

Managing Wetlands for Fish and Fowl

Jason Hassrick

ICF, Sacramento, CA, USA

Understanding the role of the Sacramento-San Joaquin Delta as rearing habitat for juvenile salmon has been identified as a critical scientific gap for stock-specific life cycle models guiding salmon management and the development of novel actions to improve this habitat (Lindley NOAA and J. Peterson USGS, pers. comm.). To test the current assumptions of these models, a previous Proposition 1-funded study quantified how habitat attributes and the network location of marsh habitat in the Delta influenced the observed use and growth of juvenile salmon. This study confirmed that salmon fry rear in Suisun Marsh, with smaller fish encountered more frequently around waterfowl ponds and larger fish in closer proximity to the migration corridor. Although results are still preliminary, the study also found that juvenile salmon in enclosures grew faster and larger in cages placed in channels connected to large off-channel water bodies. The purpose of this study is to determine to what extent management of water exchange between off-channel waterfowl ponds and marsh channels can improve trophic subsidies and growth rates of fish using these nursery habitats, employing juvenile salmon as a model species.

Contact Information: Jason Hassrick, ICF, 980 9th Street, Suite 1200; Sacramento, CA; jason.hassrick@icf.com