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ASTM International Committee D19 on

# Water

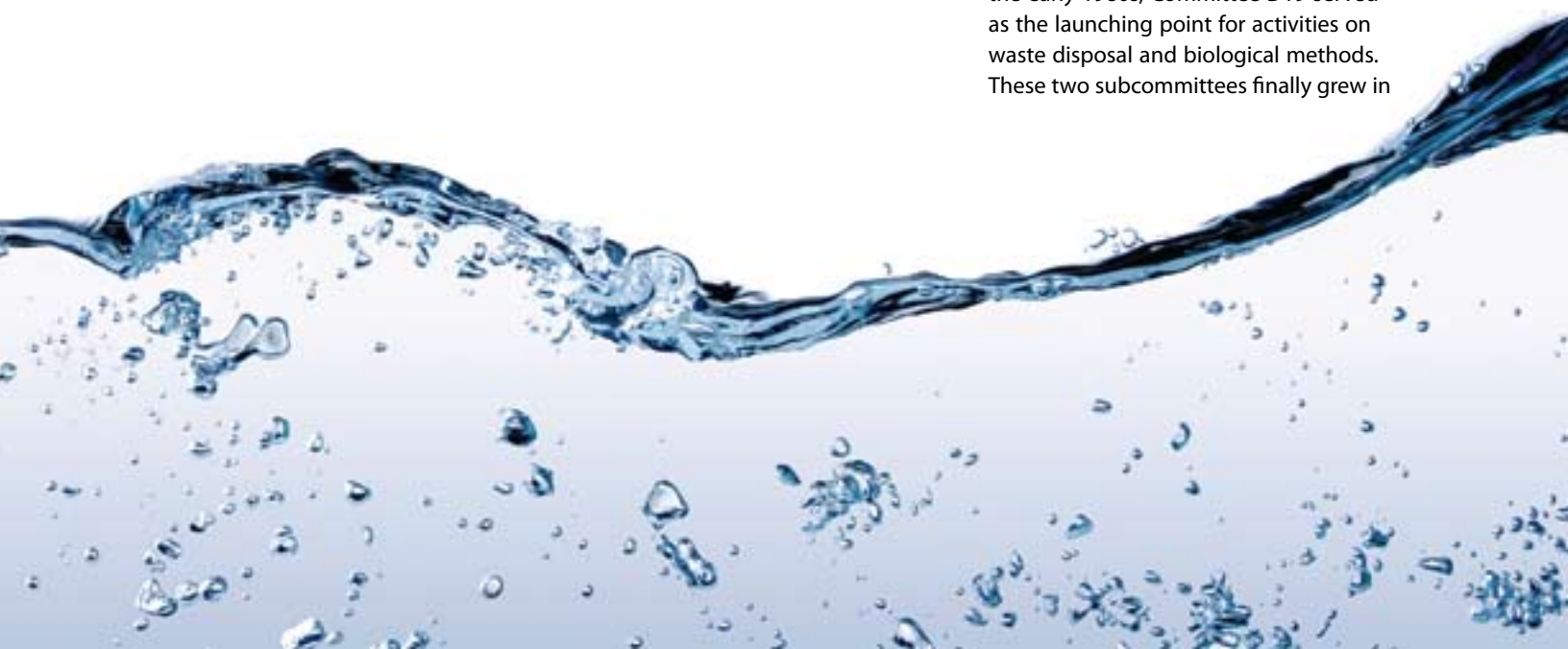
**Who We Are and Where We Are Going**

**BY NATHALIE H. (DEE) PERKINS AND G. DOUGLAS GLYSSON**

ASTM International Committee D19 was officially established as the ASTM Committee on Water for Industrial Use in 1932. In 1967 the name was changed to the Committee on Water. The initial efforts of the committee focused on water used for industrial purposes, developing methods for sampling and analysis, as well as attempting to standardize terminology and the interpretation of results. Although the scope of the committee has broadened to include the wide range of waters shown in the sidebar, "The Diversity of Water Types Considered by Committee D19," the objectives of the committee have changed very little. Committee D19 continues to meet the international demand for quality, proven consensus standards for water in all its varied forms and uses.

Under the leadership of Committee D19's first Chairman Max Hecht and the subsequent leadership of many other dedicated voluntary scientists and engineers, Committee D19 has made and continues to make significant contributions to the field of water analysis. The sidebar, "Past Chairs of Committee D19," presents the individuals who have assumed leadership of the committee from 1932 to the present.

