

Key Considerations on Sacramento Index Stock Status and Ocean Harvest

Doug Demko

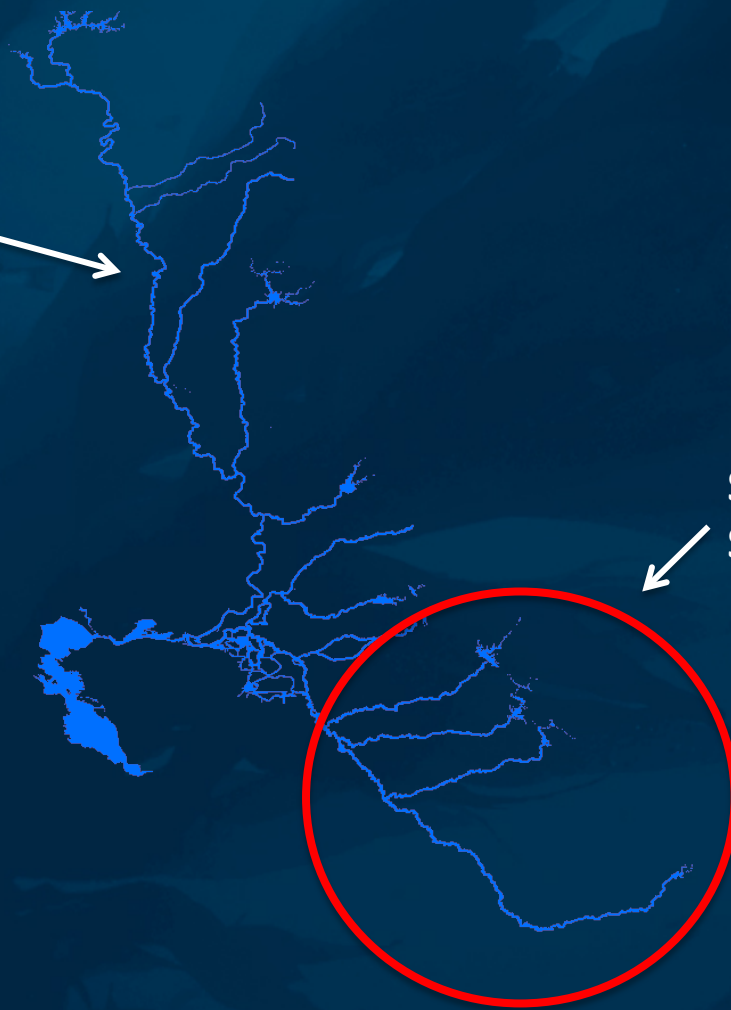
San Joaquin River Group Authority
Modesto, California

