Review of Bay-Delta Related Science and Peer Review Processes

Special Committee on Bay-Delta

Item 3b, May 24, 2016

Discussion Topics

- Board Briefings on Science
- What is Peer Review?
- Types of Peer Review
- Why Peer Review is Important to the Bay-Delta
- Research in the Bay-Delta
- Summary

Board Briefings on Science

- Mar 2011 – New Fishery Detection Methods
- Apr 2011 – Delta Smelt Lifecycle Modeling
- Jun 2011 – Relevance of X2 to Fish Requirements
- Dec 2011 – Effects of Nutrient Imbalances on Food Web
- Dec 2012 – Estimating Fish Distribution & Abundance
- May 2014 – Characterizing Natural Delta Outflow
- Jul 2014 – Longfin Smelt Lifecycle Studies
- Oct 2014 – Proposed 2015 “Early Warning” Monitoring
- Jan 2016 – Review of Delta Outflow & Salinity Trends

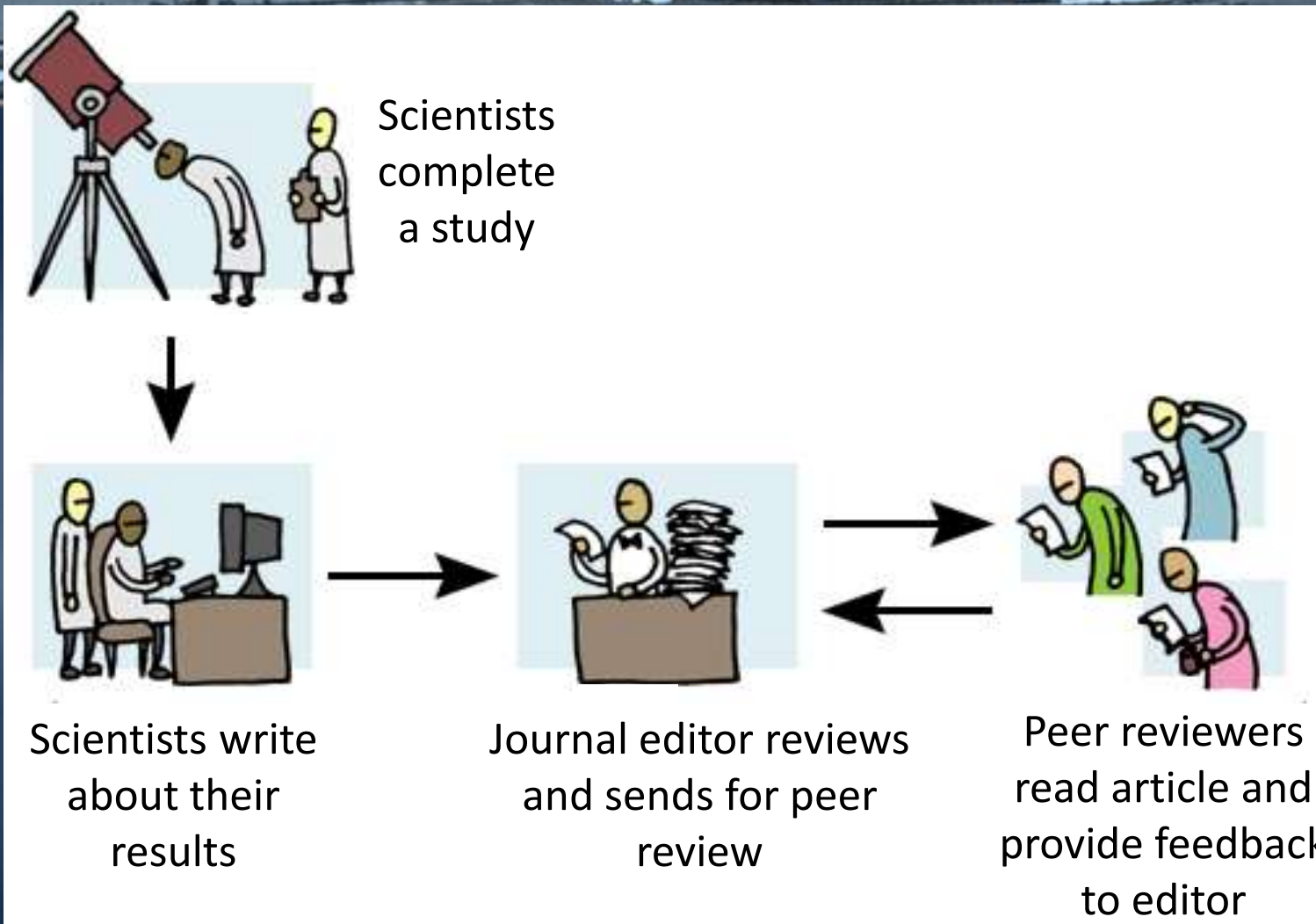
What is Peer Review?