Committee D19 has grown from the initial 17 members in 1933 to 313 members in 2007. In between those two dates subcommittees within Committee D19 have expanded and contracted. During the early 1980s, Committee D19 served as the launching point for activities on waste disposal and biological methods. These two subcommittees finally grew in



membership and diversity of activities to the point that they split from D19 to form two new committees: today's Committees D34 on Waste Management and E47 on Biological Effects and Environmental Fate.

More recently, several subcommittees have consolidated based on similar interests and overlapping membership. Subcommittee D19.03 on Sampling of Water and Water-Formed Deposits, Surveillance of Water, and Flow Measurements of Water Samples and Subcommittee D19.11 on Water for Power Generation and Process Use combined to form D19.03 on Sampling Water and Water-Formed Deposits, Analysis of Water for Power Generation and Process Use, On-Line Water Analysis and Surveillance of Water. Subcommittee D19.31 on Identification of Waterborne Oils consolidated with Subcommittee D19.06 on Methods of Analysis for Organic Substances in Water for similar reasons.

Figure 1 shows the growth of membership and the production of

full consensus standards from the first published standard in 1940 to the 310 standards published today. In addition to the published standards, there are another 56 standards being worked on by the committee. You will note that between 1987 and 1991 there is a drop in the number of full consensus standards. During this time, Committee D19 went through a rigorous review process to ensure each published standard met minimum requirements for intra- and interlaboratory testing to derive precision and bias data. Many older methods failed to meet the new criteria and were removed from publication. The committee is working to reinstate some of these methods as new technology and innovative round robins allow the development of statistically valid data.

The dedication of individual scientists to the voluntary consensus process can be clearly seen from the honors bestowed upon the members of the committee. The Max Hecht Award, named for Committee D19's first chairman, is the highest award presented by the committee and is given to individuals who have made significant contributions to Committee D19. A sidebar lists the recipients of this award.

The Award of Merit was established in 1949 by the ASTM board of direc-

tors and is the highest society award granted to an individual member for distinguished service and outstanding participation in ASTM committee activities. Individuals receiving this award have generally served on committees at the society level and/or as members of the ASTM board of directors. Committee D19 members who have received the Award of Merit are shown in the sidebar, "Committee D19 Award of Merit Recipients."

## MOVING INTO THE ELECTRONIC AGE

The biggest change in Committee D19 activities in the last 15 years has involved not only Committee D19 but the whole of ASTM. Prior to 1995, ASTM activities were conducted using paper. In 1995, use of hard copy started to change with the launch of an ASTM Web site. The Web site allowed members and non-members to get information about ASTM and its committees quickly and on demand. Although the Web site initially did not have a great deal of information, it was the start of a new age for ASTM and its members. In 1996, new standards and revisions could be sent electronically to ASTM for balloting. This allowed for a far easier and neater updating of standards and for tracking changes between ballots.

During the next four years, several improvements and additions were made to the Web site, such as allowing individuals to electronically find and purchase standards, and members to read minutes, get committee and subcommittee rosters and find information on upcoming meetings.

By 2000, e-mail had become the primary way that D19 officers and ASTM staff communicated. Correspondence could be exchanged between committee officers and ASTM staff in record time, even when staff managers were away at other ASTM committee meetings. Editors could communicate directly and quickly with the standards developers to ensure that all current changes were made to the standards

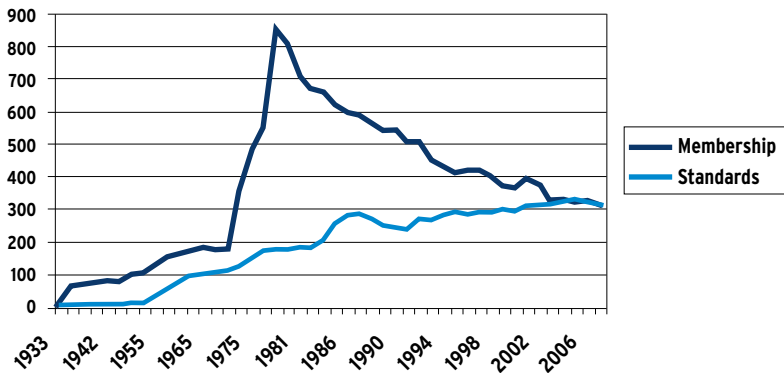
### THE DIVERSITY OF WATER TYPES CONSIDERED BY COMMITTEE D19

The term water includes:

- ▶ Surface waters (rivers, lakes, artificial impoundments, runoff, etc.)
- ▶ Ground waters
- ▶ Spring waters
- ▶ Waste waters (mine drainage, landfill leachate, brines, etc.)
- ▶ Waters resulting from atmospheric precipitation and condensation (with the exception of acid deposition)
- ▶ Process waters
- ▶ Potable waters
- ▶ Glacial melt waters
- ▶ Steam
- ▶ Water for subsurface injection
- ▶ Water discharges, including waterborne materials and water-formed deposits

