Introduction to the Instream Flow Council (IFC)

Christopher Estes
IFC Director at Large (1998-2024)

Western States Water Council Fall Meeting

Aloft Hotel, Anchorage, AK

September 14, 2023

OVERVIEW

Why IFC Founded, its Functions & Accomplishments (Highlights)

What next ?

Problem/Need:

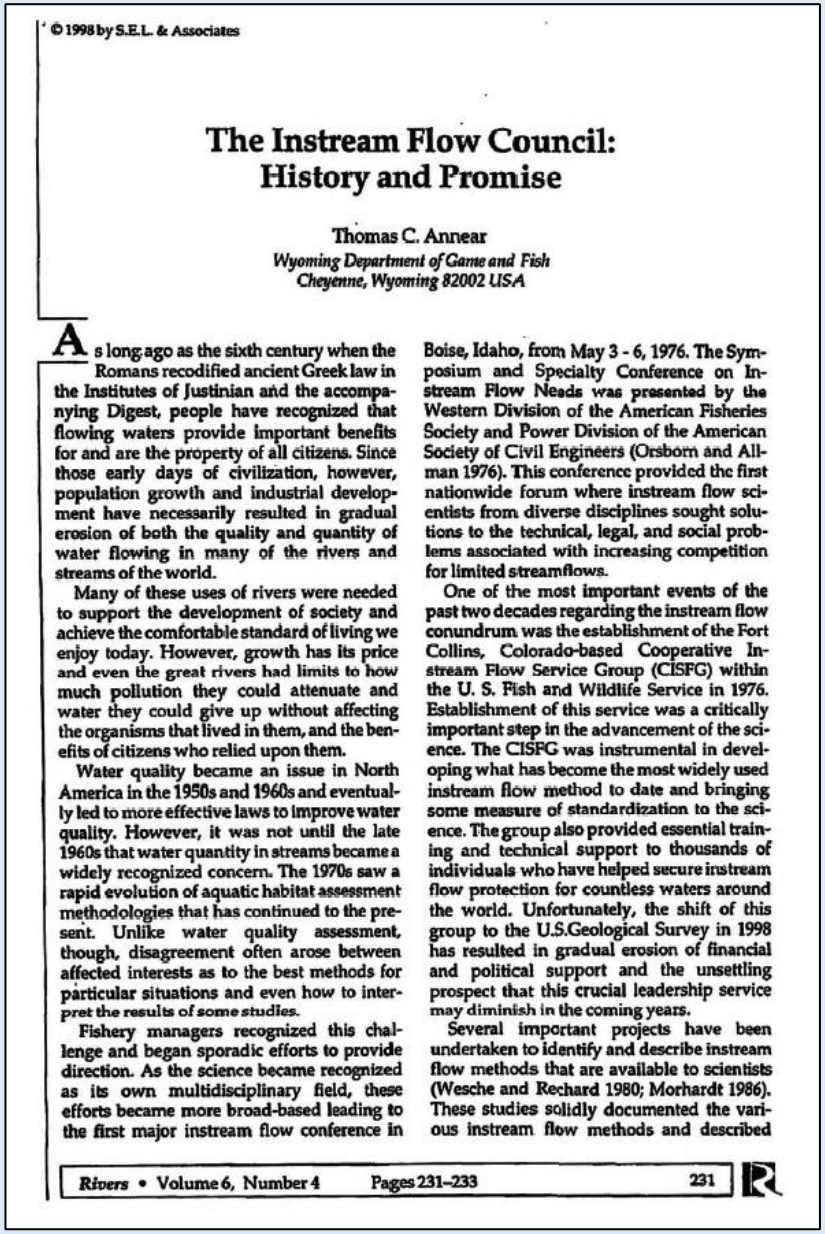
- **EROSION (1990s to 2000) of USFWS/USGS Cooperative Instream Flow Service Group, Ft. Collins, CO**
  (CISFG originally established in 1974)

- **Resulted in State Fish & Wildlife Agencies (& other water stakeholders):**
  - Losing ability to train staff in **I**nstream **F**low & **W**ater **L**evel **C**onservation (protection, restoration, & enhancement), & develop & improve standard **protocols** for **IFWLC** studies & implementation
  - Losing ability to improve, & when needed, develop **policies** & **procedures** for **IFWLC**
  - Losing ability to support improvement, & when needed, support development of **laws** for **IFWLC**

