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### EDUCATION

The Cooper Union, New York City	Bachelor of Civil Engineering	1955
New Jersey Institute of Technology	Master of Science in Civil Engineering	1958
The Johns Hopkins University	EngD, Sanitary Engineering	1961

### REGISTERED PROFESSIONAL ENGINEER

New York	37493	1960
Illinois	062-022981	1962
Missouri	E-18476	1976

### PROFESSIONAL EXPERIENCE

1993 - present	CEO, H <sub>2</sub> O'C Engineering, LLC, Columbia, Missouri
1992 - 1995	Chief, Illinois State Water Survey, Champaign, Illinois
1975 - 1992	Chairman, Department of Civil Engineering & C. W. LaPierre Professor, University of Missouri-Columbia, Columbia, Missouri
(1990)	Fulbright Scholar: Department of Civil Engineering, University of Canterbury, Christchurch, New Zealand
1961 - 1975	Professor, '70-'75; Associate Prof., '64-'69; Assistant Prof., '61-'64 Univ. of Illinois at Urbana-Champaign, Dept. of Civil Engineering
(1972)	Visiting Professor, Department of Chemistry, Montana State University, Bozeman, MT
(1969)	Sabbatical Leave., Division of Engineering and Applied Physics, Harvard University, Cambridge, MA
1958 - 1961	Research Assoc., Dept. of Sanitary Engineering & Water Resources, Institute for Coop. Research, Atomic Energy Commission Project, <i>Fate of Radioactive Zinc in Natural Water Systems</i> The Johns Hopkins University, Baltimore, Maryland ('60 - '61)
(1959)	USAEC, Oak Ridge Institute for Nuclear Studies, Oak Ridge, TN
(1958 - 1960)	USPHS Research Fellow, The Johns Hopkins University, Balt., MD

1956 - 1957 Civil Engineer, George A. Fuller Construction Company, NYC

1955 - 1956 Civil and Sanitary Engineer, Elson T. Killam,  
Sanitary and Hydraulic Engineers, Milburn, NJ

### **SCIENTIFIC AND TECHNICAL SOCIETIES**

Fellow: American Society of Civil Engineers (ASCE)  
Environmental Engineering Division (EED) Newsletter Editor;  
EED Secretary, 1968-1976

Life Member: Water Envir. Fed.; American Chemical Society; Amer. Water Works Assoc.  
Member: American Society of Limnology and Oceanography (ASLO)

Chairman Fulbright Awards Committee for Australasia, 1998-1999

USEPA Grant / Fellowship Peer Review Panelist, 1994-1998;  
Peer Review Panelist, 1995-1998, Environ. Engineering Research Division;  
Small Business Innovative Research (SBIR)

### **HONORS**

1981 Simon A. Freese Award & Lecture, Amer. Soc. of Civil Eng., Env. Eng. Div.  
*Global Environmental Deterioration & the Future of the Environmental Engineering Profession*, Address to Natl Conf. on Env. Eng., Atlanta, GA.

1990 Fulbright Award, New Zealand-U.S. Educational Foundation,  
University of Canterbury, Christchurch, New Zealand

2001 Honorary Member, Missouri Water and Wastewater Conference

2002 Warren A. Kramer Award, Missouri Section, Amer. Water Works Assoc.

2007 Gold Water Drop Award, American Water Works Association

### **PUBLICATION AWARDS**

*Deterioration of Water Quality in Distribution Systems*,  
J. AWWA, March, 1975.

*Effect of Ozonation on the Removal of Iron from Ground Water Containing Organic Substances*,  
J. AWWA, 1976.

*Biologically-Mediated Corrosion and its Effects on Water Quality in Distribution Systems*,  
J. AWWA, 1980.