### PAST CHAIRS OF COMMITTEE D19

1932 - 1971	Max Hecht
1971 - 1972	J. K. Rice
1972 - 1979	M. W. Skougstad
1979 - 1982	C. E. Hamilton
1982 - 1984	R.J. Baker
1984 - 1986	C. E. Hamilton
1986 - 1990	B. A. Malo
1990 - 1993	T. B. Bennett, Jr.
1994 - 1996	John Synnott
1996 - 1999	Jim Lichtenberg
2000 - 2005	Nathalie "Dee" Perkins
2006 - Present	G. Douglas Glysson



**Figure 1 - Committee Growth in Membership and Published Standards**

prior to releasing them.

The year 2001 brought even greater changes to the way ASTM conducted the development and balloting of standards. With the introduction of electronic balloting, D19 members no longer had to receive and go through voluminous paper ballots, record their votes, and mail the ballots back in time to meet the submission deadline. In addition, special subcommittee and main ballots could be issued almost at the will of the subcommittee chairs in between regularly scheduled balloting times.

Also in 2001, the way items were prepared for ballot changed as ASTM initiated the electronic task group meet-

ing, wherein a task group chair could place a draft item on the Web, members of the task group could comment on it, and everyone on the group could see and comment on those comments. In addition, society balloting occurred at the same time as the committee's main balloting. Thus, if a proposed standard passed the main committee and society ballots with no negatives, it went directly to the editors to start preparing the standard for release. Even the Annual Book of ASTM Standards became electronic as ASTM began publishing the books on CD.

Although these changes improved the speed with which D19 subcommittees

could produce and approve consensus standards from initial drafts to final standards, the process was not without its problems. The introduction of the concurrent main committee and society balloting caused a major problem for the D19 subcommittee chairs, as they could no longer control a standard after it went to main committee ballot. If editorial changes were needed as a result of balloting at the main committee level, it was difficult to ensure that the changes were incorporated prior to publication.

To address this problem, Committee D19 instituted a policy that all subcommittee chairs could vote an "administrative" negative on all proposed standards from their subcommittee in order to control the forward progress of the standards. Thus, if a standard needed editorial changes, these changes could be made prior to releasing the standard to the next level of balloting or to the editors.

Changes initiated in 2006 and scheduled to take place in 2007 have and will make it even easier and more efficient for Committee D19 officers and members to develop consensus standards. Last year saw the introduction of the ballot closing reports to the ASTM Web site, as well as allowing access to

## COMMITTEE D19 MAX HECHT AWARD RECIPIENTS

1954 - Max Hecht	1970 - Earl E. Coulter	1986 - C. Ellen Gonter	1999 - Paul W. Britton
1955 - Everett P. Partridge	1971 - J. Fred Wilkes	1987 - Robert Day	2000 - Martha Hendrick-Smith
1956 - Abraham A. Berk	1972 - Lester L. Loudon	1988 - Victor M. Marcy	2001 - Nathalie "Dee" Perkins
1957 - Robert C. Adams	1973 - James K. Rice	1988 - Robert E. White	2002 - Reid Tait
1958 - F. R. Owens	1974 - Michael Dannis	1989 - Gene Collins	2002 - Charles McDonough
1959 - L. Drew Betz	1975 - Sallie A. Fisher	1990 - Jack R. Hall	2003 - Dave McCurdy
1960 - Frank N. Speller	1976 - Donald L. Reid	1991 - Olsen Rogers	2003 - John Hubbling
1961 - Claude K. Rice	1977 - Charles C. Wright	1991 - Tony Cappellucci	2004 - Dan Montgomery
1962 - S. Kenneth Love	1978 - Russell W. Lane	1992 - Marvin J. Fishman	2005 - Stephen P. Ellis
1963 - John F. J. Thomas	1979 - Leslie E. Lancy	1992 - Bernard A. Malo	2005 - William A. Telliard
1964 - Frank E. Clarke	1980 - Robert J. Baker	1993 - John A. Winter	2006 - G. Douglas Glysson
1965 - Richard D. Hoak	1981 - James J. Lichtenberg	1995 - Tom B. Bennett, Jr.	2007 - Ed Huffman
1966 - Orrin M. Elliot	1982 - Verity C. Smith	1996 - Robert J. Joyce	
1967 - George R. Tallon	1983 - Charles E. Hamilton	1997 - John Synnott	
1968 - Robert A. Baker	1984 - Bob Kroner	1998 - Colin Sanderson	
1969 - Walter A. Lower	1985 - Lyman H. Howe	1998 - Deen Johnson	