  Other Challenges

  - General unawareness of what adjacent state, province, & territory agencies did/do (same for USFWS Regions & Tribes) & why
  - American Fisheries Society (AFS) focus too broad and unable to meet these needs

- **RESULTING ACTION TO IDENTIFY & DEVELOP SOLUTIONS to FILL GAPS**
  - National Instream Flow Program Assessment Project, NIFPA: 1993-1996



The Instream Flow Council: History and Promise

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As long ago as the sixth century when the Romans recodified ancient Greek law in the Institutes of Justinian and the accompanying Digest, people have recognized that flowing waters provide important benefits for and are the property of all citizens. Since those early days of civilization, however, population growth and industrial development have necessarily resulted in gradual erosion of both the quality and quantity of water flowing in many of the rivers and streams of the world.

Many of these uses of rivers were needed to support the development of society and achieve the comfortable standard of living we enjoy today. However, growth has its price and even the great rivers had limits to how much pollution they could attenuate and water they could give up without affecting the organisms that lived in them, and the benefits of citizens who relied upon them.

Water quality became an issue in North America in the 1950s and 1960s and eventually led to more effective laws to improve water quality. However, it was not until the late 1960s that water quantity in streams became a widely recognized concern. The 1970s saw a rapid evolution of aquatic habitat assessment methodologies that has continued to the present. Unlike water quality assessment, though, disagreement often arose between affected interests as to the best methods for particular situations and even how to interpret the results of some studies.

Fishery managers recognized this challenge and began sporadic efforts to provide direction. As the science became recognized as its own multidisciplinary field, these efforts became more broad-based leading to the first major instream flow conference in Boise, Idaho, from May 3 - 6, 1976. The Symposium and Specialty Conference on Instream Flow Needs was presented by the Western Division of the American Fisheries Society and Power Division of the American Society of Civil Engineers (Orsborn and Allman 1976). This conference provided the first nationwide forum where instream flow scientists from diverse disciplines sought solutions to the technical, legal, and social problems associated with increasing competition for limited streamflows.

One of the most important events of the past two decades regarding the instream flow conundrum was the establishment of the Fort Collins, Colorado-based Cooperative Instream Flow Service Group (CISFG) within the U. S. Fish and Wildlife Service in 1976. Establishment of this service was a critically important step in the advancement of the science. The CISFG was instrumental in developing what has become the most widely used instream flow method to date and bringing some measure of standardization to the science. The group also provided essential training and technical support to thousands of individuals who have helped secure instream flow protection for countless waters around the world. Unfortunately, the shift of this group to the U.S.Geological Survey in 1998 has resulted in gradual erosion of financial and political support and the unsettling prospect that this crucial leadership service may diminish in the coming years.

Several important projects have been undertaken to identify and describe instream flow methods that are available to scientists (Wesche and Rechard 1980; Morhardt 1986). These studies solidly documented the various instream flow methods and described

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https://www.instreamflowcouncil.org/about/

National Instream Flow Program Assessment (NIFPA) Project Steering Committee Members

- Christopher Estes, Co-Chair
  Alaska Department of Fish and Game, Anchorage, AK
- Keith Bayha, Co-Chair
  U.S. Fish and Wildlife Service, Anchorage, AK
- Gary E. Smith, California Department of Fish and Game, Sacramento, CA
- Jay W. Skinner, Colorado Division of Wildlife, Denver, CO
- Charles E. Coomer, Georgia Department of Natural Resources, Social Circle, GA
- M. Delbert Lobb, Missouri Department of Conservation, Columbia, MO
- Liter E. Spence, Montana Department of Fish Wildlife, and Parks, Helena, MT
- J. Douglas Sheppard, New York Department of Env. Conservation, Albany, NY
- Alexander (Alex) R. Hoar, U.S. Fish and Wildlife Service, Hadley, MA
- E. Dawn Whitehead, U.S. Fish and Wildlife Service, Vero Beach, FL
- Clair B. Stalnaker, U.S. Geological Service, Fort Collins, CO

