Northwest **Power** and **Conservation** Council

October 2, 2018

MEMORANDUM

TO: Council members

FROM: Erik Merrill, ISAB/ISRP Manager, and Nancy Leonard, ISAB Ex Officio

SUBJECT: Appointment of Thomas Quinn to the ISAB

DISCUSSION ITEM: Staff asks that the Council discuss the appointment of Dr. Thomas Quinn to the Independent Scientific Advisory Board (ISAB). Council discussion should assist Chair Yost in his capacity as the Council's representative on the ISAB's Administrative Oversight Panel, which will make the final ISAB appointment decision. The other Oversight Panel representatives are Jaime Pinkham (Executive Director, Columbia River Inter-Tribal Fish Commission) and Kevin Werner (Science Director, NOAA-Fisheries Northwest Fisheries Science Center). A separate decision memo has been sent to the Oversight Panel for their consideration of Quinn's appointment.

SIGNIFICANCE: The eleven-member ISAB continues to provide the Council and the region with independent reviews of critical scientific issues facing Columbia River Basin fish and wildlife mitigation and recovery efforts. With the addition of Quinn to the current set of ISAB members, the ISAB should maintain its ability to effectively review the science pertaining to topics likely to arise in the next few years such as predation management effectiveness; regional research, monitoring, and evaluation plan development; mainstem fish passage analyses; NOAA recovery planning; and Fish and Wildlife Program and recovery plan objectives development.

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BUDGETARY/ECONOMIC IMPACTS
The ISAB operates on an annual budget, independent of the Council's budget, funded by the Bonneville Power Administration through the Fish and Wildlife Program. No additional funds are requested.

BACKGROUND
The ISAB and ISRP appointments process follows three steps, of which the first two steps are complete and the third step is the subject of this memo. First, in December 2013, the Council, NOAA Fisheries, and Columbia Basin Indian Tribes invited the region to nominate scientists to be considered for service on the ISAB and ISRP. Second, the National Academy of Sciences evaluated the list of nominees based on their scientific credentials and recommended a pool of 23 candidates for potential ISAB and ISRP appointment (see the National Academy's October 28, 2014 memo). These candidates augmented an existing pool of about 60 highly qualified ISAB and ISRP nominees who were evaluated by the National Academy in 2011, 2008 and 2005. Third, from the list of recommended candidates, the Council appoints ISRP members and the ISAB Administrative Oversight Panel appoints ISAB members.

Thomas Quinn, Ph.D., is a professor at the School of Aquatic and Fishery Sciences at the University of Washington. His expertise and research interests include salmon and trout ecology, predator-prey interactions, and the selective effects of fisheries and artificial propagation, among others (see his UW webpage, Salmon Science website, full curriculum vitae, and attached short CV). He recently completed the second edition of his book The Behavior and Ecology of Pacific Salmon and Trout. Our recommendation to appoint Quinn is based on his expertise, outstanding qualifications, ability to serve, lack of conflicts of interest, and inclusion in the National Academy of Sciences' pool of scientists qualified for ISAB and ISRP appointment.

Quinn was among the 52 scientists recommended by the National Academy of Sciences when they evaluated nominees to develop a pool of potential ISAB and ISRP appointees in 2005.[1] All the scientists recommended meet the ISAB and ISRP membership criteria, in that they have demonstrated high achievement in a relevant discipline; a strong record of scientific accomplishment documented by contribution to peer-reviewed literature or other evidence of creative scientific accomplishment; high standards of scientific integrity, independence, and objectivity; ability to forge creative solutions to complex problems; and interest in and ability to work effectively in an interdisciplinary setting. Quinn has an exceptional record of scientific accomplishments and has a reputation for being a productive and influential member of scientific committees.

In addition to the basic qualifications, all appointees must confirm their ability to commit sufficient time to effectively participate in review activities and to comply with the ISAB conflict of interest standards for the duration of their appointment. Quinn understands the ISAB's workload and has agreed to serve if appointed. He has confirmed that he does not have any conflicts of interest (for example, BPA Fish and Wildlife Program

[1] This pool of candidates was last updated in 2014, and we are currently in the process of updating the pool.

funding) or any public statements that could create the perception of undue bias related to issues that might be the subject of ISAB reviews.

The ISAB's governing documents call for membership to include expertise in anadromous and resident fish ecology; statistics; modeling; wildlife ecology; genetics; fisheries; fish passage/bioengineering; fish husbandry; ocean and estuary ecology; geomorphology; and socio-economics. Pacific Northwest scientists with expertise in Columbia River anadromous fish and non-anadromous fish must be included. The current ISAB members cover a wide range of disciplines (see Table below), and Quinn's broad expertise would augment the ISAB's capacity to review scientific issues across the life cycle of Pacific salmon and trout. His expertise in predator-prey interactions will be needed on the ISAB's upcoming review of predation management effectiveness.

