

# *Publications Taking Us Toward a Metric America*

For almost its entire existence, NBS/NIST has been interested and directly involved in America's bumpy and prolonged transition to the metric system of measurement. This involvement has had and continues to have many facets. On the technical front, NIST works with scientists from around the world to achieve continually improving precision in metric system measurements and unit definitions, and NIST policy specifies metric units in all staff reports. On a public policy front, the Bureau has for many years striven to increase the American public's understanding and acceptance of metric measurement units.

One prime example of an informative and easily read metric publication which effectively reaches out to a non-traditional NBS/NIST audience is the *Metric Style Guide for the News Media* [1]. Originally published in 1976 with revisions and updates in 1992 and 1997, the publication serves as a compact and accurate "metric literacy" reference document, giving the reader an overview of the units and the grammar of the metric system. Size approximations are provided to help readers visualize common metric units, and easy-to-use tables of common metric prefixes and conversions are also included. The *Style Guide* makes the point that Americans will compete more successfully in the global marketplace when they understand and speak the international language of measurement.

The news media have an important role in assisting the American public as we make the transition to the international language of measurement. Correct and positive use of metric terms and symbols by the media helps to smooth this transition. For almost 25 years, the *Style Guide* has continued to be extremely popular, not only with the news media, but also with school teachers and the general public. Teachers, especially, have praised the pamphlet for its ability to aid in the teaching of metric literacy. Approximately 200,000 copies of the *Style Guide* have been printed and distributed.

Two other NBS/NIST publications, *The Chart of the Modern Metric System* [2] and *A Brief History of Measurement Systems with a Chart of the Modern Metric System* [3], also serve as important tools in the effort to promote metric literacy. These publications are especially notable for their long-lived popularity and widespread dissemination. The first of these [2] is a full-color wall chart (ISO A1-sized poster) which highlights, graphically illustrates, and explains the seven

base units of the SI metric system. The chart's usefulness in helping students learn and understand the metric system is enhanced by the inclusion of three well-designed and easy-to-use tables: metric system prefixes, common conversions, and SI names and symbols for units that are derived from the base units.

A sister publication to the large wall chart is the equally-popular 1/4-sized (ISO A3 size) small wall chart [3]. On the reverse side of the small wall chart, a well-written article explains the importance of weights and measures to all societies and traces the history and development of both the English and the metric systems of measurement.

After more than three decades of life, the two charts and the measurement history article remain among the Metric Program's most requested items. Several hundred thousand of these colorful and informative wall charts have been produced, and they can be found hanging everywhere from elementary school classrooms to the offices of physicists. Originally designed and printed in 1968, both of the charts have been revised and reprinted several times, with major changes made in 1986 and 1997.

The Bureau's involvement in the national debate over metrication reached a critical pitch in the late 1960s. In a project that would later be described by Lewis Branscomb as the biggest NBS project of his directorship, the Bureau embarked on the U.S. Metric Study. In the Metric Study Act of 1968 (P.L. 90-472), Congress directed the Secretary of Commerce to conduct an extensive study to determine the advantages and disadvantages of increased metric use in the United States and to submit a full report to Congress within three years. The Secretary of Commerce delegated responsibility for the study to NBS.

The Metric Study Group was directed by Daniel De Simone with a team of over 40 NBS program managers and supporting staff. Also heavily involved in the study were 50 private-sector members of a Metric System Study Advisory Panel. The panel members were appointed by the Secretary of Commerce from organizations representing a wide spectrum of interests. The chairman of the panel was Louis Polk, a director of the Bendix Corporation.

Following a detailed blueprint, the study sought facts and opinions from over 700 major groups representing every sector of society—including labor unions, trade

associations, professional societies, education associations, consumer-related organizations, and many others. Input was obtained through a series of multi-day public hearings, surveys, correspondence, and other supplementary investigations.

The report to Congress was published as a 190-page NBS Special Publication entitled *A Metric America: A Decision Whose Time Has Come* [4]. Intended for wide distribution, this landmark publication details the

findings and conclusions of the U.S. Metric Study. The report includes several specific recommendations for the Nation to achieve a smooth and coordinated transition to the metric system of measurement. Many of these recommendations were summarized in the report's transmittal letter to Congress which was signed by Secretary of Commerce Maurice H. Stans. This letter is reproduced as Fig. 1.