National Instream Flow Program Assessment (NIFPA) Project Summary

- Multistate Conservation Grant Project Initiated in 1993
- Governed by Steering Committee (6 state fish & wildlife agency & 3 USFWS members)
- Participants from every US state fish & wildlife state agency, the 7 USFWS Regions, including AK & Lower 48 Tribe representation – all met in 1995 & 1996
- Assessed status and needs of each state's* instream flow program (science, legal, institutional, & public involvement)
- **Produced videos** defining the background, elements/roles/case histories of the **Public Trust Doctrine**** (PTD) for fulfilling public trust responsibilities (Slide 6)
- **SIGNIFICANT OUTCOMES:** Formed new 10 member **steering committee** of state fish & wildlife agency participants **to develop permanent agency instream flow program network organization** post NIFPA project (Slides 7 & after)
    - Committee developed Charter & Bylaws creating the Instream Flow Council (IFC).
    - Membership: US & Canada state, territorial & provincial fish and wildlife agencies
    - First official IFC membership meeting held in Denver, CO, March 1998

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* **USFWS Regions & Tribal, too**

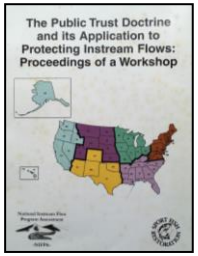
** *https://www.instreamflowcouncil.org/the-public-trust-doctrine/*

NIFPA Public Trust Doctrine (PTD) Online Video Series

Video Series

PTD 100 (video tape)	Preview of the Public Trust Doctrine (9 minutes)
PTD 101 (Video tape)	Introduction to the Public Trust Doctrine, by Joseph Sax (77 minutes)
PTD 101 A and B (video tapes)	same as PTD 101 above except formatted for classroom use (54:45 and 29:30 minutes, respectively)
PTD 102 (video tape)	Perspectives on Water Law Doctrines (63 minutes)
PTD 103 (2 video tapes)	Case Studies in Public Trust Doctrine Application to Instream Flow Protection; New Applications of the Public Trust Doctrine; The Doctrine and Other Legal Tools for Instream Flow Protection (four hours)
PTD 104 (video Tape)	Question and Answers on the Public Trust Doctrine

https://www.instreamflowcouncil.org/the-public-trust-doctrine/



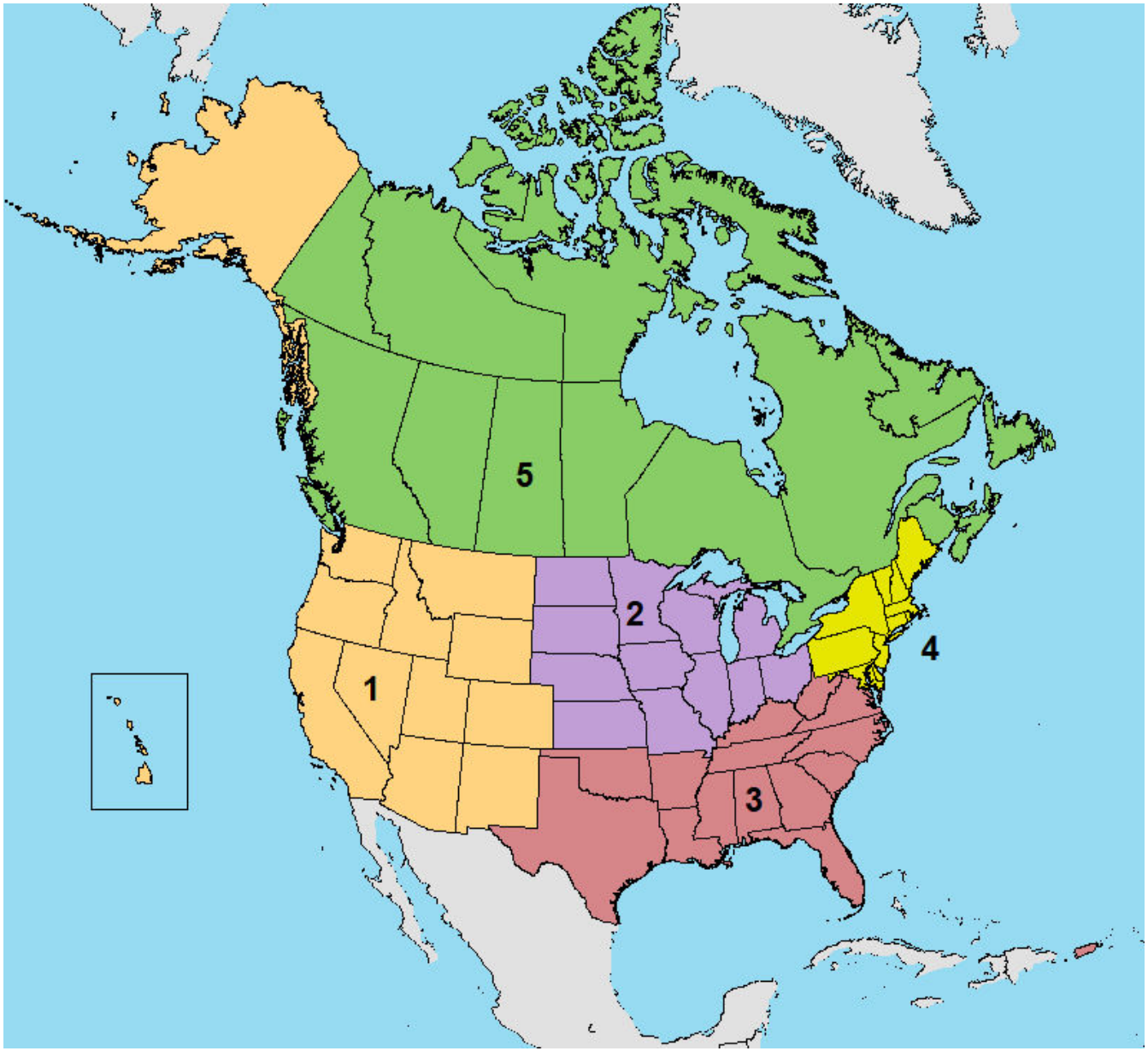
Instream Flow Council Development Steering Committee Members

