



Heartland Science

Ohio's Legacy of Discovery & Innovation

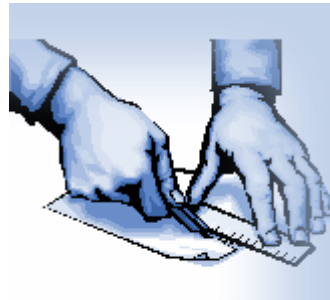


Energy

From Amps to Air Conditioning

Metric System Pioneer

In 1893, Thomas C. Mendenhall, a native of Hanoverton, Ohio, decided that the international meter and kilogram would be the fundamental length and mass standards for weights and measures in the United States. Mendenhall was then Superintendent of Weights and Measures for the U.S. federal government. His decision, known as "The Mendenhall Order," was a major departure from past United States policy of maintaining length and mass standards identical to the Imperial systems of weights and measures used in Great Britain. In that system, length was the English yard and mass the pound.



Mendenhall (1841-1924) was a renowned scientist, appointed by President James Harrison as superintendent of the U.S. Coast and Geodetic Survey in 1889. He had been chairman of physics at Ohio State University, chief of the Instrument Division in the U. S. Signal Corps, and president of Rose Polytechnic Institute.

The Mendenhall Order redefined customary British-U.S. units in terms of metric units. The yard became 3600/3937 meter and the avoirdupois pound-became the mass of 0.4535924277 kilogram. The National Bureau of Standards (now the National Institute of Standards and Technology) used those same definitions from its founding in 1901 until 1959. In 1959, English-speaking countries agreed to define one yard as 0.9144 meter and one pound-mass as 0.45359237 kilogram.



Mendenhall did not need any new laws for the action because the metric system had been legal in the U. S. since passage of the Metric Act of 1866. It regarded metric units as the fundamental and internationally accepted standards for the United States.

President Harrison appointed Mendenhall director of the U.S. Coast and Geodetic Survey in 1889, and he served until 1894. The weights and measures office then was part of the geodetic survey. Mendenhall helped to determine the boundary line between the United States and Canada, including the boundary of Alaska. As a member of the International Electrical Congress, he also had a hand in defining basic units of electricity.

Find out more...

- **International Bureau of Weights and Measures**
(<http://www.bipm.org/en/home>)
- **The National Conference on Weights and Measures**
(<http://www.ncwm.net/main.html>)
- **The American National Standards Institute**
(<http://www.ansi.org/>)
- **The National Institute of Standards and Technology Office of Weights and Measures**
(<http://ts.nist.gov/ts/htdocs/230/235/owmhome.htm>)
- **The Central Weights and Measures Association**
(<http://www.cwma.net/>)
- **The Ohio Division of Weights and Measures**
(<http://www5.state.oh.us/agr/W&MDivision.html>)