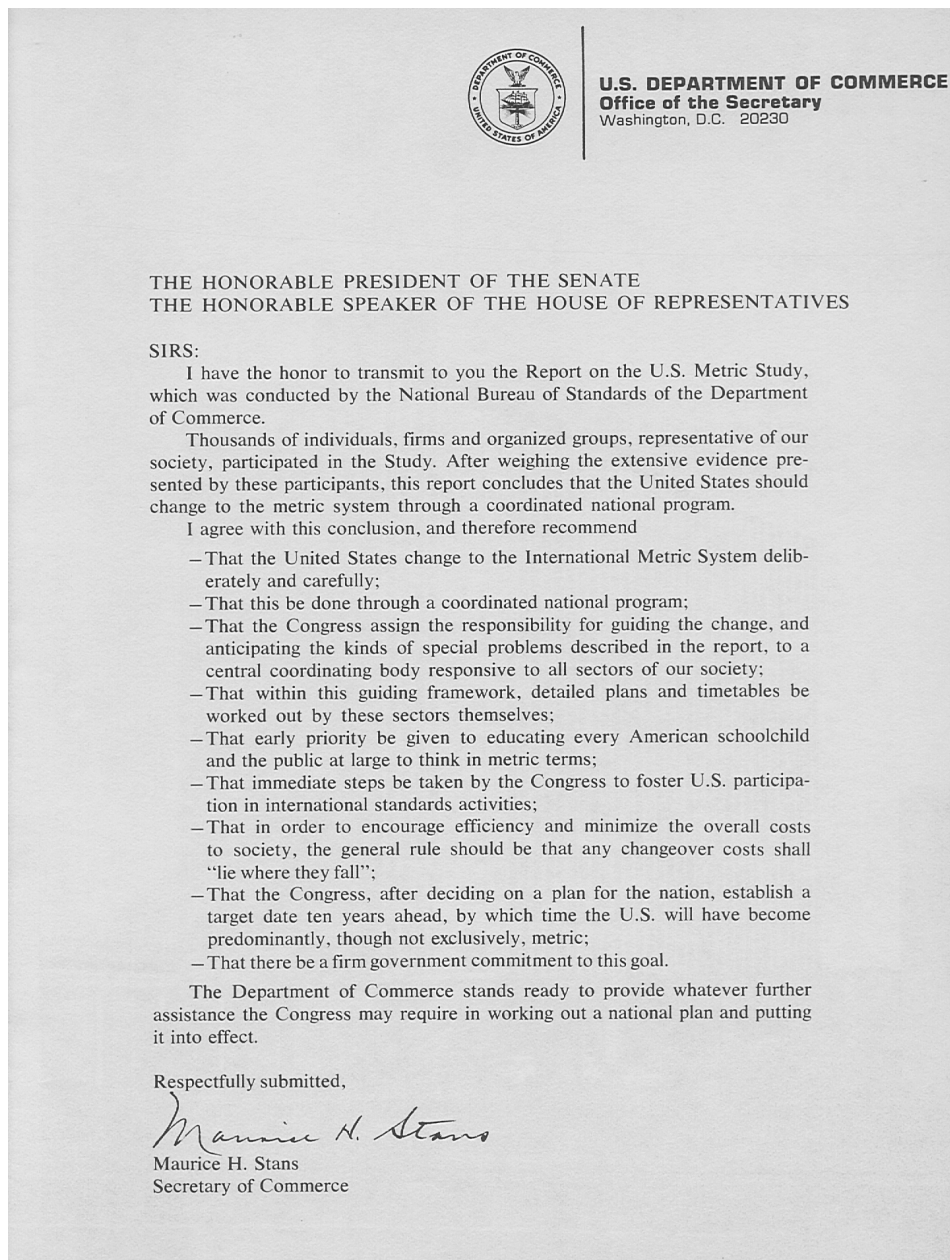


Fig. 1. Letter from the Secretary of Commerce to Congress transmitting the NBS Report on the U.S. Metric Study.

In addition to the main summary report, 12 supporting volumes were produced as part of the project—for a grand total of over 2300 pages of published text. These supporting volumes were entitled:

*International Standards* (NBS SP 345-1)  
*Federal Government: Civilian Agencies* (345-2)  
*Commercial Weights and Measures* (345-3)  
*The Manufacturing Industry* (345-4)  
*Nonmanufacturing Business* (345-5)  
*Education* (345-6)  
*The Consumer* (345-7)  
*International Trade* (345-8)  
*Department of Defense* (345-9)  
*A History of the Metric System Controversy in the United States* (345-10)  
*Engineering Standards* (345-11)  
*Testimony of Nationally Representative Groups* (345-12).

Because of its importance as the summary document of the most significant study on national metrication issues ever conducted by the United States government, the *Metric America* publication has been (and continues to be) cited as a reference in hundreds of books, magazines, and newspaper articles—the current edition of *Encyclopedia Britannica* being one example.

The report was cited heavily when the 92nd and the 93rd Congresses debated legislative proposals and national conversion issues. Finally, four years after the report was first published, the Metric Conversion Act was passed by the 94th Congress in 1975 and signed into law by President Ford. The Act was an important milestone, yet disappointing to many of the U.S. Metric Study contributors because several of the report's

recommendations—such as the importance of a carefully planned transition, target dates, and a coordinated national program—were not implemented in the final language of the legislation.

In 1988, amendments to the Metric Conversion Act, Congress gave a significant boost to the metric effort by declaring the metric system to be the preferred system of measurement for U.S. trade and commerce. Unfortunately, even today, many of the issues and debates surrounding national metrication still linger.

As America enters the new millennium and NBS/NIST enters its second century, there is an increased desire by Americans to work, communicate, and live as part of the larger, global community—and the metric system is the global community's language of measurement. Increased public understanding and acceptance of metric measures is an on-going effort which NIST continues to support through several excellent publications and many other outreach activities.

*Prepared by Ralph A. Richter.*

## Bibliography

- [1] *Metric Style Guide for the News Media*, NBS Letter Circular 1137, National Bureau of Standards, Washington, DC, December 1976.
- [2] *Chart of the Modernized Metric System*, NBS Special Publication 304, National Bureau of Standards, Washington, DC (1968).
- [3] *Brief History and Use of the English and Metric Systems of Measurement with a Chart of the Modernized Metric System*, NBS Special Publication 304A, National Bureau of Standards, Washington, DC (1968).
- [4] *A Metric America: A Decision Whose Time Has Come*, NBS Special Publication 345, National Bureau of Standards, Washington, DC, July 1971.