- Tom Annear, Chair WY Game & Fish
- Ian Chisholm, MN DNR
- Christopher Estes, AK Dept. Fish & Game
- John Kauffman, VA Game & Inland Fisheries
- Steve Filipek, AR Fish & Game
- Larry Hutchinson, NE Fish & Game
- Rick Jacobson, CT Fish & Game
- Randy Moss, TX Parks & Wildlife
- Gary Smith, CA Fish & Game
- Gary Whelan, MI DNR

INSTREAM FLOW COUNCIL HIGHLIGHTS

- Membership
- Structure
- Functions
- Resources
- What Next
- Supplemental Slides

5 IFC Regions



IFC Membership Overview

Membership Categories: General Description (5 Regions – US and Canada)

https://www.instreamflowcouncil.org/ifc-membership/about-ifc-membership/

Executive Committee:

https://www.instreamflowcouncil.org/about/executive-committee-officers-&-structure/

Governing Council (member agency voting members)**:**

These are the Member Agency's Designated Lead IFWLC Program Representative for:

- US State/Territory Fish & Wildlife Agencies
- Canada Province/Territory Fish & Wildlife IFC Member Agencies

(1 per each agency)

https://www.instreamflowcouncil.org/ifc-membership/

General Council (non-voting members from member agencies & special categories)

IFC VISION/MISSION

IFC seeks to help state, provincial, & territorial fish & wildlife agencies better fulfill their **public trust** responsibilities to protect aquatic resources, so that they can be used & enjoyed by current & future generations.

Vision: that each waterbody in Canada & the United States has flow & water level regimes that sustain ecological integrity.

Mission: to improve the effectiveness of state, provincial, & territorial instream flow programs & activities in conserving (protecting, restoring, enhancing) aquatic ecosystems.

IFC's Parent Fish & Wildlife Leadership Organization

ASSOCIATION *of* FISH & WILDLIFE AGENCIES

Supplemental Background Slides
https://www.instreamflowcouncil.org/download/virgilmoore_slides_flow2018-pdf/?wpdmdl=11389&ind=5ccff16ab72bd
Companion Dialogue
https://www.instreamflowcouncil.org/download/virgilmoore_dialogue_flow2018-pdf/?wpdmdl=11387&ind=5ccff167db4da

2022-2024 Committees Rosters
https://fishwildlife.org/download_file/view/4614/229

INSTREAM FLOW COUNCIL

https://fishwildlife.org/

ASSOCIATION *of* FISH & WILDLIFE AGENCIES

The Voice of Fish & Wildlife Agencies

- Founded in 1902, AFWA is the professional organization that represents the collective voice of the state fish & wildlife agencies in all 50 states, the U.S. Virgin Islands, District of Columbia, & Canadian provinces.

