

Annual Literature Update
December 2017 (January - November 2017)
IEP and Related Science
IEP Lead Scientist Culberson- and SMT-Provided Listings

Baumsteiger, J. and P. B. Moyle (2017). "Assessing Extinction." *BioScience*: 67(4): 357-366.

Baumsteiger, J., R. E. Schroeter, T. O'Rear, J. D. Cook and P. B. Moyle (2017). "Long-Term Surveys Show Invasive Overbite Clams (*Potamocorbula amurensis*) are Spatially Limited in Suisun Marsh, California." *San Francisco Estuary and Watershed Science*: 15(2).

Brandl, S. C., B. M. Schreier, J. L. Conrad, B. May and M. R. Baerwald (2016). "Generation of Quantitative Polymerase Chain Reaction Detectability Half-Lives and Comparison of Sampling Protocols for Genetic Diet Studies of San Francisco Estuary Fishes." *Transactions of the American Fisheries Society* 145(3): 441-449.

Brown, L. R., L. M. Komoroske, R. W. Wagner, T. Morgan-King, J. T. May, R. E. Connon and N. A. Fangue (2016). "Coupled Downscaled Climate Models and Ecophysiological Metrics Forecast Habitat Compression for an Endangered Estuarine Fish." *Plos One* 11(1).

Buchanan, R. 2017. Multivariate San Joaquin River Chinook Salmon survival investigation, 2010-2013. Report to U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation.

Chao, Y., J. D. Farrara, H. Zhang, Y. J. Zhang, E. Ateljevich, F. Chai, C. O. Davis, R. Dugdale and F. Wilkerson (2017). "Development, implementation, and validation of a modeling system for the San Francisco Bay and Estuary." *Estuarine, Coastal and Shelf Science*: 194: 40-56.

Cloern, J. E., J. Kay, W. Kimmerer, J. Mount, P. B. Moyle and A. Mueller-Solger (2017). "Water Wasted to the Sea?" *San Francisco Estuary and Watershed Science*: 15(2).

Conrad , J.L, Eric Holmes , Carson Jeffres , Lynn Takata , Naoaki Ikemiyagi , Jacob Katz , Ted Sommer. 2016. "Application of Passive Integrated Transponder Technology to Juvenile Salmon Habitat Use on an Experimental Agricultural Floodplain." *North American Journal of Fisheries Management* 36:30–39.

Cordoleani F, Notch J, McHuron AS, Ammann AJ, Michel CJ. In Press. "Movement and survival of wild Chinook salmon smolts from Butte Creek during their outmigration to the ocean: comparison of a dry versus wet year." *Transactions of the American Fisheries Society*.

Corline, N. J., T. Sommer, C. A. Jeffres and J. Katz (2017). "Zooplankton ecology and trophic resources for rearing native fish on an agricultural floodplain in the Yolo Bypass California, USA." *Wetlands Ecology and Management*.

Crossin et al. (2017). "Acoustic telemetry and fisheries management." *Ecological Applications*: 27(4): 1031-1049.

Damon, L.J., Slater, S.B., Baxter, R.D., and Fujimura, R.W. 2016 "Fecundity and reproductive potential of wild female Delta Smelt in the upper San Francisco Estuary, California." *California Fish and Game*, 102(4):188-210.

Feyrer, F., K. Newman, M. Nobriga and T. Sommer (2016). "Delta Smelt Habitat in the San Francisco Estuary: A Reply to Manly, Fullerton, Hendrix, and Burnham's "Comments on Feyrer et al. Modeling the Effects of Future Outflow on the Abiotic Habitat of an Imperiled Estuarine Fish." *Estuaries and Coasts* 39(1): 287-289.

Finger, A. J., G. Schumer, A. Benjamin and S. Blankenship (2017). "Evaluation and Interpretation of Genetic Effective Population Size of Delta Smelt from 2011–2014." *San Francisco Estuary and Watershed Science*: 15(2).