Table of Current ISAB Members

ISAB Member	Affiliation	Expertise	Term
Kurt Fausch	Colorado State University	Fisheries - population and stream ecology	2018, 2nd
Kate Myers	University of Washington (emeritus)	Fisheries - ocean and salmon ecology	2018, 2nd
Laurel Saito	The Nature Conservancy, Nevada	Hydrology and ecosystem modeling	2018, 2nd
Carl Schwarz	Simon Fraser University, Canada	Statistics and actuarial science	2019, 2nd
Alec Maule	Formerly with United States Geological Survey	Fisheries - physiological ecology of salmonids (mainstem fish passage)	2019, 2nd
Steve Schroder	Fisheries Consultant, formerly with Washington Department of Fish and Wildlife	Fisheries - artificial production, freshwater and estuarine salmon ecology	2019, 2nd
William Jaeger	Oregon State University	Economics and policy	2021, 2nd
Cynthia Jones	Old Dominion University	Biometrics, fisheries and population dynamics	2021, 2nd
Thomas Turner	University of New Mexico	Fisheries - genetics	2021, 2nd
Stan Gregory	Oregon State University, emeritus	Fisheries, ecology, and habitat	2019, 1st
Peter Moyle	University of California, Davis, emeritus	Fisheries, ecology, and habitat	2019, 1st

CURRICULUM VITAE (short version)

Name: Thomas Peter Quinn
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Degrees: B.A. with Distinction in Biology, Swarthmore College, 1976
M.S. in Fisheries, University of Washington, 1978
Ph.D. in Fisheries, University of Washington, 1981

Employment:

2000	Professor, School of Aquatic and Fishery Sciences
1990-2000	Associate Professor, School of Fisheries,
1992-1995	Associate Director for Instruction, School of Fisheries
1986-1990	Assistant Professor, School of Fisheries, Univ. of Washington
1984-1985	Research Associate, Department of Oceanography, University of British Columbia, Vancouver, B.C.
1981-1984	Post-doctoral Fellow, University of British Columbia and Pacific Biological Station, Nanaimo, B. C., Canada

Research Interests:

Behavior, ecology and evolution of fishes, with emphasis on migrations, life history patterns, reproduction, habitat requirements and diversification of Pacific salmon

Honors:

College of Ocean and Fishery Sciences Undergraduate Teaching Award (1989)
Distinguished Teaching Award, University of Washington (1991)
College of Ocean and Fishery Sciences Honorable Mention (Undergraduate: 1990, Graduate: 1990 and 1991) teaching awards
Marsha L. Landolt Distinguished Graduate Mentor Award, University of Washington (2008)
National Research Council panel on the "Status of Pacific Northwest Anadromous Salmonids"
College of Ocean and Fishery Sciences Distinguished Research Award 1998
Fulbright Fellowship to study in Ireland, 2000
Excellence in Fisheries Education Award, American Fisheries Society, 2010
Elected member, Washington State Academy of Sciences, 2010
Carl R. Sullivan Fisheries Conservation Award, 2012, from the American Fisheries Society to the Alaska Salmon Program, of which Quinn has been a core member since 1987
National Research Council panel on "Ecological Risk Assessment Under FIFRA and ESA"
Fellow, American Fisheries Society

Over 50 Graduate Students and Post-Doctoral Fellows Supervised (see full CV for list)

Over 70 Research Grants (see full CV for list)

Selected Recent Publications from over 370 (see full CV for list):

2018. Quinn, T.P. The Behavior and Ecology of Pacific Salmon and Trout (Second Edition). University of Washington Press, Seattle. 562 pages.

2018. Tillotson, M. and T.P. Quinn. Selection on the timing of migration and breeding: A neglected aspect of fishing-induced evolution and trait change. Fish and Fisheries 19: 170-181. pdf

2017. Berdahl, A., P.A.H. Westley, and T.P. Quinn. Social interactions shape the timing of spawning migrations in an anadromous fish. Animal Behaviour 126: 221-229. pdf

2017. Hovel, R.A., S.M. Carlson and T.P. Quinn. Climate change alters the reproductive phenology and investment of a lacustrine fish, the threespine stickleback. Global Change Biology 23: 2308-2320. pdf

2017. Quinn, T.P., C.J. Cunningham, and A.J. Wirsing. Diverse foraging opportunities drive the functional response of local and landscape-scale bear predation on Pacific salmon. Oecologia 183: 415-429. pdf

2015. Anderson, J.H., P.L. Faulds, K.D. Burton, M.E. Koehler, W.I. Atlas, and T.P. Quinn. Dispersal and productivity of Chinook (*Oncorhynchus tshawytscha*) and coho (*O. kisutch*) salmon colonizing newly accessible habitat. Canadian Journal of Fisheries and Aquatic Sciences 72: 454-465

2015. Bond, M.H., J.A. Miller, and T.P. Quinn. Beyond dichotomous life histories in partially migrating populations: cessation of anadromy in a long-lived fish. Ecology 96(7): 1899-1910. pdf

2015. Goetz, F.A., E. Jeanes, M.E. Moore, T.P. Quinn. Comparative migratory behavior and survival of wild and hatchery steelhead (*Oncorhynchus mykiss*) smolts in riverine, estuarine, and marine habitats of Puget Sound, Washington. Environmental Biology of Fishes. 98: 357-375. pdf

2013. Bond, M.H. and T.P. Quinn. Patterns and influences on Dolly Varden migratory timing in Chignik Lakes, Alaska, and comparison to populations throughout the Northeastern Pacific and Arctic oceans. Canadian Journal of Fisheries and Aquatic Sciences. 70: 655-665

2013. Cunningham, C.J., G.T. Ruggerone, and T.P. Quinn. Size selectivity of predation by brown bears depends on the density of their sockeye salmon prey. The American Naturalist. 181(5): 663-673. pdf

2013. Westley. P.A.H., T.P. Quinn and A.H. Dittman. Rates of straying by hatchery-produced Pacific salmon (*Oncorhynchus spp.*) and steelhead (*Oncorhynchus mykiss*) differ among species, life history types, and populations. Canadian Journal of Fisheries and Aquatic Sciences. 70: 735-746