- Peer review is the evaluation of science by a group of experts
- In the Delta, the objective is for best available science to be used to inform management decisions
- Independent peer review is a critical step to evaluate the science produced

Types of Peer Review

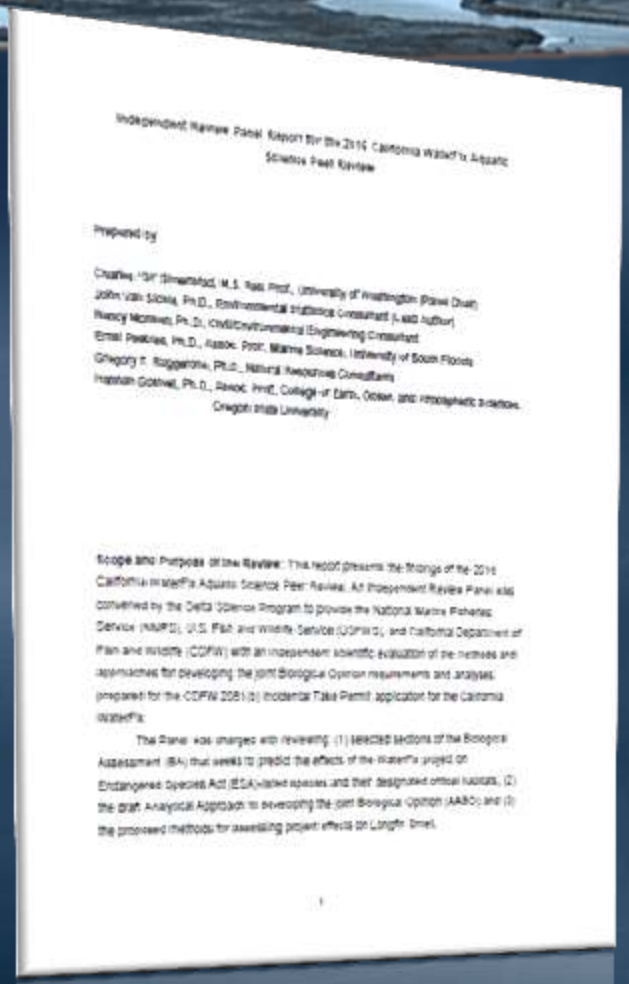
- Science Journal/Book Peer Review
- Expert Peer Review Panel

Science Journal/Book Peer Review



Adapted from UC Berkeley: http://undsci.berkeley.edu/article/howscienceworks_16

Expert Panel Review



Independent Review Panel Report for the 2016 California WaterFix Aquatic Science Peer Review

Prepared by

Charles "Sir" Simenstad, M.S. Res. Prof., University of Washington (Panel Chair)
John Van Sickle, Ph.D., Environmental Statistics Consultant (Lead Author)
Nancy Monnet, Ph.D., Civil/Environmental Engineering Consultant
Ernst Peebles, Ph.D., Assoc. Prof., Marine Science, University of South Florida
Gregory R. Ruggerone, Ph.D., Natural Resources Consultants
Hannah Gosnell, Ph.D., Assoc. Prof., College of Earth, Ocean, and Atmospheric Sciences, Oregon State University

Scope and Purpose of the Review: This report presents the findings of the 2016 California WaterFix Aquatic Science Peer Review. An Independent Review Panel was convened by the Delta Science Program to provide the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) with an independent scientific evaluation of the methods and approaches for developing the joint Biological Opinion requirements and analyses prepared for the CDFW 2081(b) Incidental Take Permit application for the California WaterFix.

The Panel was charged with reviewing: (1) selected sections of the Biological Assessment (BA) that seeks to predict the effects of the WaterFix project on Endangered Species Act (ESA)-listed species and their designated critical habitats, (2) the draft Analytical Approach to developing the joint Biological Opinion (AABO); and (3) the proposed methods for assessing project effects on Longfin Smelt.

