



NBS TECHNICAL NOTE **960**

U.S. DEPARTMENT OF COMMERCE / National Bureau of Standards

# A Survey of the National Metric Speakers Bureau

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<sup>1</sup> Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D.C. 20234.

<sup>2</sup> Located at Boulder, Colorado 80302.

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# A Survey of the National Metric Speakers Bureau

*Technical Note, no 960*

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John M. Tascher

Institute for Applied Technology  
National Bureau of Standards  
Washington, D.C. 20234



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## SUMMARY

The National Metric Speakers Bureau was established by the Metric Information Office of the National Bureau of Standards (NBS) in January 1976 in response to the rapidly growing interest in the metric system and metrication. The number of speakers at the end of 1976 was 273 with at least one in every State. NBS supplied a script and other materials to each speaker. A survey of all of the speakers was conducted during November and December 1976. The purpose of the survey was to determine how the Speakers Bureau is working, and how it can be made to work better.

Of the 273 registered speakers, 197 replied (a rate of return of 72.2 percent). About 1580 requests were made to the responding metric speakers; of these, the speakers accepted about 1330 invitations for a rate of acceptance of about 85 percent. About 40 percent of the speakers reported that they are reimbursed for their expenses (usually travel expenses when they go out of the local area). Additional speakers were thought by 18 speakers to be needed in their areas. Of the 197 respondents, 164 (or 83 percent) were satisfied with the materials provided by NBS for their presentations, 22 (or 11 percent) were not satisfied, and 11 (or 6 percent) were uncertain.

The speakers described numerous ways in which NBS can be of further assistance. These included such suggestions as developing programs in specific technical areas, preparing training materials, publishing journals, issuing new press releases telling the news media about the Speakers Bureau, and providing supplies of NBS publications. It is anticipated that many of the activities suggested will be undertaken by the U.S. Metric Board, after it is established.

This Technical Note gives a survey of the sources of information on the metric system and metrication in those areas where the speakers asked for additional information. Most of the information sought by the speakers falls into four general areas: Metric System, Education, Business and Industry, and Consumer.

Finally, all except five of the respondents indicated that they wanted to continue as metric speakers. Of the five, four did not want to continue and one was uncertain. This is an indication that the majority of the speakers believe that the National Metric Speakers Bureau is serving a worthwhile function.





## ABSTRACT

The National Metric Speakers Bureau was established by the Metric Information Office of the National Bureau of Standards (NBS) in January 1976 in response to the rapidly growing interest in the metric system and metrication. The number of speakers at the end of 1976 was 273 with at least one in every State. NBS supplied a script and other materials to each speaker. A survey of all of the speakers was conducted during November and December 1976. The purpose of the survey was to determine how the Speakers Bureau is working, and how it can be made to work better. NBS wanted to know, for example, what the speakers thought of the speaker materials supplied by NBS, where additional speakers may be needed, what types of expertise the speakers have, and how NBS could further assist the speakers. This report summarizes the findings of the survey. The report also gives a survey of the sources of information on the metric system and metrication. A roster of speakers of the National Metric Speakers Bureau, dated July 1977, appears in an appendix.

Key words: Metric information, sources of; metric speakers; Metric Speakers Bureau; National; National Metric Speakers Bureau



A SURVEY OF THE  
NATIONAL METRIC SPEAKERS BUREAU

John M. Tascher

INTRODUCTION

1. Background

The National Metric Speakers Bureau was established by the Metric Information Office of the National Bureau of Standards (NBS) in January 1976. This was in response to the rapidly growing interest in the metric system and metric conversion, caused in part by the signing of the Metric Conversion Act of 1975. NBS was getting a very large number of inquiries about securing metric speakers for seminars, conferences, classes, service clubs, and training sessions. As a result, the Metric Information Office invited, through personal contact and metric-related national organizations, persons knowledgeable about the metric system to become speakers with the Speakers Bureau. The number of speakers at the end of 1976 was 273, with at least one in every State.

Each speaker was supplied with a basic set of talks and 35-mm transparencies which were keyed into the talks. The speakers were told that they did not have to use these talks verbatim unless they chose to do so. What was asked was that certain key points be emphasized and that no conflicting ideas or viewpoints be presented. NBS has occasionally sent copies of a newsletter, "Current Metric Activity," to the speakers to serve as updates on metric developments in order that presentations be kept current.

After each appointment to the Speakers Bureau, a press release was sent to the broadcast and news media in the speaker's area to publicize the speaker in order that local groups could contact the speaker directly. The NBS also publicized the program through the media and said it would refer interested groups seeking metric speakers to the local speaker(s). Speakers were told that they were free to solicit any speaking engagements on their own.

The speakers agreed to serve in the Speakers Bureau as a public service. It was understood that each speaker would make a reasonable effort to accept requests for speaking, but was under no obligation to do so. Any details concerning expenses had to be resolved between the speaker and the requesting group.

2. Survey of Speakers

A survey of all the registered members of the National Metric Speakers Bureau was conducted during November and December 1976. A copy of the letter and questionnaire sent to the speakers, dated November 5, 1976, is reproduced in appendix A.

The purpose of the questionnaire was to determine how the Speakers Bureau has been working, and how it can be made to work better. The National Bureau of Standards wanted to know, for example, what the speakers thought of the speaking materials supplied by NBS, where additional speakers may be needed, what types of expertise the speakers have, and how NBS could further assist the speakers. The National Metric Speakers Bureau may be transferred to the U.S. Metric Board when the Board becomes operational.

#### ANALYSIS OF RESPONSE TO QUESTIONNAIRE

Of the 273 registered speakers, 197 replied (a rate of return of 72.2 percent). Of the 197 respondents, 24 failed to put their name on the questionnaire. A list of respondents is provided in appendix B.

##### 1. Speaker Profiles (Questions 1 through 4)

The purpose of the first four questions of the questionnaire was to obtain information to help NBS provide referrals to groups seeking speakers. These questions sought information about: (1) groups the speakers felt qualified to address, (2) special areas of expertise, (3) when speakers are available, and (4) willingness to travel outside their local areas.

The information collected has been added to each speaker's file in the NBS Speakers Bureau records.

##### 2. Requests for Speakers (Questions 5 through 7)

About 1580 requests were made to the responding metric speakers; of these, the speakers accepted about 1330 invitations for a rate of acceptance of about 85 percent. Reasons for turning down requests to speak were:

Scheduling conflicts	162
Outside of local area	37
Lack of expertise	30
Inconvenience	15
Other	<u>7</u>
TOTAL	251

A list of the number of requests made to, and the number of acceptances by, each of the speakers is tabulated in appendix B.