- Mission: To advocate for the roles, responsibilities, & authorities of our member agencies to manage fish & wildlife as public trust resources for current & future generations.

- Operates through Committee structure, Governed by Executive Committee & annual rotating President.

Association of Fish & Wildlife Agencies
(AFWA)
https://fishwildlife.org/

INSTREAM FLOW COUNCIL

ASSOCIATION *of* FISH & WILDLIFE AGENCIES

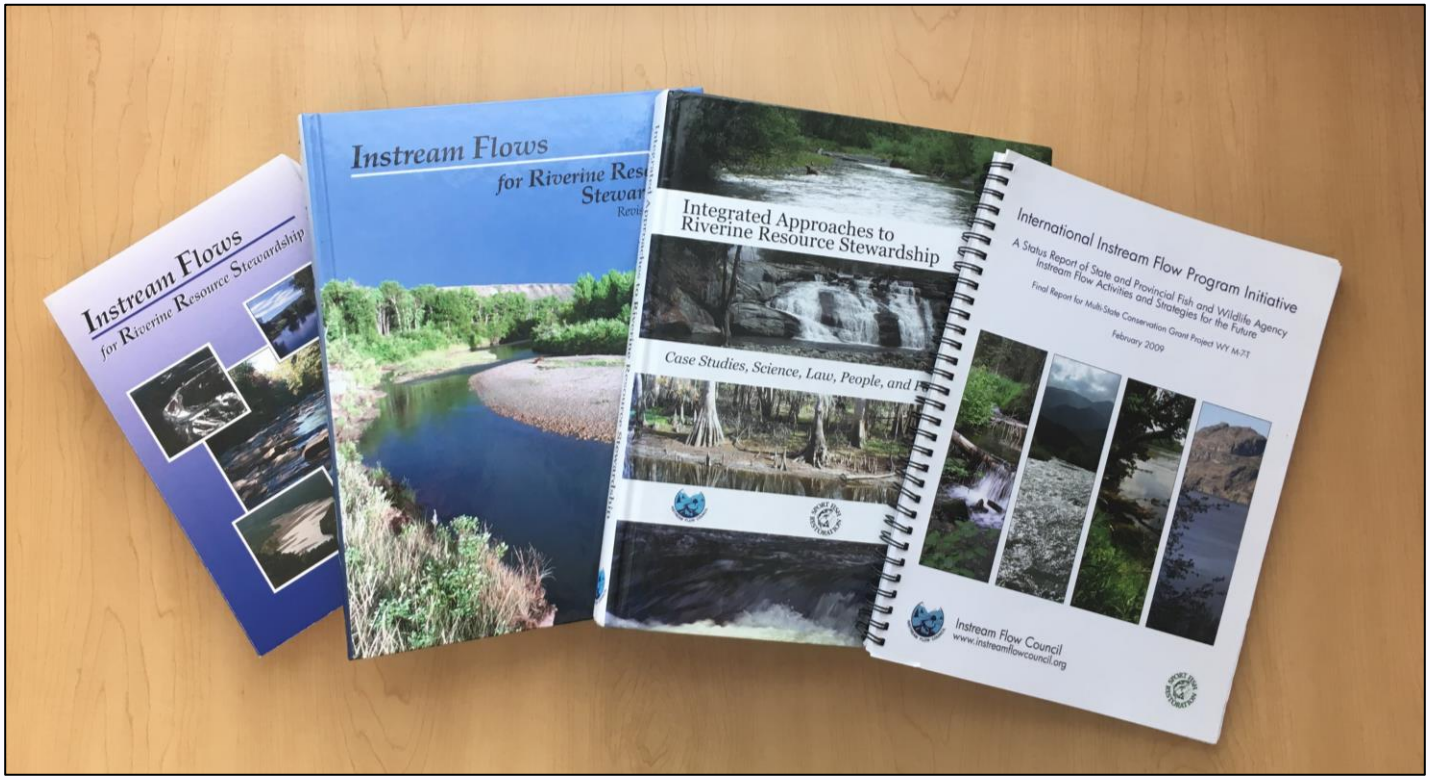
- The Association (AFWA) represents US state fish & wildlife agencies on Capitol Hill & before the Administration on key conservation & management policies to ensure fish & wildlife priorities are addressed & to secure funding through legislation.
- AFWA also provides management, technical assistance & training opportunities to current as well as the next generation of fish & wildlife leaders.