Goertler, P. A. L., T. R. Sommer, W. H. Satterthwaite and B. M. Schreier (2017). "Seasonal floodplain-tidal slough complex supports size variation for juvenile Chinook salmon (*Oncorhynchus tshawytscha*)." *Ecology of Freshwater Fish*.

Grimaldo, L., F. Feyrer, J. Burns and D. Maniscalco (2017). "Sampling Uncharted Waters: Examining Rearing Habitat of Larval Longfin Smelt (*Spirinchus thaleichthys*) in the Upper San Francisco Estuary." *Estuaries and Coasts*, <http://dx.doi.org/10.1007/s12237-017-0255-9>

Gunderson, D.T., S.C. Zeug, R.B. Bringolf, J. Merz, Z. Jackson, M.A.H. Webb. 2017. "Tissue contaminant burdens in San Francisco Estuary White Sturgeon (*Acipenser transmontanus*): implications for population recovery." *Archives of Environmental Contamination and Toxicology*, 69(2)1-14. DOI: 10.1007/s00244-017-0378-9.

Hammock, B. G., S. B. Slater, R. D. Baxter, N. A. Fangue, D. Cocherell, A. Hennessy, T. Kurobe, C. Y. Tai and S. J. Teh (2017). "Foraging and metabolic consequences of semi-anadromy for an endangered estuarine fish." *PLoS One* 12(3): e0173497.

Hasenbein, M., N. A. Fangue, J. Geist, L. M. Komoroske, J. Truong, R. McPherson and R. E. Connon (2016). "Assessments at multiple levels of biological organization allow for an integrative determination of physiological tolerances to turbidity in an endangered fish species." *Conservation Physiology* 4.

Heublein, J., Bellmer, R., Chase, R.D., Doukakis, P., Gingras, M., Hampton, D., Israel, J.A., Jackson, Z.J., Johnson, C.C., Langness, O.P., Luis, S., Mora, E., Moser, M.L., Rohrbach, L., Seesholtz, A.M., and Sommer, T. 2017. "Improved fisheries management through life stage monitoring: the case for the Southern Distinct Population Segment of the North American Green Sturgeon and the Sacramento-San Joaquin River White Sturgeon." Technical Memorandum, NOAA-TM-NMFS-SWFSC-588.

Heublein, J., Bellmer, R., Chase, R.D., Doukakis, P., Gingras, M., Hampton, D., Israel, J.A., Jackson, Z.J., Johnson, C.C., Langness, O.P., Luis, S., Mora, E., Moser, M.L., Rohrbach, L., Seesholtz, A.M., Sommer, T., and Stuart, J.S. 2017. "Life history and current monitoring inventory of San Francisco Estuary Sturgeon." Technical Memorandum, NOAA-TM-NMFS-SWFSC-589.

Hobbs, J. A., P. B. Moyle, N. Fangue and R. E. Connon (2017). "Is Extinction Inevitable for Delta Smelt and Longfin Smelt? An Opinion and Recommendations for Recovery." *San Francisco Estuary and Watershed Science*: 15(2).

Hopper, J. V., P. D. Pratt, K. F. McCue, M. J. Pitcairn, P. J. Moran and J. D. Madsen (2017). "Spatial and temporal variation of biological control agents associated with Eichhornia crassipes in the Sacramento-San Joaquin River Delta, California." *Biological Control*: 111: 13-22.

Hutton, P. H., J. S. Rath and S. B. Roy (2017). "Freshwater flow to the San Francisco Bay-Delta estuary over nine decades (Part 1): Trend evaluation." *Hydrological Processes*.
<https://doi.org/10.1002/hyp.11201>

Hutton, P. H., J. S. Rath and S. B. Roy (2017). "Freshwater flow to the San Francisco Bay-Delta estuary over nine decades (Part 2): Change attribution." *Hydrological Processes*.
<https://doi.org/10.1002/hyp.11195>

Jeffries, K. M., R. E. Connon, B. E. Davis, L. M. Komoroske, M. T. Britton, T. Sommer, A. E. Todgham and N. A. Fangue (2016). "Effects of high temperatures on threatened estuarine fishes during periods of extreme drought." *Journal of Experimental Biology* 219(11): 1705-1716.