##### 3. Reimbursement of Speaker's Expenses (Question 8)

Of the 197 respondents, 79 or about 40 percent reported that they normally are reimbursed for their expenses (usually travel expenses when they go out of the local area).



4. Need for Additional Speakers (Question 9)

At the time the survey was undertaken, it was considered desirable to find out whether and where additional speakers may be needed. The questionnaire asked the speakers whether and/or how many additional speakers would be needed. In response 18 speakers felt that additional speakers were needed as follows:

<u>Speaker</u>	<u>Area</u>	<u>Number of Additional Speakers Needed</u>
Gawronski	San Diego, California	2
Hoffman	Sacramento, California	1
Freier	Los Angeles, California	100
Geppert	Delaware	4
Andrews	Florida	10
Collier	Marietta, Georgia	12
Magee	Idaho	Uncertain
Star	Mt. Prospect, Illinois	About 10
Faulkner	Maine	2-3 for general needs 6-8 for school needs
Malone	Nebraska	Several in Western Nebraska
Prevost	New Hampshire	3-5
Reeder	Buffalo, New York	Uncertain
Diener	Research Triangle Area of North Carolina	1
Pangle	North Carolina	Uncertain
Murray	Scranton, Pennsylvania	Uncertain
Guerrero	Houston, Texas	Uncertain
Holman	Houston, Texas	2
Mitchell	Seattle, Washington	Speakers Who Can Talk During the Day

The operation of the Speakers Bureau will probably be transferred to the U.S. Metric Board when the Board is established. For this reason, no new speakers will be appointed at this time, unless a clear need exists.

5. Speakers Evaluation of NBS Materials (Question 10)

Of the 197 respondents, 164 or 83 percent were satisfied with the materials provided by NBS for their presentations, 22 or 11 percent indicated that they were not satisfied, and 11 or 6 percent were uncertain.

The chief complaint from the 22 speakers centered on the 35-mm transparencies. A number of speakers said that the slides were not pertinent to practical uses. One respondent said that the script was good, but the slides were not. Another said that the slides had practically no metric education or information value. On the other hand, several speakers said the slides are "very good" or "excellent" or "great."

Another complaint was that the materials were too general. One speaker said, "Many technical groups seem dissatisfied with the general nature of the talk and would ask questions of a very specific nature which I was not knowledgeable enough to answer." (It must be pointed out, however, that it was intentional that the materials be "general." They have to be supplemented with more specialized materials for talks to specialized technical groups.)

#### 6. Additional Information Needed by Speakers (Question 11)

The purpose of question 11 was to determine what additional information the speakers needed. Most of the information being sought by the speakers falls into four general categories: Metric System; Education; Business and Industry; and Consumer.

It is important to make a distinction between the metric system and metrication. For purposes of this report, the metric system refers to the International System of Units (SI) as established by the General Conference on Weights and Measures since 1960, how it was developed, what it is, and how it is interpreted and modified. Section 4(4) of the Metric Conversion Act of 1975 gives responsibility to the Secretary of Commerce for interpreting or modifying SI for the United States. The National Bureau of Standards has expertise in the area and will continue to maintain it. Metrication refers to the "application" of the metric system, whether in education, business and industry, government operations, or daily living. By and large, these are areas outside the expertise of the metric information activities of the National Bureau of Standards, except for providing knowledgeable sources of information.

a. Metric System and Metrication - there are several sources of information which provide broad coverage on the metric system and metrication. These are listed in section 1 of appendix C.

b. Metric System - The important sources which define and describe the metric system are listed in section 2 of appendix C.

Several speakers asked about the proper spelling of units, particularly meter (metre) and liter (litre). Each organization or sector will decide for itself which spelling it prefers. The U.S. Department of Commerce, by a directive from the Assistant Secretary of Commerce for Science and Technology dated July 24, 1975, uses the "er" spelling in correspondence, reports, and publications. This spelling has been reaffirmed by Dr. Jordan J. Baruch, the new Assistant Secretary for Science and Technology, in a memorandum dated May 6, 1977, to Dr. Ernest Ambler, Acting Director of the National Bureau of Standards. It is uncertain whether the U.S. Metric Board will take a stand on the spelling of meter and liter.



One speaker asked for an explanation of the distinction between weight and mass. Considerable confusion exists in the use of the term weight as a quantity to mean either force or mass. The Federal Register Notice dated December 10, 1976, simply says that "weight" is the commonly used term for "mass." Following is a quote from the \* Standard for Metric Practice:

"In commercial and everyday use, the term weight nearly always means mass; thus, when one speaks of a person's weight, the quantity referred to is mass. This nontechnical use of the term weight in everyday life will probably persist. In science and technology, the term weight of a body has usually meant the force that, if applied to the body, would give it an acceleration equal to the local acceleration of free fall. The adjective "local" in the phrase "local acceleration of free fall" has usually meant a location on the surface of the earth; in this context, the "local acceleration of free fall" has the symbol g (sometimes referred to as "acceleration of gravity") with observed values of g differing by over 0.5% at various points on the earth's surface. The use of force of gravity (mass times acceleration of gravity) instead of weight with this meaning is recommended. Because of the dual use of the term weight as a quantity, this term should be avoided in technical practice except under circumstances in which its meaning is completely clear. When the term is used, it is important to know whether mass or force is intended and to use SI units properly as described in 3.4.1.1 (of the Standard for Metric Practice), by using kilograms for mass or newtons for force."

Several speakers asked which units will be used within such areas as viscosities, heat transfer, etc. Each area of interest will eventually establish its own system of preferred units to use in describing the phenomena with which they work. For example, the meteorology sector will decide which units it prefers for measurements such as wind speed (probably km/h), and solar radiation (probably Wh/m<sup>2</sup>).

c. Education - Section 3 of appendix C lists several references which will provide information about the metric system in education.

d. Business and Industry - There were numerous questions about industrial conversion and timetables for metrication in industry. The great bulk of information available on conversion in industry is referenced in the general sources of information listed in section 1 of appendix C.

The group that is in the forefront on metrication in industry is the American National Metric Council (ANMC), whose address is 1625 Massachusetts Avenue, NW., Washington, D.C. 20036, and whose telephone is (202) 232-4545. ANMC is a nongovernment, nonprofit body

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\* See reference in Appendix C, Section 2, paragraph b on page 22.

supported by business and industry to plan and coordinate metric conversion, particularly in the business and industry sector.