https://fishwildlife.org/

INSTREAM FLOW COUNCIL

OTHER IFC Web Resources Examples Follow

IFC Authored Publications



2002: Instream Flows for Riverine Resource Stewardship
2004: Instream Flows for Riverine Resource Stewardship, (revised ed.)
2008: Integrated Approaches to Riverine Resource Stewardship:
Case Studies, Science, Law, People, & Policy
2009: International Instream Flow Program Initiative

https://www.instreamflowcouncil.org/resources/ifc-publications/

Other IFC Web Publications

e-reprints of the classic 1976 two-volume American Fisheries Society (AFS)/American Society of Civil Engineers publication on instream flows & water levels.

Instream Flow Needs Volume I

Instream Flow Needs Volume II

2014 Supplemental Orsborn Foreword to 1976 AFS/ASCE Publication

https://www.instreamflowcouncil.org/resources/ifc-publications/afs-publications/

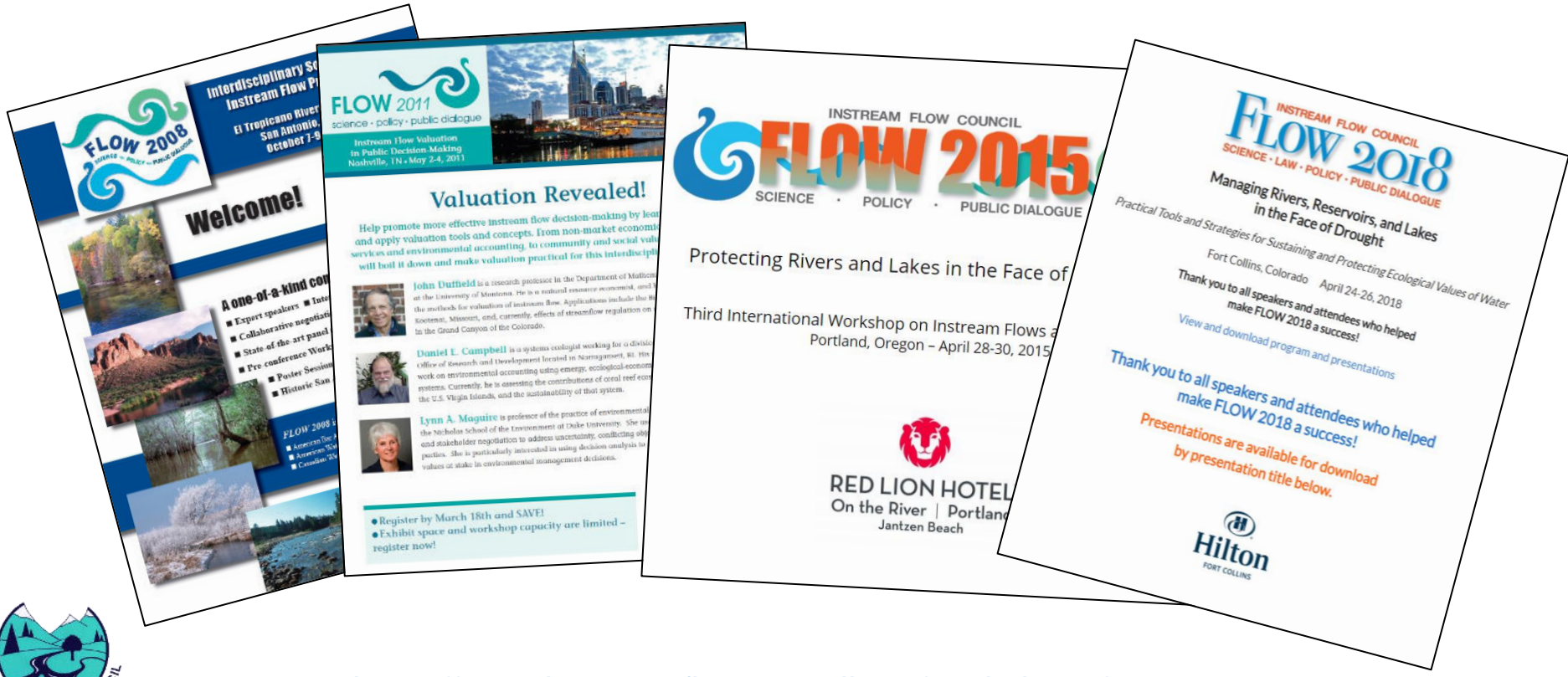
Global Workshops - All Water Stakeholders