Johnson, R. C., S. Windell, P. L. Brandes, J. L. Conrad, J. Ferguson, P. A. L. Goertler, B. N. Harvey, J. Heublein, J. A. Israel, D. W. Kratville, J. E. Kirsch, R. W. Perry, J. Pisciotto, W. R. Poytress, K. Reece and B. G. Swart (2017). "Science Advancements Key to Increasing Management Value of Life Stage Monitoring Networks for Endangered Sacramento River Winter-Run Chinook Salmon in California." *San Francisco Estuary and Watershed Science*: 15(3).

Kammerer, B. D., T. C. Hung, R. D. Baxter and S. J. Teh (2016). "Physiological effects of salinity on Delta Smelt, *Hypomesus transpacificus*." *Fish Physiology and Biochemistry* 42(1): 219-232.

Katz, J. V. E., C. Jeffres, J. L. Conrad, T. R. Sommer, J. Martinez, S. Brumbaugh, N. Corline and P. B. Moyle (2017). "Floodplain farm fields provide novel rearing habitat for Chinook salmon." *PLoS One*: 12(6): e0177409.

Kayfetz K, Kimmerer W. 2017. "Abiotic and biotic controls on the copepod *Pseudodiaptomus forbesi* in the upper San Francisco Estuary." *Mar Ecol Prog Ser* 581:85-101.

Kimmerer W, Ignoffo T, Kayfetz K, Slaugher A. (2017). "Effects of freshwater flow and phytoplankton biomass on growth, reproduction, and spatial subsidies of the estuarine copepod *Pseudodiaptomus forbesi*." *Hydrobiol* <https://doi.org/10.1007/s10750-017-3385-y>

Komoroske, L. M., K. M. Jeffries, R. E. Connon, J. Dexter, M. Hasenbein, C. Verhille and N. A. Fangue (2016). "Sublethal salinity stress contributes to habitat limitation in an endangered estuarine fish." *Evolutionary Applications* 9(8): 963-981.

Kurobe, T., P.W. Lehman, Md. E. Haque, T. Sedda, S. Lesmeister, S. Teh. 2018. "Evaluation of water quality during successive severe drought years within *Microcystis* blooms using fish embryo toxicity tests for the San Francisco Estuary, California." *Science of the Total Environment* 610-611: 1029-1037.

Kurobe, T., M. O. Park, A. Javidmehr, F. C. Teh, S. C. Acuna, C. J. Corbin, A. J. Conley, W. A. Bennett and S. J. Teh (2016). "Assessing oocyte development and maturation in the threatened Delta Smelt, *Hypomesus transpacificus*." *Environmental Biology of Fishes* 99(4): 423-432.

Lane, B. A., H. E. Dahlke, G. B. Pasternack and S. Sandoval-Solis (2017). "Revealing the Diversity of Natural Hydrologic Regimes in California with Relevance for Environmental Flows Applications." *JAWRA Journal of the American Water Resources Association*: 53(2): 411-430.

Latour, R. J. (2016). "Explaining Patterns of Pelagic Fish Abundance in the Sacramento-San Joaquin Delta." *Estuaries and Coasts*: 39(1): 233-247.

Lehman, P. W., T. Kurobe, S. Lesmeister, D. Baxa, A. Tung and S. J. Teh (2017). "Impacts of the 2014 severe drought on the *Microcystis* bloom in San Francisco Estuary." *Harmful Algae*: 63: 94-108.

Mahardja, B., M. J. Farruggia, B. Schreier and T. Sommer (2017). "Evidence of a Shift in the Littoral Fish Community of the Sacramento-San Joaquin Delta." *PLoS One*: 12(1): e0170683.