- Expert panel charged with providing independent scientific evaluation
- Provided a body of work to review
- Panel responds with a balanced and constructive review of material

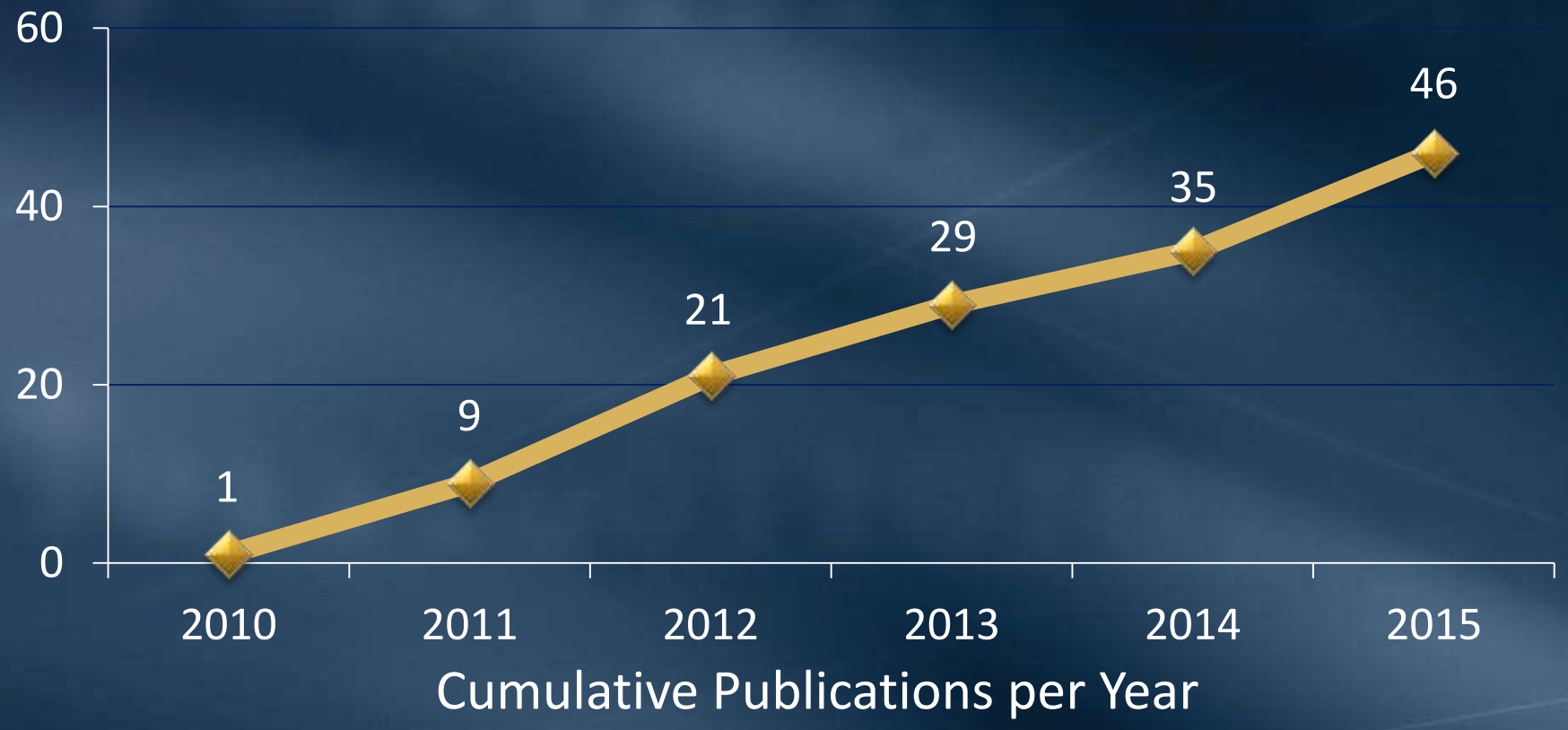
Why Peer Review is Important to the Bay-Delta

- Management decisions should be made based on the best available science
- High quality science is needed to ensure that regulatory decisions are being made on the best available science