Answers to specific questions on industrial conversion can be obtained from the sources listed in appendix C, section 4.

e. Consumer - Several speakers had questions in the consumer area. Much information on metrication and the consumer is referenced in the general sources of information referred to in appendix C, section 1. Other sources of information are listed in appendix C, section 5.

f. Miscellaneous Areas - For information on weights and measures departments at the Federal, State, and local levels, how metrication will affect weights and measures activities, and where to obtain weights and measures equipment, contact:

Jeffrey V. Odom  
Metric Coordinator  
Office of Weights and Measures  
National Bureau of Standards  
Washington, D.C. 20234

Until the U.S. Metric Board is established, status of the nominations to the Board can be obtained by contacting:

Presidential Personnel Office  
Old Executive Office Building  
Washington, D.C. 20500

For information on metric standards, obtain A Bibliography of Metric Standards which is available from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Only a few metric standards have as yet been adopted as American National Standards, but a wider range of metric standards and recommendations have been adopted by the international standards organizations. Included in the Bibliography are:

- i. American National Standards
- ii. International Organization for Standardization (ISO) Standards and Recommendations
- iii. International Electrotechnical Commission (IEC) Recommendations
- iv. International Commission on Rules for the Approval of Electrical Equipment (CEE) Specifications.

The bibliography is designed to provide guidance on the availability of standards which should be useful as introductory material for metrication.

For information on metrication in hospitals see: (1) Metric Handbook for Hospitals published by the U.S. Metric Association, Inc., Sugarloaf Star Route, Boulder, Colorado 80302, in 1975; (2) SI Metric Conversion Kit for Hospitals (U.S. Edition) published by the Canadian

Hospital Association, 25 Imperial Street, Toronto, Ontario, M5P 1C1, Canada; (3) Medicine and Metrication available for \$1.75 from Dr. Howard Faulkner, Technology Department, University of Maine, Gorham, Maine 04038. For answers to specific questions, contact:

Mr. Bernard Korn  
Staff Specialist  
Department of Health Facilities and Standards  
American Hospital Association  
840 North Lake Shore Drive  
Chicago, Illinois 60611

For information on the other miscellaneous areas which the speakers asked about (e.g., metric impact on secretaries, gas station attendants, etc.; costs of metric conversion; political and economic aspects of metrication; and the Renard Series of Preferred Numbers), the best source of information is the NASA Technical Memorandum listed in appendix C, section 1.

There is no known bibliography of Government metric publications for internal Government use.

#### 7. Assistance Requested from NBS Metric Information Program (Question 12)

Numerous speakers responded to question 12 by describing ways in which the NBS Metric Information Program can be of further assistance. Most of the suggestions were for activities that NBS is not likely to be able to undertake.

With the establishment of the U.S. Metric Board, the NBS role in metric information and metrication may be more limited. For example, NBS will be responsible for the interpretation and modification of the SI for use in the United States as specified in Section 4 (4) of the Metric Conversion Act of 1975 (Public Law 94-168). It is most likely that the Board, whenever it becomes functional, will take over the bulk of metric activities suggested by many of the speakers. Thus, NBS cannot undertake such things as issuing motion pictures, developing slide programs dealing with specific topics such as procurement and machine shop operation, printing proceedings of meetings or conferences dealing with metric, supplying transparencies for overhead projection in place of the 35-millimeter transparencies previously issued. This office will not be developing teaching tools, slide rule type conversion tables, or other training materials. There are many nongovernment efforts in these areas (consult the NASA bibliography cited in section 1, appendix C).

NBS will not be publishing newsletters or journals in competition with such publications as the Metric Reporter or the U.S. Metric Association Newsletter. The Metrication Subcommittee of the Interagency Committee on Standards Policy plans to write an occasional Federal Agency



Metric Newsletter to keep the Federal agency metric coordinators informed of the metrication activities within the Federal Government. NBS will probably send out an occasional "Current Metric Activity" until the U.S. Metric Board is established. It is not possible for NBS to supply each speaker with a subscription to newsletters such as the Metric Reporter, as suggested by one speaker.

Several speakers suggested that there should be slides explaining SI and there should be updated slides (slides explaining the Metric Board, for example). NBS is preparing 35-millimeter transparencies concerning the SI base and supplementary units, SI derived units with special names, and SI prefixes. Copies of these slides will be sent to each speaker. NBS will not be preparing slides describing the U.S. Metric Board. The Board will have its own ideas in this area.

One speaker suggested reissuing the Question and Answer supplement to the script. Several of the speakers did not receive the revised March 1976 "Questions and Answers on Metric." A copy of this revised version can be provided. It is up-to-date for virtually all the questions.

There were many requests for a list of available NBS metric publications. NBS LC 1070 "Some References on Metric Information" lists the NBS metric publications and their availability. See section 9 on page 10.

Some of the speakers wanted a more technical handout for engineers, industry, or science students. One handout which could be used for this purpose is the Federal Register Notice dated December 10, 1976, entitled the "Metric System of Measurement."\* Another is NBS Special Publication 304A, "Brief History of Measurement Systems," which includes a chart explaining the seven base units and the two supplementary units.

Many speakers thought that more publicity should be given to the metric speakers, mainly through the issuance of another press release, that the press release should include telephone numbers of the speakers, and that the press release should make clear that travel expenses and financial assistance should be provided by the groups requesting the speaker.

It is not desirable to issue another press release at this time pending a determination of the future status of the Speakers Bureau by the U.S. Metric Board. The Board may want to make changes in its operation and may also want to develop new materials for the speakers. (It is, of course, possible that the Metric Board may not want to continue the Metric Speakers Bureau, in which event it would probably be disbanded.)

An up-to-date roster of the members of the National Metric Speakers Bureau appears in appendix D.

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\*See reference in appendix C section 2, paragraph a.

## 8. Publications Needed (Question 13)

Question 13 asked each speaker to estimate the number of copies he would need of NBS LC 1052, "All You Will Need to Know About Metric (For Your Everyday Life)" for 1977. The total requested was about 130,000 copies. This did not include those speakers who were uncertain or who indicated "as many as possible." Though NBS will respond to a request for a reasonable number, the need for larger quantities can easily be met by local reproduction.

## 9. Other NBS Metric Materials (Question 14)

The responses to question 14 concerning the need for other NBS materials indicated that the speakers desire a substantial number of other NBS publications as well. The total needed, including only those who gave specific numbers, was as follows:

<u>Publication Number</u>	<u>Title</u>	<u>Total Number Requested</u>
SP 410	NBS Metric Kit	74
SP 304	The Modernized Metric System (Wall Chart)	142
SP 304A	Brief History of Measurement Systems (with a chart)	2225
SP 330	The International System of Units (SI)	1265
SP 365	Metric Conversion Card	7650
SP 376	For Good Measure (15-cm ruler)	3000
SP 389 *	Some References on Metric Information	1400
SP 430	Household Weights and Measures	950
LC 1051	Metric Conversion Factors	200
LC 1056	NBS Guidelines for Use of the Metric System	2200
LC 1069	Metric Style Guide for the News Media	100
LC 1071	Factors for High-Precision Conversion	550
CIS-7	What About Metric?	1375

(Several speakers specified various non-NBS publications which NBS could not supply.) About half of the speakers either said they needed no materials or were uncertain.