## **BOOKS, CHAPTERS**

*AWWA Manual on Water Quality and Treatment*: McGraw-Hill, 1971

Iron & Manganese Removal (Ch. 11);

Management of Water Treatment Plant Residues (Ch. 13)

*Environmental Engineering Unit Operations & Unit Processes Laboratory Manual*,

Assoc. of Environmental Engineering Professors, 210 pp., August 1972

*Control of Microorganisms in Drinking Water*, ASCE, 2002, ISBN 0-7844-00635-9

Chapter 3: Microbially-Mediated Corr. and Water Quality Deter., pp. 23-50

Chapter 8: Rapid Sand Filtration, pp. 127-148.

## PUBLICATIONS RELATED TO WATER QUALITY AND TREATMENT

### *Zinc in Natural Surface Waters*

O'Connor, J. T., and Renn, C. E., Evaluation of Procedures for the Determination of Zinc, *Journal of the American Water Works Association*, 55: 5, 631-637, May 1963.

O'Connor, J. T., and Renn, C. E., and Wintner, I., Zinc Concentration in Rivers of the Chesapeake Bay Region, *Journal of the American Water Works Association*, 56:3, 280-286, March 1964.

O'Connor, J. T., and Renn, C. E., Soluble-Adsorbed Zinc Equilibrium in Natural Waters, *Journal American Water Works Association*, 56: 8,1055-1061, Aug. 1964.

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### *Iron and Manganese, Organic Materials in Ground Waters*

O'Connor, J. T., Englebrecht, R. S., and Ghosh, M. M., Significance and Removal of Iron in Water Supplies, Proceedings, 4th Annual Sanitary Engineering Conf., Vanderbilt Univ., June 1965.

Ghosh, M. M., O'Connor, J. T., and Englebrecht, R. S., Precipitation of Iron in Aerated Ground Water, *J. Sanitary Engineering Division, American Society of Civil Engineers*, 92: SA1, 199-213, 1966; Discussions by W. Stumm & P. Singer; J. Morgan & F. Birkner; F. Winklehaus, F. DiGiano & W. Weber, Jr.

O'Connor, J. T., Englebrecht, R. S., and Ghosh, M. M., Removal of Iron from Ground Waters, Proceedings, Symposium on Acid Mine Drainage, Pittsburgh, Pennsylvania, May 1965.

Robinson, L. R., O'Connor, J. T., and Englebrecht, R. S., Organic Materials in IL Ground Waters, *Journal of the American Water Works Association*, February 1967.

Englebrecht, R. S., O'Connor, J. T., and Ghosh, M. M., Iron Removal by Aeration and Filtration, *Water and Sewage Works*, Vol. 114, pp. 123-128, April 1967.

O'Connor, J. T., Iron and Manganese Removal: Methods and Practice, Proceedings, Sanitary Engineering Institute, University of Wisconsin, March 1969.

O'Connor, J. T., The Practice of Iron and Manganese Removal, *Water and Sewage Works*, pp. R68-R70, Nov. 1969.

### *Drinking Water Disinfection*

O'Connor, J. T., and Kapoor, S. K., Small Quantity Field Disinfection,  
*Journal of the American Water Works Association*, Vol. 62, No. 2, pp. 80-84, February 1970.

### *Magnesium Oxide for Iron Removal*

O'Connor, J. T., and Benson, B., Iron Removal Using Magnesium Oxide,  
*J. Sanitary Engineering Division, ASCE*, Vol. 96, No. 7, No. SA6, pp. 1377-1386, Dec. 1970.

### *Biologically-Mediated Deterioration of Water Quality During Filtration of Ground Waters*

O'Connor, J. T., and Baliga, K. Y., Control of Bacterial Growths in Rapid Sand Filters,  
*J. Sanitary Engineering Division, ASCE*, Vol. 96, No. 7, No. SA6, pp. 1377-1386, Dec. 1970.

Baliga, K. Y., and O'Connor, J. T., Biologically-Mediated Chemical Changes in the Filtration of  
Aerated Ground Waters,  
*Journal of the American Water Works Association*, Vol. 63, No. 5, pp. 292-297, May 1971.