Mahardja, B., Young, M.J., Schreier, B., and Sommer, T. 2017. "Understanding imperfect detection in a San Francisco Estuary long-term larval and juvenile fish monitoring programme." *Fisheries management and Ecology*, 24:488-503. DOI: 10.1111/fme.12257

Marineau, M.D., Wright, S.A., Whealdon-Haught, D.R., Kinzel, P.J., 2017. "Physical characteristics of the lower San Joaquin River, California, in relation to white sturgeon spawning habitat, 2011–14." U.S. Geological Survey Scientific Investigation Report 2017–5069, 47 p. <https://doi.org/10.3133/sir20175069>.

Martyr-Koller, R. C., H. W. J. Kernkamp, A. van Dam, M. van der Wegen, L. V. Lucas, N. Knowles, B. Jaffe, and T. A. Fregoso (2017). "Application of an unstructured 3D finite volume numerical model to flows and salinity dynamics in the San Francisco Bay-Delta." *Estuarine, Coastal and Shelf Science*: 192: 86-107.

Monismith, S. (2017). "An integral model of unsteady salinity intrusion in estuaries." *Journal of Hydraulic Research*: 55(3): 392-408.

Monismith, S. (2016). "A Note on Delta Outflow." *San Francisco Estuary and Watershed Science*: 14(3).

Nagendra, D. A. (2017). "Ecosystem management as a wicked problem." *Science*: 356(21 April 2017): 265-270.

Ocean Protection Council (2017). Rising seas in California – an update on sea level rise science.

Pyne, M. I., D. M. Carlisle, C. P. Konrad and E. D. Stein (2017). "Classification of California streams using combined deductive and inductive approaches: Setting the foundation for analysis of hydrologic alteration." *Ecohydrology*: 10(3): e1802.

Schreier, BM, MR Baerwald, JL Conrad, G Schumer, and B May. 2016. "Examination of predation on early life stage Delta Smelt in the San Francisco Estuary using DNA diet analysis." *Transactions of the American Fisheries Society* 145: 723-733.

Sellheim, K., M. Willmes, J. A. Hobbs, J. J. G. Glessner, Z. J. Jackson & J. E. Merz. 2017. "Validating Fin Ray Microchemistry as a Tool to Reconstruct the Migratory History of White Sturgeon". *Transactions of the American Fisheries Society*, 146:5, 844-857. DOI: 10.1080/00028487.2017.1320305.

Sherman, S., R. Hartman, and D. Contreras, editors. 2017. "Effects of Tidal Wetland Restoration on Fish: A Suite of Conceptual Models." IEP Technical Report 91. Department of Water Resources, Sacramento, California.

Takata, L., T. R. Sommer, J. Louise Conrad and B. M. Schreier (2017). "Rearing and migration of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) in a large river floodplain." *Environmental Biology of Fishes*.

Teh, S. J., D. V. Baxa, B. G. Hammock, S. A. Gandhi and T. Kurobe (2016). "A novel and versatile flash-freezing approach for evaluating the health of Delta Smelt." *Aquatic Toxicology* 170: 152-161.

Thorne, K. M., D. L. Elliott-Fisk, C. M. Freeman, T.-V. D. Bui, K. W. Powelson, C. N. Janousek, K. J. Buffington and J. Y. Takekawa (2017). "Are coastal managers ready for climate change? A case study from estuaries along the Pacific coast of the United States." *Ocean & Coastal Management*: 143: 38-50.

Whipple, A. A., J. H. Viers and H. E. Dahlke (2017). "Flood regime typology for floodplain ecosystem management as applied to the unregulated Cosumnes River of California, United States." *Ecohydrology*: 10(5): e1817.

Windell, S, Brandes, P.L., Conrad, J.L., Ferguson, J.W., Goertler, P.A.L., Harvey, B.N., Heublein, J., Israel, J.A., Kratville, D.W., Kirsch, J.E., Perry, R. W., Pisciotto, J., Poytress, W.R., Reece, K., Swart, and Johnson, R.C. 2017. "Scientific framework for assessing factors influencing endangered Sacramento River winter-run Chinook Salmon (*Oncorhynchus tshawytscha*) across the lifecycle." Technical Memorandum, NOAA-TM-NMFS-SWFSC-586.