NBS can provide single copies of these publications upon request. An order blank for the publications listed above is in NBS LC 1070, "Some References on Metric Information."

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\* SP 389 is now out of print. The replacement is LC 1070, "Some References on Metric Information."

10. Continuation as a Metric Speaker (Question 15)

Of the total number of speakers responding, three indicated that they did not want to continue as metric speakers. Two of these speakers were in California, and one was in Massachusetts. One additional speaker, who did not give a name on the questionnaire, was uncertain. In addition, three months or so after he sent in his questionnaire, another speaker decided to withdraw as a speaker. Of the 197 respondents, 192 want to continue. This is an indication that the majority of the speakers believe that the National Metric Speakers Bureau is serving a worthwhile function.





APPENDIX A

**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Bureau of Standards**  
Washington, D.C. 20234

November 5, 1976

Dear Metric Speaker:

The National Metric Speakers Bureau has been in operation now for almost ten months. We are interested in knowing how the system is working, whether additional speakers are needed in your area, and how the Metric Information Program of the National Bureau of Standards can be of further assistance to you.

An area of increasing concern to us is that we often get requests for metric speakers who are knowledgeable in certain specialized areas; for example, metrication in such areas as procurement, machine shops, education at various levels, hospital administration, retail trades, and various types of manufacturing industries. If you have expertise in any of the above or other areas, please so indicate under question 2 of the questionnaire. We may refer groups seeking such experts to you even though this would mean travelling outside your region of the country. Before we make such referrals, however, we would like to know your willingness and availability to travel. Please indicate by answering question 4.

Please return the questionnaire, in the envelope provided, by December 1, 1976. A revised list of the metric speakers will be sent to you after the survey is completed.

Sincerely,

John M. Tascher  
Metric Coordinator

Enclosures



8. Do groups normally reimburse you for your expenses? Yes \_\_\_\_\_ No \_\_\_\_\_
9. Is there a need for more metric speakers in your area? Yes \_\_\_\_\_ No \_\_\_\_\_  
If "Yes," how many more do you believe are needed? \_\_\_\_\_
10. Have you generally been satisfied with the materials provided by NBS for your presentations? Yes \_\_\_\_\_ No \_\_\_\_\_  
If "No," please explain:
11. Are there any subject areas for which you need more information?  
Yes \_\_\_\_\_ No \_\_\_\_\_  
If "Yes," please explain:
12. Please describe any ways in which the NBS Metric Information Program can be of further assistance:
13. How many copies of the leaflet "All You Will Need to Know About Metric" do you estimate you will need in 1977? \_\_\_\_\_
14. Are there any other NBS metric materials which you would like to receive in quantity to use as handouts? Yes \_\_\_\_\_ No \_\_\_\_\_  
If "Yes," list the materials and estimated quantities needed below:
15. Are you interested in continuing to be a metric speaker? Yes \_\_\_\_\_ No \_\_\_\_\_
16. Other comments:

APPENDIX B

Number of Speakers in State,  
 Names of Speakers Who Responded to Survey,  
 Number of Requests Received by Speaker, and  
 Number of Requests Accepted

	<u>Number of Requests</u>	<u>Number of Acceptances</u>
<u>Alabama</u> (9 Speakers)*		
Helen Goetz	1	1
Jules Perot	4	4
Zac Perry	-	-
<u>Alaska</u> (3 speakers)		
Jeff C. Jeffers	3	2
<u>Arizona</u> (4 speakers)		
LaVonne A. Chambers	?	?
<u>Arkansas</u> (4 speakers)		
Ernestine W. Hunter	10	10
Bill Sullivant	10	10
Charles Watson	25	20
<u>California</u> (23 speakers)		
Ronald S. Andrade	25	23
Charles H. Beardsley	4	4
Edwin M. Belles, Jr.	4	4
Arthur Freier	6	4
Jane Gawronski	about 20	about 10
Bruce Grant	5	5
Joseph Hoffman	-	-
Robert Hopkins or Vincent R. Hopkins	3	3
Henry C. Kahrman, Jr.	6	6
Gerald A. LaRocca	-	-
John V. Martucci	-	-
Richard E. Meyers	2	2
Frederica Parks	10	10
Jack W. Pearson	4	3
Gary D. Sanderson	6	6
Dewayne B. Sharp or JoAnn Sharp	14	14
Ed Sheldon	3	2
Marvin L. Sohns	5	1
Robert F. Tardif	35	25
Unknown, Van Nuys, CA, postmark	5	3

\* Figure in parentheses after each State refers to total number of speakers in that State (including any alternates).

	<u>Number of Requests</u>	<u>Number of Acceptances</u>
<u>Colorado</u> (5 speakers)		
James C. Davis	4	4
John Gerhardt	10	10
Unknown, Denver postmark	-	-
<u>Connecticut</u> (5 speakers)		
Sigmund Abeles	4	4
Richard I. Black	4	3
Harry Haakenson	2	2
Donald P. LaSalle	-	-
Ralph Yulo	3	3
<u>Delaware</u> (2 speakers)		
Thomas M. Baker	1	1
William J. Geppert	22	22
<u>Florida</u> (6 speakers)		
Sydney Andrews	about 100	about 50
Herbert L. Johnson	5	5
Mike Walker	10	9
<u>Georgia</u> (6 speakers)		
Robert C. Collier	11	10
Douglas Groce	2	2
Oliver K. Lewis	1	1
O. D. Mullinax	3	3
<u>Hawaii</u> (1 speaker)		
<u>Idaho</u> (6 speakers)		
Lyman D. Holloway	2	2
Gwen and Joseph Kelley	3	3
Kenneth Magee	3	3
Wallace S. Manning	4	4
Melvin E. Rexroat	5	5
<u>Illinois</u> (10 speakers)		
George W. Bright	1	1
Arnold Brown	20	20
Fred Helgren	10	10
Ian D. Laing	1	1
Richard Mattoon	2	2
Emanuel M. Star	6	-
Unknown, postmarked Rockford, Ill.	8	7
<u>Indiana</u> (4 speakers)		
Charles Bertram	50	35
James E. Pflieger, Jr.	20	20
Warren W. Worthley	6	5