### **Books, Chapters**

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Iron & Manganese Removal (Ch. 11);  
Management of Water Treatment Plant Residues (Ch. 13)  
*American Water Works Association*, McGraw-Hill, 1971.

O'Connor, J. T., Editor, Environ. Engineering Unit Operations & Unit Processes Lab. Manual,  
*Association of Environmental Engineering Professors*, 210 pp., August 1972.

### *Removal of Trace Metals: Arsenic, Barium, Cadmium, Mercury and Selenium*

O'Connor, J. T., and Gullledge, J. H, Removal of Arsenic (V) from Water by Adsorption on  
Aluminum and Ferric Hydroxides,  
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Processes,  
*Proceedings, 16th Water Quality Conference, University of Illinois, Urbana*, Feb. 1974.

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O'Connor, J. T., Thiem, L., and Badorek, D., Removal of Mercury from Drinking Water Using Activated Carbon,  
*Journal of the American Water Works Association*, August 1976.

Thiem, L., and O'Connor, J. T., Removal of Barium, Cadmium, Mercury and Selenium from Drinking Water Supplies,  
*Municipal Environmental Research Laboratory, ORD, USEPA, Cincinnati, Ohio*, 1982

*Microbially-Mediated Corrosion and Water Quality Deterioration During Distribution*

O'Connor, John T., Hash, L. and Edwards, A. B., Deterioration of Water Quality in Distribution Systems,  
*Journal of the American Water Works Association*, March, 1975.

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*Journal of the American Water Works Association*, June 1976.

Banerji, S. K., Knocke, W. R., Lee, S., and O'Connor, J. T., Biologically-Mediated Water Quality Changes in Water Distribution Systems (Part I),  
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*Proc., American Water Works Association, WQTC, Kansas City, Missouri*, December 1977.

Lee, S., O'Connor, J. T., and Banerji, S. K., Biologically-Mediated Corrosion and Water Quality Deterioration,  
*Proc., American Water Works Association, WQTC, Phila., PA*, Dec. 1979.

Lee, S., O'Connor, J. T., and Banerji, S. K., Biologically-Mediated Corrosion and its Effects on Water Quality in Distribution Systems,  
*Journal of the American Water Works Association*, November 1980.

Prakash, T. M., Banerji, S. K., and O'Connor, J. T., Development of a Pipe Manifold System for Monitoring Water Quality in Water Distribution Systems,  
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*Municipal Environmental Research Laboratory, Office of Research and Development, USEPA, Cincinnati, Ohio*, EPA-600/52-84-056 (NTIS Order No. PB-84-157-494) April 1984.

*Removal of Organic Substances & THMs by Granular Activated Carbon and Polymeric Adsorbents*

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Banerji, S. K., and O'Connor, J. T., Guide to Comparative Treatment Mode Efficiencies, *Water and Sewage Works, August 1980.*

*Virus Removal and Inactivation*

Reach, C. D., O'Connor, J. T., and Hemphill, L., Virus and Bacterial Quality of Missouri River Water, *Proc., Annual Conference, American Water Works Association, San Francisco, CA, June 1979.*

O'Connor, J. T., Hemphill, L., and Reach, C. D., Removal of Virus from Public Water Supplies, *MERL, ORD, USEPA, Cinn., OH, August 1982.*

*Phosphates and Silicates for Corrosion Control*

Banerji, S. K., O'Connor, J. T., and Huang, D., Polyphosphate Additions for Corrosion Control in Water Distribution Systems, *Proc., Natl. Conf. on Env. Eng., American Society of Civil Engineers, Boulder, Colorado, July 1983.*

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*Control of Microorganisms in Water Plant Effluents, Distribution Systems and Household Plumbing*

O'Connor, J. T., Brazos, B. J., Ford, W. C., Dusenberg, L. L., and Summerford, B. E., Chemical and Microbiological Evaluation of Drinking Water Systems in Missouri, *Proceedings, American Water Works Association, WQTC, Denver, Colorado*, December 1984.