***FLOW 2008*: Interdisciplinary Solutions to Instream Flow Problems**

***FLOW 2011*: Instream Flow Valuation**

***FLOW 2015*: Protecting Rivers & Lakes in the Face of Uncertainty** *(slides & companion dialogue)*

***FLOW 2018*: Managing Rivers, Reservoirs, & Lakes in the Face of Drought** *(slides & companion dialogue)*



https://www.instreamflowcouncil.org/workshops/

What Next Examples

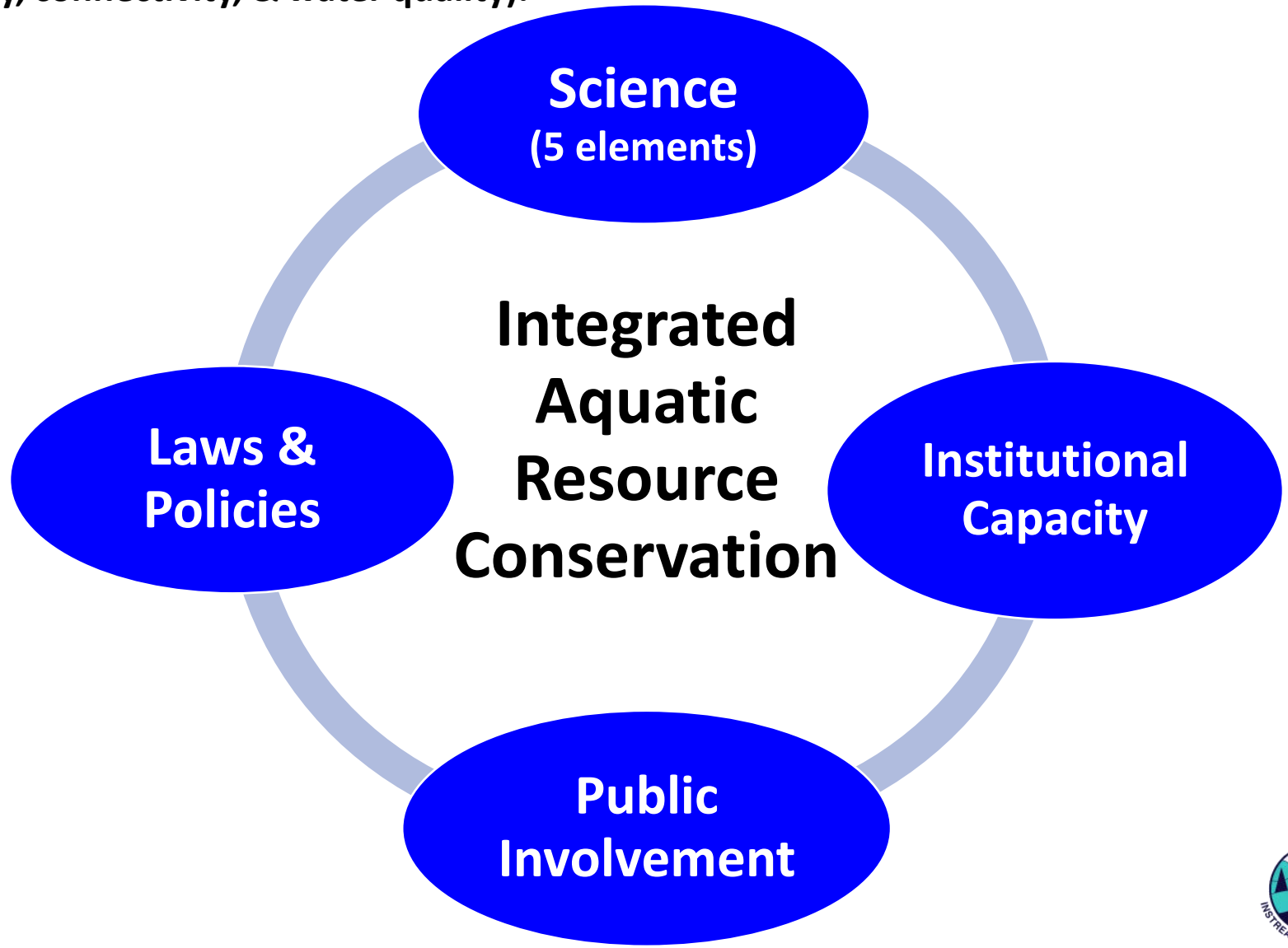
- IFC/AFS Multistate Conservation Grant (MSCG) Joint Project (in progress) to: Establish a full-time IFWLC Training, Research, & Development Center (highest IFC priority)

