regulation for infectious hepatitis is included. Schoolchildren are excluded for a minimum of 4 weeks to insure adequate recovery from this disease. All familial and intimate contacts are given gamma globulin by the family doctor according to a schedule. Since the State regulations for infectious hepatitis isolation is 7 days, the family physician determines when an adult may be released for work.

7. Contacts of patients with measles, German measles, mumps, and chickenpox are not quarantined. Gamma globulin is recommended for modification of measles in child contacts. All school personnel is informed that contacts of the four virus diseases are to be inspected each day as a part of homeroom morning inspection by the homeroom teacher, and when first signs of illness appear, referred to the school nurse or to the family doctor if there is no school nurse available.

8. Local regulations concerning other communicable diseases, such as poliomyelitis, scabies, ringworm of the scalp, impetigo, diphtheria, and others, are as listed in the rules and regulations of the control of communicable diseases, Iowa State Department of Health.

9. An intimate contact is any person who has spent time with the patient at home during the prodromal-symptom period of the disease in question, or has been a playmate of the patient during the period just mentioned. It is not to include contacts in the schoolroom or during normal working relations except under very unusual circumstances.

The Iowa State Department of Health has suggested to other counties that they also try the new modifications. If sufficient testing shows the demonstration to be effective, action will be taken to adopt them as official rules and regulations of the State.