Brazos, B. J., and O'Connor, J. T., Electron Micrographic Survey of a Drinking Water System, *Proceedings, American Water Works Association, WQTC, Denver, Colorado*, December 1984.

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Brazos, B. J., O'Connor, J. T., and Abcouwer, S. A., Kinetics of Chlorine Depletion and Microbial Growth in Household Plumbing Systems, *Proc., American Water Works Association, WQTC, Houston, Texas*, December 1985.

Brazos, B. J., and O'Connor, J. T., A Transmission Electron Micrographic Survey of the Planktonic Bacterial Population in Chlorinated and Non-Chlorinated Drinking Water, *Proc., American Water Works Association, WQTC, Houston, Texas*, December 1985.

Brazos, B. J., O'Connor, J. T., and Lenau, C. W., Seasonal Effects on Total Bacterial Removals in a Rapid Sand Filtration Plant, *Proc., American Water Works Association, WQTC, Portland, Oregon*, pp. 795-834, Nov. 1986.

Brazos, B. J., O'Connor, J. T., Ford, W. C., Lane, J. L., Dusenberg, L. L., and Summerford, B. E., Variances from Mandatory Disinfection--Evaluation and Maintenance of Microbiological Quality of Source Waters, *Proc., American Water Works Association, WQTC, Portland, OR*, Nov. 1986.

Brazos, B. J., O'Connor, J. T., and Kirchhoff, B., Fractionation of Turbidity in the Missouri River, *Proc., American Water Works Association, WQTC, Baltimore, MD*, 721-740, Nov. 1987.

Brazos, B. J., and O'Connor, J. T., Relative Contributions of Regrowth and Aftergrowth to the Number of Bacteria in a Drinking Water Distribution System, *Proc., American Water Works Association, WQTC, Baltimore, MD.*, pp. 433-467, Nov. 1987.

Brazos, B. J., and O'Connor, J. T., Seasonal Effects on Removal of Particle-Associated Bacteria in a Rapid Sand Filtration Plant, *Proc., American Water Works Association, WQTC, St. Louis, Missouri*, pp. 577-630, Nov. 1988.

Kirchhoff, B., Brazos, B. J., and O'Connor, J. T., Comparative Reductions of Turbidity, Heterotrophic Plate Count and Total Bacteria in a Ground Water, Lime Softening Plant, *Proc., American Water Works Association, WQTC, St. Louis, Missouri*, pp. 870-889, Nov. 1988.

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*Public Works*, Vol. 120, No., 1:62-63, 114-115, January 1989.

O'Connor, J. T., Banerji, S. K., and Brazos, B. J., Recommended Chemical and Microbiological Analyses for Distribution System Monitoring,  
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Brazos, B. J., and O'Connor, J. T., Seasonal Effects on the Generation of Particle-Associated Bacteria During Distribution.  
*Proc., American Water Works Association, WQTC, Philadelphia, Pennsylvania*, November 1990.

Brazos, B. J., and O'Connor, J. T., Seasonal Effects on the Generation of Particle-Associated Bacteria During Distribution,  
*J. of Environmental Engineering, American Soc. of Civil Engineers*, Vol. 122, No. 12, Dec., 1996.

#### *Turbidity and Other Microbiological Surrogates*

O'Connor, J. T., and Brazos, B. J., An Assessment of the Use of Direct Microscopic Counts in Evaluating Drinking Water Treatment Processes,  
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Brazos, B. J., and O'Connor, J. T., The Effect of Lower Turbidity on Distribution System Water Quality, Research Report,  
*American Water Works Association Research Foundation, 1992.*

#### *Wetlands for Tertiary Wastewater Treatment*

Stober, J. T. and O'Connor, J. T., Seasonal Evaluations of an Evolved Wetland providing Tertiary Wastewater Treatment: BOD, Nitrate, Phosphate, and Sulfate Reductions,  
*Proceedings, Water Environment Federation, Annual Conference, Chicago, Illinois, Oct. 1994.*

Stober, J. T., O'Connor, J. T., and Brazos, B. J. Winter and Spring Field Evaluations of a Wetland providing Tertiary Wastewater Treatment,  
*Water Environment Research*, Vol. 69, No. 5: 961-968 July/Aug., 1997.