- Future *GLOBAL FLOW/WATER LEVEL* 202X Workshops

  - **Open to <u>ALL</u> Water Stakeholders**

Feasibility Project to Develop an Instream Flow & Water Level Conservation Training, Research, & Development Center: Current Progress

FRAMEWORK: Effective aquatic resource conservation & management outcomes are achieved by integrating 8 interdisciplinary elements (4 components) that include laws & policies, institutional capacity, public involvement, & science (hydrology, geomorphology, biology, connectivity, & water quality).



Alternative Approaches Considered for Center

- Centralized, brick & mortar facility
- De-centralized, distributed network
- Hybrid: networking + central location
- Joint sponsorship with other organizations

Next Steps

- Post final feasibility assessment document
- Business Plan & potential funding sources
- **Investigate co-location feasibility (hybrid approach)**
- Develop preliminary training & governing framework

MY SUGGESTIONS

- Explore the IFC Website
- Reach Out & Get to Know Our IFC Members
- Participate in IFC FLOW/WATER LEVEL Global Workshops
- Participate in AFWA Committees & Subcommittees
- Let IFC Members Know How IFC Can Help and Collaborate With You
- Participate as an Instructor, student, and/or advisor in the IFWLC Training Research & Develop Center and track its progress.

QUESTIONS

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Supplemental Companion Slides

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Assessing the Feasibility to Develop an Instream Flow and Water Level Conservation Training Research and Development Center: Current Progress

Supplemental IFWLC Center Background Slides Follow

How we got here:

- Training in the interdisciplinary integration of science, legal, institutional, and public involvement lacking
- Historically impactful & integrative training opportunities not available since **1990s**
- Instream Flow Council / American Fisheries Society partner & granted funds to explore solutions

The Process

- Review & summarize currently available training opportunities
- Review & summarize current training needs
- Explore alternative approaches for filling gaps

Reviewing Current Training Opportunities

- Approach
  - Informal networking
  - Web searches
- Results
  - fragmented and of variable depth / quality
  - non-existent for many components (esp. holistic integration)
  - Lentic coverage weak

Evaluating Training Needs with a Survey

- Web-based survey Summer 2021 (486 participants)
- Responses received from:
  - 49 US states
  - 7 Canadian provinces
  - 7 other nations
- Most respondents:
  - From state / provincial or federal agencies
  - Directly deal with resource management
  - On the job < **20 yrs.**

Evaluating Training Needs with a Survey

- Training sources vary widely
  - Biology, hydrology, water quality from Universities
  - Social components & integration from within organizations
- Most respondents acknowledged need for MORE intermediate – advanced training in ALL disciplines
- 95% of respondents agreed there is need for nationally consistent, comprehensive, & multi-disciplinary training

Potential Training Center Functions

- Interdisciplinary & Integrated training
- Research and Development
- Support and Networking Services

Alternative Approaches Considered

- Centralized, brick & mortar facility
- De-centralized, distributed network
- Hybrid: networking + central location
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Next Steps

- Post Final Feasibility Assessment
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