

RESUME

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Employment History:

2004-2013—Engineering Collaborator, OPA685—Agricultural Research Service, Pacific West Area (Albany,CA) . Work Location: US Arid-Land Agricultural Research Center, 21881 North Cardon Lane, Maricopa, AZ. 85218.

1995 – 2004 (01/04/2004—RETIRED in '04): ST-00, Research Hydraulic Engineer and Chief Scientist, USDA, ARS, Phoenix, Arizona. [**At US Water Conservation Laboratory, USWCL**, Currently renamed: U S Arid Land Agricultural Research Center].

1990 – 1995: GM-15, Research Hydraulic Engineer, USDA, ARS, USWCL, Phoenix, Arizona.

1985 – 1990: GM-15, Supervisory Research Hydraulic Engineer, and Research Leader, Irrigation and Hydraulics Research Unit, USWCL, Phoenix, Arizona.

1975 – 1985: GS-14 (GM-14), Research Leader and Supervisory Research Hydraulic Engineer, USDA, USWCL, Phoenix, Arizona.

1966 – 1975: GS-13, Research Hydraulic Engineer, USDA, ARS, USWCL.

1963 – 1966: GS-12 Research Agricultural Engineer, USDA, ARS, U.S. Water Conservation Laboratory (USWCL), Phoenix, Arizona.

1958-1963: Instructor , Department of Agricultural Engineering, University of Illinois, Urbana, Illinois.

PRIMARILY:

I was charged with “Improving the Accuracy, Economics, and Convenience of flow measurement in Irrigated Agriculture.” I improved existing metering methods and invented new systems for use in pipes and canal systems. These are documented in various publications and patents.

SECONDARILY:

I was involved in Irrigation System and Irrigation System Management of Drip, Sprinkler, and Flood types: (Level Basin, Borders, and Sloping Furrows). In addition, I was involved with Watershed Management Studies including developing sediment yield measuring equipment.

BIOGRAPHICAL SUMMARY:

Degrees in both Civil (PhD) and Agricultural Engineering (BS, MS), University of

Illinois.

Forty years with the US Water Conservation Laboratory, Agricultural Research Service, USDA, conducting research on water measurement and water management in irrigated agriculture.

Leader of the Irrigation and Hydraulics Research Group at the Laboratory for 18 years. Sited as one of the world's foremost experts in water measurement, particularly in agricultural applications involving canals of large and small sizes.

Authored/Coauthored more than 145 technical articles, books and book chapters on irrigation, water measurement, and water management.

Chaired numerous technical committees within American Society of Civil Engineers (ASCE) and American Society of Agricultural Engineers (ASAE).

Served as a consultant and expert for numerous government (county, tribal, state and federal) agencies and water districts, domestic and foreign.

Major awards include:

James R. Croes Medal, ASCE, 1977;

Hydraulics Structures Medal, ASCE, 1995;

Royce J. Tipton Award, ASCE, 1999;

USCID Merriam Improved Irrigation Award, 2002, and

Hunter Rouse Hydraulic Engineering Lecture, ASCE, June 2004.

DETAILS

Recent Activities and noted areas of expertise:

- Developer of the Long-Throated Flume Calibration/Rating Software: (Most current version, WinFlume, was rewritten in Visual Basic in cooperation with USDA (Dept. of Agr.) and USBR (Bureau of Reclamation.), 2021.
- Provided the **Foreword** for the most recent *ISCO Flow Measurement Handbook*.
- Designed and supervised the installation of a large **Long-Throated Flume** (2000 cfs) installed on the US Army, Fort Huachuca, Arizona. (2006-2007)
- Author or Co-author of over 145 Technical Journal papers, mostly dealing with Flow Measurement Technologies in Open Channels:
- Published Design Concepts for building accurate total-load sediment samplers for natural streams.

Some Recent Publications:

Replogle, John A. 2020. New Water Sources, Promises and Problems. USCID News Letter. (The U.S. Society for Irrigation and Drainage Professionals). Issue No. 131, Summer 2020. Pgs.:7-10.

Replogle, John A. 2015. Field and Laboratory Techniques for Agricultural Water Management. For presentation at the ASABE /AI Conference, 15 Nov, 2015. Los Angeles, CA.

Replogle, John A. and Rick S. Adler. 2014. Weed-Resistant Propeller-Meter System. Proceedings of the World Environmental and Water Resources Congress 2014-June 1-5, Portland, OR. American Society of Civil Engineers. pp 1774-1783.

- Replogle, J.A.**, 2009. Tests of Concepts for Stream-Flow Sampler Design. Journal of Hydrologic Engineering, ASCE, Vol. 14, No. 1, pp 65-74.
- Wahl, T.L., A.J Clemmens, **J.A. Replogle** and M.G. Bos. 2005. Simplified design of flumes and weirs. Irrigation and Drainage. 54:231-247.
- Clemmens, A.J., T.S Strelkoff and **J.A. Replogle**. 2003. Journal of Hydraulic Engineering. 129(9):680-687.
- Clemmens, A.J. and **J.A. Replogle**. 2003. Irrigation Metering. Encyclopedia of Water Science. p. 495-497.
- Clemmens, A.J., T.S Strelkoff and **J.A. Replogle**. 2003. Journal of Hydraulic Engineering. 129(9):680-687.
- Clemmens, A.J. and **J.A. Replogle**. 2003. Irrigation Metering. Encyclopedia of Water Science. p. 495-497.
- Replogle, J. A.**, and , B. T Wahlin. 2003. Head loss characteristics of flap gates at the end of drain pipes. Transactions of the ASAE. 46(4):1077-1084.
- Replogle, J.A.** 2002. Some observations on irrigation flow measurements at the end of the millennium. Applied Engineering in Agriculture. 18(1):47-55.
- Replogle, J. A.**, and , B. T Wahlin. 2000. Pitot-static tube system to measure discharges from wells. Journal of Hydraulic Engineering. 126(5):335-346
- Wahlin, B.T., Clemmens, A.J. and **Replogle, J.A.** 2000. Evaluating the measurement accuracy of surface water flows and accumulated volumes. Proc. International Conference on Water Resources Engineering, ASCE Joint Conference on Water Resources Planning and Management, Minn, MN, Jul 30-Aug 2.