

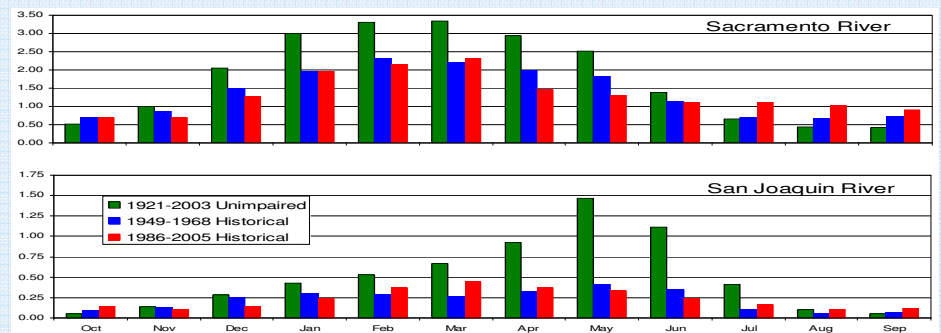


## **5. A strong science program and a flexible management regime are essential to improving flow criteria**

- **Current science provides enough insight to act**
- **Role of uncertainty – Uncertainty always exists but science can reduce key uncertainties**
- **Managing uncertainty - Adaptive management with emphasis on integration, synthesis, and action**
- **Support science targeted to where better answers are most needed**

# 1. Environmental flows are more than just volumes of inflows and outflows

- Timing, duration, frequency, and rate of change of flows need consideration
- Science setting flow criteria for rivers has advanced substantially
- Flow criteria for estuaries are especially challenging with tidal, fluvial, and landscape components



## **2. Recent flow regimes both harm native species and encourage non-native species**

- **Variability and complexity across the estuarine landscape better support native species**
- **Flow stabilization harms native species and encourages non-native species**



### **3. Flow is a major determinant of habitat and transport**

- **Floodplain activation – flows that connect floodplains and channels are beneficial**
- **In-Delta net channel flows – dominated by tides but net flows biologically relevant**
- **Net Delta outflow – higher seasonal outflows provide variable habitats favorable for native fish communities**



# 4. Recent Delta environmental flows are insufficient to support native Delta fishes for today's habitats

- Adequate winter-spring inflows and outflows benefit native fish populations
- Flow and physical habitat interact but are not interchangeable
- Do habitat and flow restoration jointly