## COMMITTEE D19 AWARD OF MERIT RECIPIENTS

1950 - Max Hecht  
1955 - Robert C. Adams  
1956 - L. Drew Betz  
1959 - Claude K. Rice  
1961 - Frank E. Clarke  
1967 - Robert A. Baker  
1970 - James K. Rice  
1974 - Sallie A. Fisher  
1975 - Robert C. Kroner  
1976 - George R. Tallon  
1978 - Abraham A. Berk  
1978 - Lester L. Loudon  
1979 - Jerome A. Platte  
1980 - Marvin W. Skougstad  
1984 - Victor Marcy

1984 - Tom B. Bennett, Jr.  
1985 - Russell W. Lane  
1986 - Robert E. White  
1986 - Connie K. Glover  
1987 - Bernard J. Dutka  
1988 - Charles E. Hamilton  
1989 - Marvin J. Fishman  
1990 - Bernard A. Malo  
1993 - Lyman H. Howe  
1995 - James J. Lichtenberg  
1996 - Jack Hall  
1997 - C. Ellen Gonter  
1999 - Reid Tait  
2001 - Verity Smith  
2002 - G. Douglas Glysson  
2003 - Steve Ellis  
2004 - Donna L. Damrau  
2006 - Nathalie "Dee" Perkins

the ballot negatives and comments to all members of the committee online. A D19 task group or subcommittee chair no longer has to wait for paper copies to be mailed to them to determine the results of a balloted item. This change, along with electronic tracking and reporting of the resolution of negatives, which is a proposed change to take place this year, will make the job of the subcommittee chair much easier and more efficient. Finally, the wide use of laptops and Internet connections in hotels has encouraged Committee D19 members to accomplish at their semiannual meetings many of the tasks that were put off until after the meeting, sometimes for many months. Accuracy of meeting minutes has generally improved as a result.

## RECENT STANDARDS DEVELOPMENT

Over the last several years, Committee D19 has been working closely with the U.S. Environmental Protection Agency and other agencies on the development of standards that will be useful in U.S. regulatory processes. Committee D19 has formally established a section under its Executive Subcommittee, D19.90.04

on USEPA/ASTM Coordination. With ASTM, EPA and D19 individuals working together in this section, D19 has submitted several ASTM standards to the EPA for consideration as approved EPA standards and will continue to do so in the future.

Subcommittee D19.02 on General Specifications, Technical Resources and Statistical Methods has been working on standards that will help individuals and companies better manage their laboratories and quantify their results. D19.03 has been involved in the development of standards that address the on-line monitoring of a variety of parameters, including pH, conductivity, oxygen, silica, sodium by specific ion electrode, dissolved and particulate metals by X-ray fluorescence, anions and carbon dioxide by conductivity, anions by ion chromatography and turbidity. D19.04 on Methods of Radiochemical Analysis has been active in the development of standards for the radiochemical analysis of water and is moving these standards to the EPA. Currently, D19.04 has 14 draft standards in the balloting process.

Subcommittee D19.05 on Inorganic Constituents in Water is currently working on four new standards that

deal with the use of ion chromatography. Among other things, D19.06 on Methods for Analysis for Organic Substances in Water is developing a practice for cyanide definitions that will help ensure the proper use and understanding by users of the method. D19.07 on Sediments, Geomorphology and Open-Channel Flow is heavily involved with the development of standards that measure the turbidity of water and has developed a new set of units (already adopted by the U.S. Geological Survey) for the reporting of turbidity measurements. D19.08 on Membranes and Ion Exchange Materials continues to develop and refine methods for the filtering and ultrafiltration of water using membranes and reverse osmosis. D19.24 on Water Microbiology is currently working on 22 new standards that involve the removal of microbiological material for water.

## FUTURE DIRECTIONS

As Committee D19 celebrates its 75th anniversary, the committee continues to search for needs that it may be able to address with quality, proven consensus standards. We draw membership from all facets of industry and the federal government, particularly the U.S. Geological Survey and the EPA. We serve as the United States representative to ISO TAG 147 on Water. In increasing numbers, we are welcoming members from the international community. We anticipate that our increasing diversity will continue to keep our committee busy and productive for many years to come.

**NATHALIE H. "DEE" PERKINS** is president of Geoserv Inc. A member D19, she served as committee chair from 2000 to 2005. She received Committee D19's Max Hecht Award in 2001 and the ASTM Award of Merit in 2006.

**G. DOUGLAS GLYSSON, P.E., P.H.,** has over 36 years of service with the U.S. Geological Survey. Glysson currently serves as D19 chair and secretary of the Board of Registration for the American Institute of Hydrology.