	Number of Requests	Number of <u>Acceptances</u>
<u>Iowa</u> (3 speakers)		
J. Clair Boyd	10	10
Thatcher Johnson	6	6
<u>Kansas</u> (8 speakers)		
John L. O'Neill	7	7
Terry E. Parks	8	8
Gary E. Schmidt	6	6
Ed Schroeder	10	10
<u>Kentucky</u> (3 speakers)		
Helen Cunningham	4	2
Eugene M. Schanbacher	10	8
<u>Louisiana</u> (4 speakers)		
M. M. Ohmer	10	10
James R. Oliver	17	17
Russell Whittington, Jr.	25	25
<u>Maine</u> (4 speakers)		
Howard M. Faulkner	about 40	about 25
Gaylon Kennedy	3	3
<u>Maryland</u> (5 speakers)		
Audrey Buffington	4	3
Florence E. Fischer	3	2
Andre Nadash	6	6
J. Victor Stout	-	-
<u>Massachusetts</u> (7 speakers)		
Stanley J. Bezuska	2	0
Robert E. Clark	6	5
William W. K. Freeman	-	-
Klaus E. Kroner	3	1
Edward H. Stadolnik	6	6
Unknown, postmarked Springfield, Mass.	2	2
<u>Michigan</u> (18 speakers)		
Eugene Bleiler	1	1
Thomas Yack	4	4
Unknown, but in Michigan	1	0
<u>Minnesota</u> (5 speakers)		
David L. Dye	3	3
Arvid Fenger	6	3
Charles Willard	-	-
<u>Mississippi</u> (4 speakers)		
Frank A. Anderson	3	3
Lawrence J. Bellipanni	5	4



	<u>Number of Requests</u>	<u>Number of Acceptances</u>
<u>Missouri</u> (3 speakers)		
Eugene K. Johnson	1	-
Anton deS. Brasunas	about 30	about 30
<u>Montana</u> (3 speakers)		
Gary L. Delano	5	4
Mike Jablin	12	8
Ray Woodriff	-	-
<u>Nebraska</u> (4 speakers)		
Roger Macklem	about 35	about 33
Steven A. Malone	9	9
Donald F. Niemann	1	1
<u>Nevada</u> (2 speakers)		
Virginia Gilbert	4	3
Ron Gutzman	6	6
<u>New Hampshire</u> (1 speaker)		
Fernand J. Prevost	about 9	3
<u>New Jersey</u> (5 speakers)		
Kenneth B. Fetter	6	3
Frederick T. Gutmann	2	2
John Landvater	5	4
Karl W. Linn	3	3
<u>New Mexico</u> (3 speakers)		
B. K. Graham	1	1
Charles H. Greene	2	2
<u>New York</u> (17 speakers)		
Constance C. Adams	1	1
William Collins	2	1
Marion A. Forbes	25	19
Jane Forstenzer	5	3
Doris Frazer	2	1
Nathan Friedman	6	5
David B. Howell	2	2
Frances J. Parker	5	3
Charles Pflaum	about 30	21
Bob Puglisi	2	2
Suzanne Reeder	about 6	4
J. Fred Tucker	15	15
Dorothy Willsey	about 20	about 20
Unknown, postmarked Suffern, NY	1	1

	<u>Number of Requests</u>	<u>Number Acceptances</u>
<u>North Carolina (6 speakers)</u>		
John F. Corey	24	22
Mary E. Diener	5	5
Robert R. Jones	30	25
Anita Pangle	10	6
Thomas L. Rokoske	1	1
<u>North Dakota (5 Speakers)</u>		
Jay Chapman	2	2
Glenn Prigge	2	2
<u>Ohio (5 speakers)</u>		
David J. Hyslop	10	8
Louis Ross	6	2
Cornelius Wandmacher	6	6
Robert L. Wolff	8	5
<u>Oklahoma (3 speakers)</u>		
Douglas B. Aichele	5	5
R. W. Powell	10	6
<u>Oregon (3 speakers)</u>		
Anton Postl	3	3
Ernest John Rubin	-	-
Kendrick J. Simila	6	5
<u>Pennsylvania (9 speakers)</u>		
G. Edward Carpenter	10	9
Robert D. Dolan	14	14
Anton Glaser	25	24
Wade C. Hall	11	9
William J. Murray	10	8
Mildred Reigh	2	2
Martin Rosen	-	-
Rodman O. Winter	6	6
<u>Rhode Island (1 speaker)</u>		
Edward R. Fisher	35	35
<u>South Carolina (5 speakers)</u>		
Matthew B. Barkley	2	1
Edward A. Munns	2	2
<u>South Dakota (4 speakers)</u>		
Charles Eicher	3	3
Terry Richardson	21	21

	<u>Number of Requests</u>	<u>Number of Acceptances</u>
<u>Tennessee (9 speakers)</u>		
J. F. Crabtree	2	2
Uri Gat	3	3
Eugene H. Holeman	about 18	17
Roland McDaniel	7	7
<u>Texas (8 speakers)</u>		
Jim Bezdek	16	6
Ronald Exley	10	8
Felix C. Guerrero	15	15
David N. Holman	6	5
Cathy Rahlfs	2	2
Charles W. Tillerson	-	-
Jean Woodward Wilson	6	3
<u>Utah (2 speakers)</u>		
<u>Vermont (2 speakers)</u>		
Richard E. Higgins	3	3
<u>Virginia (3 speakers)</u>		
Edgar L. Edwards, Jr.	about 25	about 20
Robert M. Todd	3	2
<u>Washington (5 speakers)</u>		
J. T. Kimbrell	8	7
John H. Lewis	10	10
Sam E. Mitchell	19	15
David J. Vargas	2	2
<u>West Virginia (2 speakers)</u>		
<u>Wisconsin (11 speakers)</u>		
William E. Burkhardt	30	30
William Cable	12	11
Paul J. Grogan	6	6
Henry Kroeze	-	-
Patricia Laux	6	6
Chester P. Olson	5	4
Robert Probst	3	-
Norman Schein	15	15
<u>Wyoming (3 speakers)</u>		
Robert J. Kansky	about 15	about 15
Elvin R. Leeman	10	9

<u>Unknown</u>	<u>Number of Requests</u>	<u>Number of Acceptances</u>
	0	0
	1	1
	5	5
	6	3
	2	2
	8	4
	3	2
	1	1
	1	-
	8	8
	5	5
	2	1
	3	3
	5	5
	3	3
	3	1
	12	11
	5	5

Total Speakers (273)  
 Total Number of Requests (approx. 1580)  
 Total Number of Acceptances (approx. 1330)