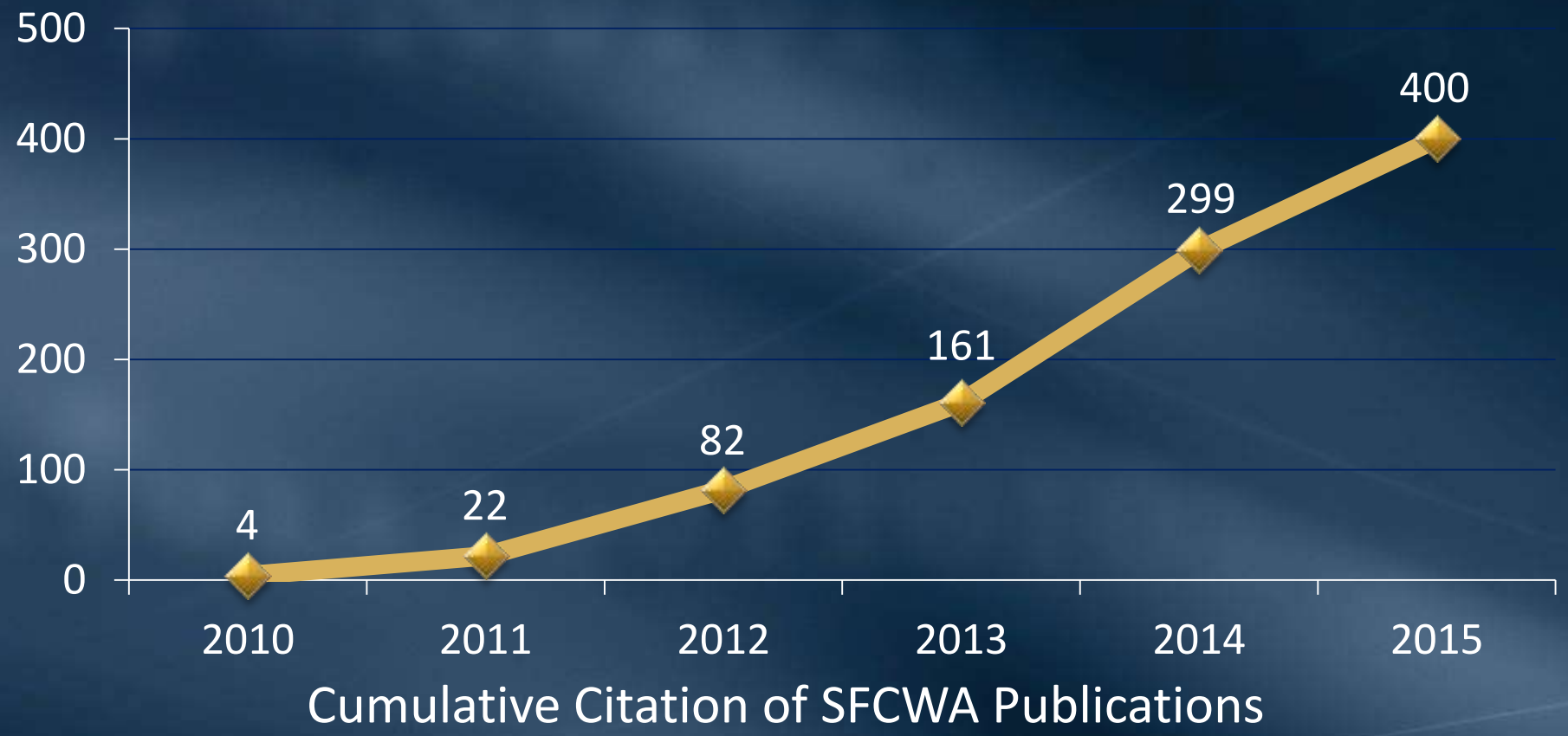
Research in the Bay-Delta

- Interagency Ecological Program
- Delta Science Program
- Collaborative Science Adaptive Management Program
  - Collaborative Adaptive Management Team
- Academics

Peer Reviewed Articles Funded by MWD/ State Federal Contractors Water Agency



Citations referencing SFCWA publications



Summary

- Science informs regulatory decisions and management actions
  - State Water Resource Control Board
  - Endangered Species Act
- Metropolitan continues to develop a robust science program
- Use peer review to ensure better science is recognized

The Delta


Sacramento
Suisun Bay
Grizzley Bay
Suisun Bay
Honker Bay
Stockton
State & Federal
Pumping Plants
California's Bay-Delta