**Atrazine Removal**

Stober, J. T., Brazos, B. J., and O'Connor, J. T.,  
Bench-Scale Studies of Atrazine Removal with Powdered Activated Carbon,  
*Missouri Water and Wastewater Conference*, Springfield, Missouri, Sept. 1996.

**Removal of Ammonium Ion by Ion Exchange**

Brazos, B. J., O'Connor, J. T., and Klekamp, Ken,  
*Control of Water Quality Deterioration in Water Distribution Systems: Washington, Illinois  
Employs a Novel Method to Remove Ammonium Ion and Control Nitrification During Distribution,*  
*Public Works*, Vol. 127, No. 12, November, 1996.

**Evaluation of Water Treatment Plant Performance**

Brazos, B. J., and O'Connor, J. T.,  
Evaluation of Rapid Sand Filters for Control of Microorganisms in Drinking Water:  
Parts One and Two, *Public Works*, Vol. 128, Nos. 3-4 :March-April, 1997.

**Control of Copper Corrosion**

Murphy, B., O'Connor, J. T., and O'Connor, T. L.,  
Willmar, Minnesota Battles Copper Corrosion:  
Part 1: The Problem and the Search for Effective Treatment Alternatives  
Part 2: Nitrification, Bacteria and Copper Corrosion in Household Plumbing  
Part 3: Results of Pilot Plant Column and Copper Pipe Test Loop Studies  
*Public Works*, Vol. 128, Nos. 11-13, October, November, December, 1997.

**Control of Nitrification in Water Distribution Systems**

Murphy, B., O'Connor, J. T., and O'Connor, T. L.,  
Willmar, Minnesota Controls Nitrification in the Distribution System  
Part 1: Ozonation  
Part 2: Breakpoint Ammonium Reduction Treatment  
*Public Works*, Vol. 129, Nos. 10, 11, September, October, 1998.

T. L. O'Connor, Bart Murphy and J. T. O'Connor,  
Controlling Nitrification in a Water Distribution System Using Sodium Chlorite  
*Water Engineering and Management*, Vol. 148, No. 9, September, 2001.

## **Control of Microbial Nutrients in Water Distribution Systems**

O'Connor, T. L., O'Connor, J. T. and Gerdes, S.,

Control of Water Quality Deterioration in Water Distribution Systems:

Part 1. Presence of Methane in Illinois Well Water Supplies

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*Water Engineering and Management*, Vol. 146, Nos. 3-6, March-June, 1999.

## **Stream Biomonitoring**

O'Connor, T. L. and O'Connor, J. T.,

Stream Biomonitoring Assesses the Impact of Large-Scale Livestock Production,

*Water Engineering and Management*, Vol. 146, No, 10, October, 1999.

## **Microbially-Mediated Corrosion and Water Quality Deterioration During Distribution**

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Part 1: Recognition of the Role of Microorganisms

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*Water Engineering and Management*, Vols. 147, 148; Nos. 10-12, 1; Oct.-Dec., 2000; Jan. 2001.

## **Arsenic in Drinking Water**

O'Connor, J. T.,

Arsenic in Drinking Water:

Part 1. The Development of Drinking Water Regulations

Part 2. Human Exposure and Health Effects

Part 3. Occurrence of Arsenic in U.S. Waters

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*Water Engineering and Management*, Vol. 149, Nos. 2, 3, 5, 6, February, March, May, June 2002.

**Books:**

**Control of Microorganisms in Drinking Water,  
*American Society of Civil Engineers, 2002***

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*John Wiley & Sons, under contract***