## APPENDIX C

### Sources of Information on the Metric System and Metrication

#### Section 1. General Sources of Information

- a. A complete compilation of sources of information about the metric system and the application of the metric system is a NASA Technical Memorandum (TM X-3449) entitled "Information on the Metric System and Related Fields." It was compiled by Ernst Lange of the George C. Marshall Space Flight Center in cooperation with Louis F. Sokol and Valorie Antoine, President and Vice President of the U.S. Metric Association. This document, published in November 1976, contains references to all known documents on the metric system as of December 1975. This bibliography includes books, reports, articles, presentations, periodicals, legislation, motion pictures, TV series, film strips, slides, posters, wall charts, education and training courses, addresses for information, and sources for metric materials and services. The bibliography is comprehensively indexed for quick retrieval. It is for sale at a cost of \$13.25 by the National Technical Information Service, Springfield, Virginia 22161.
- b. The Metric Reporter, published biweekly by the American National Metric Council, 1625 Massachusetts Avenue, NW., Washington, D.C. 20036, provides coverage on metric activities in business, industry, government, and education, and contains reviews of new metric publications, materials, and visual aids, plus listings of upcoming metric conferences, workshops, seminars, and meetings. Subscription rate is \$25 per year.
- c. The Annual Report of the ANMC (copies available free from ANMC) contains a good status report of metrication for 1975 and for 1976 activities, particularly in business and industry. The ANMC does not plan to issue annual reports in the future.
- d. U.S. Metric Association Newsletter, published quarterly by the U.S. Metric Association, Inc., Sugarloaf Star Route, Boulder, Colorado 80302, has many items of current interest in business, industry, education, and government. The Newsletter is sent to members of the Association. (Current annual membership fee is \$4.)
- e. Metric Yearbook, published annually by J.J. Keller and Associates, Inc., 145 West Wisconsin Avenue, Neenah, Wisconsin 54956, telephone (toll-free 800-558-5011), gives a review of metric progress in the United States for the year covered. The volume covers a representative sample of activities in broad areas, such as metric legislation, education, industrial and business conversion, and metrication in Government agencies. Much attention is given to activities in trade and professional associations where metrication activities in industrial areas often begin. Metric Yearbook is available at \$4 each for subscribers\* and \$10 for first copy (\$5 for

\*Subscribers to the Metric System Guide Library



each additional copy) for nonsubscribers. J.J. Keller and Associates also publishes a monthly Metric Bulletin, which is available at \$5 a month subscription rate.

- f. Metric Conversion Act of 1975, Report of the Senate Committee on Commerce, available free from the Senate Committee on Commerce, Washington, D.C. 20510, gives a description of the Metric Conversion Act, the purpose and background of the Act, and a section-by-section analysis of the Act. It is Report No. 94-500.

## Section 2. Metric System

- a. The Federal Register Notice dated December 10, 1976, entitled "The Metric System of Measurement; Interpretation and Modification of the International System of Units for the United States" lists the units, symbols, and prefixes which are acceptable for use in the U.S. Several non-SI units are listed as acceptable for use. Any units not listed on this notice should not be used. This notice is available from the National Bureau of Standards. (A copy of the notice was sent to each speaker under a letter dated January 31, 1977.)
- b. Another principal document is the Standard for Metric Practice, which has been designated an American National Standard. There are two versions of this document: \*

IEEE Std. 268-1976

ASTM E 380-1976

The Standard for Metric Practice is the "last word" regarding metric practice in the United States. It contains guidance on the application of the metric system (such as which prefixes to use), rules for conversion and rounding, and a comprehensive list of conversion factors from non-SI to SI units. The Department of Defense directive on metric usage [Number 4120.18 from ASD (I and L) dated December 10, 1976] specifies that the Standard for Metric Practice shall be the guide for the use of SI by the Department.

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\* These two versions differ in only one way--the spelling of meter and liter. The IEEE document uses the "er" spelling, and the ASTM document uses the "re" spelling. The IEEE Standard 268-1976 is available from the Institute of Electrical and Electronic Engineers, 345 East 47th Street, New York, New York 10017. The ASTM E 380-1976 is available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103. The cost is \$4 per copy. Either version is also available at \$4 per copy from the American National Standards Institute, 1430 Broadway, New York, New York 10018.



- c. International Standard ISO 1000, "SI Units and Recommendations for the Use of their Multiples and of Certain Other Units," published by the International Standards Organization (ISO) in Geneva, Switzerland, is available from the American National Standards Institute, 1430 Broadway, New York, New York 10018, telephone: (212) 868-1270, for \$1.50. Generally speaking, all metric practice throughout the world will take place within the boundaries laid out by this publication.
- d. NBS Special Publication 330, "The International System of Units (SI)," is a translation of the French "Le Système International d'Unités," which is the authoritative description of SI published by the International Bureau of Weights and Measures. Single copies of this are available to speakers from the National Bureau of Standards; others may order the 1977 Edition from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, for \$1.60.

### Section 3. Education

- a. "Some References on Metric Information," published by the National Bureau of Standards in August 1975 as Special Publication 389, lists some of the basic publications on the metric system, organizations which market metric materials for educators, and the names of organizations within the United States and elsewhere which can provide metric information. This publication is out of print and no more copies are available. A copy of the successor publication "Some References on Metric Information" (NBS LC-1070) can be requested from the National Bureau of Standards.
- b. Two bibliographies have been prepared to date by a joint committee of the American Association of School Librarians and the National Council of Teachers of Mathematics in consultation with the National Bureau of Standards. The first is "One to Get Ready," and the second is "2 to Get Set." The first is available at the cost of five for \$1 and the second at a cost of 60 cents each from the American Library Association, 50 East Huron Street, Chicago, Illinois 60611. These bibliographies were prepared to provide teachers and librarians with a guide to materials for effective teaching of the metric system. Included in the bibliographies are print and non-print items.
- c. An annotated bibliography entitled "The Metric Education Bibliography" published in 1975 by the Center for Vocational Education at Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210, contains 369 citations of instructional and reference materials for use in secondary, post-secondary, and teacher education in vocational and technical education and adult basic education. The cost of the Bibliography is \$10.

