

## 2014 SUPPLEMENTAL FOREWORD<sup>1</sup>

*“....And as for rivers, I believe it is evident, that they are furnished by a superior circulation of Vapours drawn from the Sea by the heat of the Sun which by Calculation are abundantly sufficient for such a supply. For it is certain that nature never provides two distinct ways to produce the same effect, when one will serve. But the increase and decrease of Rivers, according to wet and dry Seasons of the year, do sufficiently show their Origination from a Superior circulation of Rains and Vapours”... (Keill 1698)<sup>2</sup>.*

Compare Keill’s quotation from 316 years ago with my recollection of a comment in a newspaper by an Idaho legislator in the early 1970s: *“...If God can’t guarantee a minimum instream flow, how do you expect us to?...”*

It appears as if human knowledge concerning streamflows had not increased much between 1698 and 1976 (278 years) if solely based on those quotations.

Positive change can be achieved with good science and public comprehension. During the 38 years that followed the 1976 conference, I have been fortunate to observe and participate in immense amounts of positive, productive and protective science based outcomes achieved by state, federal, tribal governmental and private partnerships.

Laws, regulations and programs recognizing instream flow and water level conservation benefits and actions have expanded. This positive momentum has been energized by increased public awareness, comprehension, and participation.

A focal group contributing to this advancement and maintaining its momentum has been the Instream Flow Council (IFC). IFC is composed of representatives from each of the state fish and wildlife agencies in the United States and its territories and the provincial and territorial fish and wildlife agencies of Canada. The seeds for this group were planted before and during the 1976 Boise meeting. An example of a cooperative seed was the fact that the Boise conference was jointly sponsored by the Power Division of the American Society of Civil Engineers and the Western Division of the American Fisheries Society.

Now, instream flow and water level analyses linked to natural hydrologic variability and processes are fundamental to any stream flow and lake/reservoir level project, research study, and water-planning program. Governmental and private sector watershed-planning and subsequent actions rely on scientifically sound instream flow and water level studies.

---

<sup>1</sup> Orsborn, J. F. and C. H. Allman. 1976. Editors. *Proceedings of the Symposium and Specialty Conference on Instream Flow Needs: Solutions to technical, legal and social problems caused by increasing competition for limited streamflow*. 2 Volumes. Presented by the Western Division of the American Fisheries Society and Power Division of the American Society of Civil Engineers at the Rodeway Inn-Boise, ID. May 3-6, 1976. Published by American Fisheries Society (AFS). Bethesda, MD. 2014 Supplemental Foreword to Instream Flow Council (IFC) e-reprint-with AFS permission.

<sup>2</sup> Keill, John. 1698. *An examination of Dr. Burnet’s Theory of the earth together with some remarks on Mr. Winston’s New theory of the earth*. Printed at the Theater, Oxford, London. Page 148.

I trust the e-reprint of this conference publication will contribute to those efforts. More people will be able to avail themselves of this historic reference thanks to the IFC and the American Fisheries Society (AFS).

Despite my positive outlook, some that review this publication for the first time may be surprised when agencies and members of the private sector still use the term “*minimum flow*”. Others may wonder why some members of the public and agencies still fail to recognize or comprehend there are seasonal life-stage supporting minima. Others might question why there still isn’t full consideration and integration of the variety of uses, requirements, and processes meriting recognition and attention beyond those specific to fish. I don’t know all the answers. I can only hope this publication will benefit the discussion.

In 1975-6, “*minimum flow*” was considered to be the unused amount of *water* remaining in a water body, after all the impoundment, diversionary, and withdrawal demands (irrigation, municipal and industrial supply, hydropower, etc.) had been met. Certainly we have come farther than this in 38 years. I continue to hope so.

It is an honor to have been bestowed “*Lifetime IFC Membership*” and the 2013 IFC “*Making a Difference Award*”. It is even more gratifying and extraordinary this e-reprint will be accessible to current and future generations. This IFC action will help preserve the history of water issues, uses, methods, and values related to instream flow and water level conservation.

It is my pleasure to provide this 2014 supplemental e-reprint foreword to the original 1976 two volume conference publication.

-John F. Orsborn, PE (retired) PhD - May 2014 (orsborn@olympus.net)