- d. The U.S. Office of Education is authorized to fund special projects dealing with metric education, under section 403 of Public Law 93-380, "Amendments to the Elementary and Secondary Education Act of 1965." A list of the Metric Education Program grantees by State can be obtained from:

Dr. Floyd A. Davis  
U.S. Office of Education  
Metric Education Program  
R.O.B. 3/Room 5640  
Washington, D.C. 20202

- e. The Metric Yearbook, referred to under section l.e. above, describes activities in the various State Departments of Education and in a number of other metric programs such as the Five-State Consortium on Metric Education, Kent State's Metric Assistance Center, Northeast Metric Resource Center, the Minnesota Metric Center, Ohio State Metric Education Project, and Center for Metric Education of Western Michigan University.
- f. J.J. Keller Associates published Metri-cation--Education Takes the Lead in 1975. This publication presents: (1) an overview of progress toward metrication on the State level, and provides copies of State Board of Education metric resolutions, position papers, etc.; (2) reports on special metric education programs and workshops around the country; and (3) coverage of their consortium-type projects of interstate concern. This volume is available for \$5 each for subscribers and \$12 for first copy (\$6 per additional copy) for nonsubscribers. (Subscribers to the Metric System Guide Library).
- g. The National Bureau of Standards held a conference on May 20-21, 1975, where more than 300 educators had an opportunity to share metric education experiences. The texts of the presentations are in a publication entitled Successful Experiences in Teaching Metric. The reference and availability of this document is given in NBS LC 1070, Some References on Metric Information.

#### Section 4. Business and Industry

- a. Automotive industry -

Motor Vehicle Manufacturers Association  
320 New Center Building  
Detroit, Michigan 48202

- b. Computer industry and management systems -

Stephan Vastagh  
American National Metric Council  
1625 Massachusetts Avenue, NW.  
Washington, D.C. 20036

c. Construction (codes and standards) -

Office of Building Standards and Codes Services  
Center for Building Technology  
National Bureau of Standards  
Washington, D.C. 20234

The Center for Building Technology has recently published three publications concerning metrication in the construction industry:

- i. NBS Technical Note 915, "Metrication Problems in the Construction Codes and Standards Sector";
- ii. NBS Technical Note 938, "Recommended Practice for the Use of Metric (SI) Units in Building Design and Construction";
- iii. NBS Special Publication 458, "Metrication and Dimensional Coordination - A Selected Bibliography."

d. Building contractors (including home builders) -

Associated General Contractors of America  
1957 E Street, NW.  
Washington, D.C. 20006

e. Building products manufacturers, including lumber sizes -

National Forest Products Association  
1619 Massachusetts Avenue, NW.  
Washington, D.C. 20036

f. Real estate -

Department of Education  
National Association of Realtors  
155 East Superior Street  
Chicago, Illinois 60611

g. Architecture -

Anna Halpin  
McGraw Hill Information Systems Co.  
1221 Avenue of the Americas  
New York, New York 10020

(Ms. Halpin serves as the convenor for the Designers Sector of the ANMC.)

h. Retail industry and sales problems -

Michael Thompson  
American National Metric Council  
1625 Massachusetts Avenue, NW.  
Washington, D.C. 20036

- i. Small business - The best source of information concerning metrication effects on small business is the industry with which the small business is associated rather than any one source on small business. Any of the sources listed pertain to small business in those areas. Some helpful information may be available from the Small Business



Administration. For specific questions, contact the metric coordinator for the Small Business Administration:

Robert J. Moffitt  
Industrial Support Services Division  
Office of Procurement Assistance  
Small Business Administration  
Washington, D.C. 20416

- j. Metric fasteners - B1 Report, ISO Metric Screw Threads, available from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018, contains dimensional information on ISO metric screw threads. It lists thread classes (tolerances) and provides tables of limiting dimensions for screws, bolts, and nuts. The report was developed by American National Standards Committee B1 as an interpretive report to meet the needs of U.S. industry.
- k. Metric Fastener Standards, available from the Industrial Fasteners Institute, 1505 East Ohio Building, Cleveland, Ohio 44114, for \$35, describes the first total system for metric fasteners. It covers screw threads, materials, bolts, screws, nuts, and nonthreaded fasteners. This publication will be useful to U.S. companies who will be using the metric system until national and international fasteners are established through the normal standards-writing bodies.
- l. Training programs -

American National Metric Council  
1625 Massachusetts Avenue, NW.  
Washington, D.C. 20036

The ANMC has established an Education and Industrial Training Coordinating Committee. Under this coordinating committee are the following ANMC sector committees: In-service Training, General/Academic Education, Vocational Education, and Consumer/Home Economics.

- m. Aerospace -

Aerospace Industries Association  
1725 DeSales Street, NW.  
Washington, D.C. 20036

- n. Railroads -

Research and Test Department  
Association of American Railroads  
American Railroads Building  
1920 L Street, NW.  
Washington, D.C. 20036

o. Agricultural equipment -

Farm and Industrial Equipment Institute  
410 N. Michigan Avenue  
Chicago, Illinois 60611

p. Metrication activities in the U.S. Department of Agriculture -

Robert A. Owen  
Director, Special Projects Division  
Foreign Agricultural Service  
U.S. Department of Agriculture  
Room 6535, South Building  
Washington, D.C. 20250

q. Sources of procurement of specialized equipment, gages, tools, fasteners, hardware, etc. -

See Section J, "Sources of Metric Materials" of Information on the Metric System and Related Fields referenced in section 1.a. of this appendix.

Section 5. Consumer

a. Metric Bibliography for Home Economics Teachers, published by and available at a cost of 40¢ from the Home Economics Education Association, 1201 16th Street, NW., Washington, D.C. 20036.

b. Consumer/home economics information -

American Home Economics Association  
2010 Massachusetts Avenue, NW.  
Washington, D.C. 20036

c. Food and grocery products -

Food Marketing Institute  
1750 K Street, NW.  
Washington, D.C. 20006

d. Textiles and apparel -

American Apparel Manufacturers Association  
1611 N. Kent Street  
Arlington, Virginia 22209

## NATIONAL METRIC SPEAKERS BUREAU

## ROSTER OF SPEAKERS

ALABAMA

Mr. Harry Atkins  
1206 Briar Hollow Trail, SE.  
Huntsville, Alabama 35802  
205-453-0108 (office)  
205-881-6996 (home)

Dr. Helen Goetz  
Department of Consumer Science  
University of Alabama  
P.O. Box 6195  
University, Alabama 35486

Dr. Jules Perot  
3106 W. Brookline Drive  
Mobile, Alabama 36609  
205-661-1121 (school)  
205-661-2275 (home)

Dr. Zac Perry  
Mathematics Specialist  
State Dept. of Education  
111 Colisium Blvd.  
Montgomery, Alabama 36109  
205-832-5850

Mrs. Sharon Pitts  
Consumer Sciences Department  
School of Home Economics  
University of Alabama  
Tuscaloosa, Alabama 35401  
205-348-6178

Mr. John R. Rabb, Metrologist  
2445 Federal Drive  
P.O. Box 3336  
Montgomery, Alabama 36109  
205-832-6766

Also available from Montgomery:

(Same address as Mr. Rabb)

Aubrey Dismukes (for Montgomery)

Hubert G. Cryer (for Huntsville)

James H. Sellers (for Southeast Alabama)

ALASKA

Mr. Franklin W. Butte  
Engineering Specialist, Media Services  
University of Alaska  
3211 Providence Drive  
Anchorage, Alaska 99504  
907-272-5522, x350

Mr. Don Greenberg  
R.R. 5, Box 5560  
Juneau, Alaska 99803

Mr. Jeff C. Jeffers  
Alaska Department of Education  
Office of the Commissioner  
Pouch F - Alaska Office Building  
Juneau, Alaska 99811  
907-465-2800

ARIZONA

Mr. Richard F. Harris  
Weights and Measures Division  
10202 North 19th Avenue  
Phoenix, Arizona 85021  
602-271-5211

Also available at above address:

Raymond H. Helmick  
LaVonne A. Chambers

Miss Esther Milne  
P.O. Box 4040  
Tucson, Arizona 85717

ARKANSAS

Mr. Sam F. Hindsman, Director  
Weights and Measures Division  
4608 West 61st Street  
Little Rock, Arkansas 72209  
501-371-1759

Mr. Bill Sullivant, Metrologist  
Weights and Measures Division  
4608 West 61st Street  
Little Rock, Arkansas 72209  
501-371-1759

Ms. Ernestine W. Hunter  
2721 S. Jackson  
Fort Smith, Arkansas 72901  
501-785-2501

Mr. Charles Watson  
Specialist in Mathematics  
State Dept. of Education  
Little Rock, Arkansas 72201  
501-371-1961



CALIFORNIA

Mr. Ronald S. Andrade  
6401 Linda Vista Road  
San Diego, CA 92111

Mr. Charles H. Beardsley  
8500 Fruitridge Road  
Sacramento, CA 95826  
916-445-7001 or  
916-322-4080

Mr. Edwin M. Belles, Jr.  
Manager, Santa Clara County Chapter  
of the U.S. Metric Association  
20127 John Drive  
Cupertino, California 95014

Mr. Arthur Freier  
15618 Chadron Avenue  
Gardena, CA 90249  
213-625-6417

Mr. Bruce Grant  
6255 Chabot Road  
Oakland, CA 94618  
415-835-3000, x232

Mr. Joseph Hoffman  
Calif. State Dept. of Education  
721 Capitol Mall  
Sacramento, CA 95814

Mr. Robert A. Hopkins  
or  
Mr. Vincent R. Hopkins  
Polymetric Services, Inc.  
P.O. Box 847  
Tarzana, CA 91356  
213-881-2227 or  
213-345-9305

Mr. Henry C. Kahrman, Jr.  
GTE Sylvania  
P.O. Box 188  
Mountain View, CA 94042  
415-966-3084

Gerald A. La Rocca  
Paramount Unified School District  
15110 California Avenue  
Paramount, CA 90723

Ms. Janine Martin  
38 Shady Oaks Drive  
Folsom, CA 95630  
916-322-3284

Mr. Richard E. Meyers  
930 Monte Verde Drive  
Pacifica, CA 94044  
415-359-1558

Ms. Frederica Parks  
U.S. Dept. of Commerce  
450 Golden Gate Ave., Box 36013  
San Francisco, CA 94115

Mr. Jack W. Pearson  
University of California  
P.O. Box 808 - Code L-140  
Livermore, CA 94550

Ms. Ruth L. Riley  
3132 East Fairmont  
Fresno, CA 93726  
209-224-4350, x78

Robert Robinson  
IBM Corporation  
Monterey & Cottle Roads  
San Jose, CA 95193  
408-227-7100

Mr. Gary D. Sanderson  
Dept. of Weights, Measures,  
& Consumer Protection  
4535 E. Hamilton  
Fresno, CA 93702

Mr. Dewayne B. Sharp  
or  
Miss Jo Ann Sharp  
2590 Malaga Drive  
San Jose, CA 95125  
408-264-3967

Ed Sheldon  
IBM Corporation  
Monterey & Cottle Roads  
San Jose, CA 95193  
408-227-7100

CALIFORNIA (continued)

Dr. Marvin L. Sohns  
671 Hazelwood Drive  
Lemoore, California 93245

Mr. Robert F. Tardif  
Manager, Math Unit  
California State Dept. of Education  
721 Capitol Mall  
Sacramento, CA 95814  
916-322-3284

COLORADO

Dr. Ernest E. Allen  
Math Department  
University of Southern Colorado  
Pueblo, Colorado 81001  
303-549-2693

Mr. J. L. Dalke  
Division 270  
National Bureau of Standards  
Boulder, Colorado 80302

Mr. James C. Davis  
Chairman, Math Department  
Mesa College  
1175 Texas Avenue  
Grand Junction, Colorado 80203

Mr. John Gerhardt  
Weights and Measures Section  
Colorado Dept. of Agriculture  
3125 Wyandot  
Denver, Colorado 80211  
303-892-2845

Eleanor Millet  
IBM Corporation  
P.O. Box 1900  
Boulder, Colorado 80302  
303-447-1900

CONNECTICUT

Dr. Sigmund Abeles  
Science Consultant  
State Department of Education  
P.O. Box 2219  
Hartford, Conn. 06115

Mr. Richard I. Black  
Hubbell Wiring Device Division  
State Street & Bostwick Avenue  
Bridgeport, Conn. 06602  
203-333-1181

Dr. Harry Haakenson  
Southern Connecticut State College  
501 Crescent Street  
New Haven, Conn. 06515

Mr. Donald P. LaSalle, Director  
Talcott Mountain Science Center  
Montevideo Road  
Avon, Conn. 06010

Professor Ralph Yulo  
Eastern Connecticut State College  
83 Windham Street  
Willimantic, Conn. 06226  
203-456-2231

DELAWARE

Mr. Thomas M. Baker  
Del. Dept. of Public Instruction  
John G. Townsend Building  
Dover, Delaware 19901

Mr. William J. Geppert  
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<p>16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)</p> <p>The National Metric Speakers Bureau was established by the Metric Information Office of the National Bureau of Standards (NBS) in January 1976 in response to the rapidly growing interest in the metric system and metrication. The number of speakers at the end of 1976 was 273 with at least one in every State. NBS supplied a script and other materials to each speaker. A survey of all of the speakers was conducted during November and December 1976. The purpose of the survey was to determine how the Speakers Bureau is working, and how it can be made to work better. NBS wanted to know, for example, what the speakers thought of the speaker materials supplied by NBS, where additional speakers may be needed, what types of expertise the speakers have, and how NBS could further assist the speakers. This report summarizes the findings of the survey. The report also gives a survey of the sources of information on the metric system and metrication. A roster of speakers of the National Metric Speakers Bureau, dated July 1977, appears in an appendix.</p>			
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