California's Central Valley

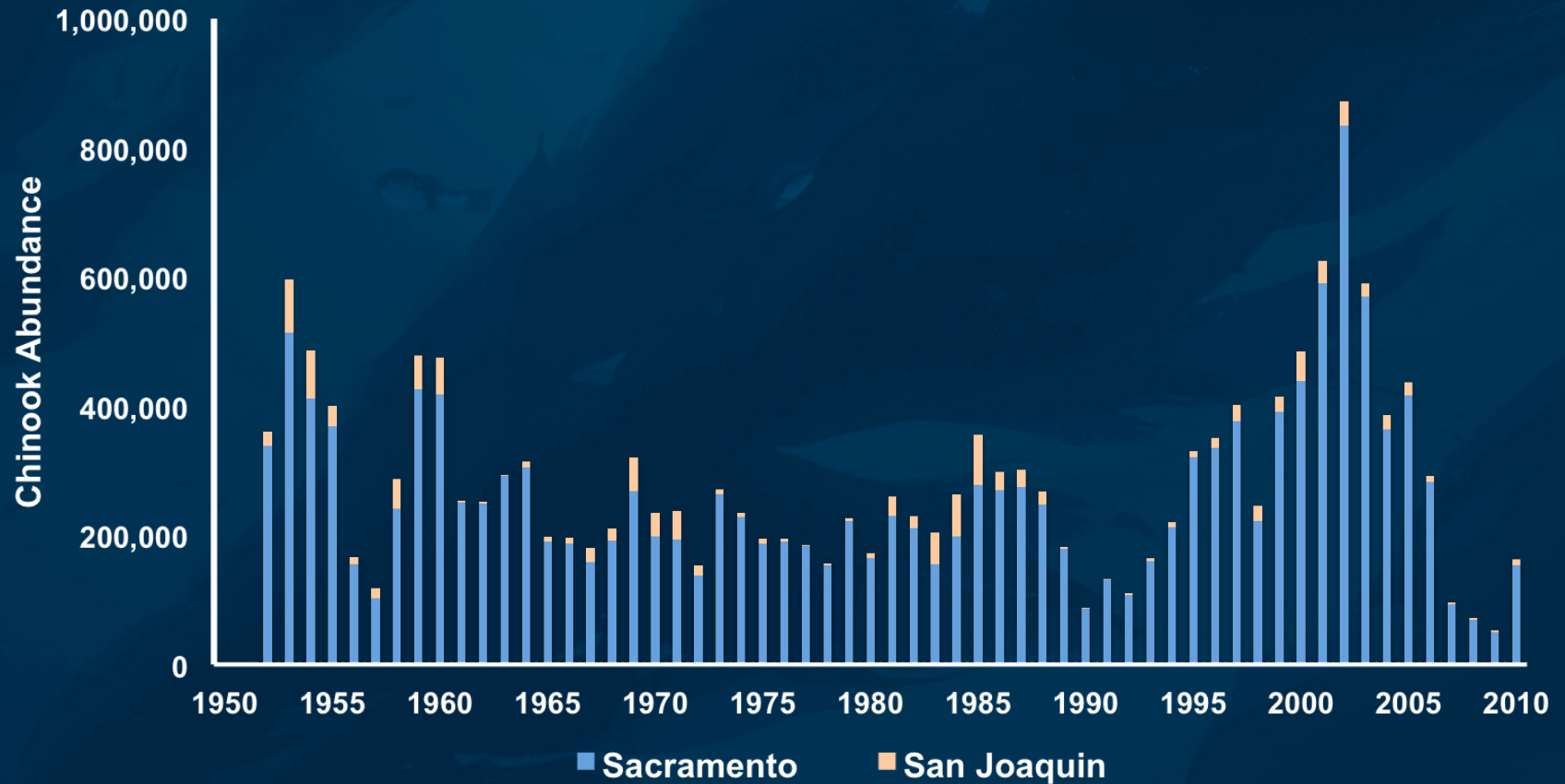
Sacramento Basin
Sac Index Population



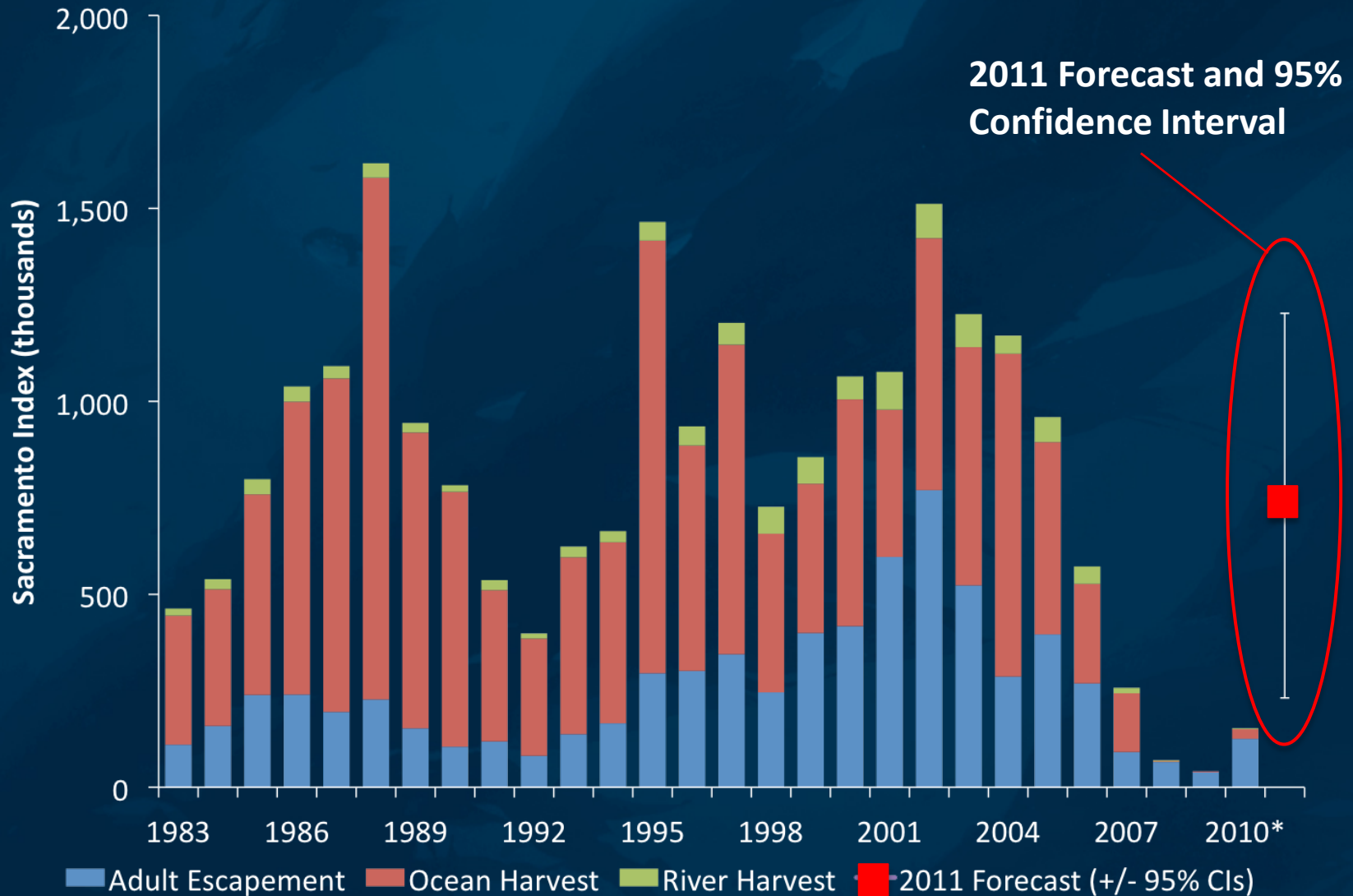
San Joaquin Basin
SJRGAs



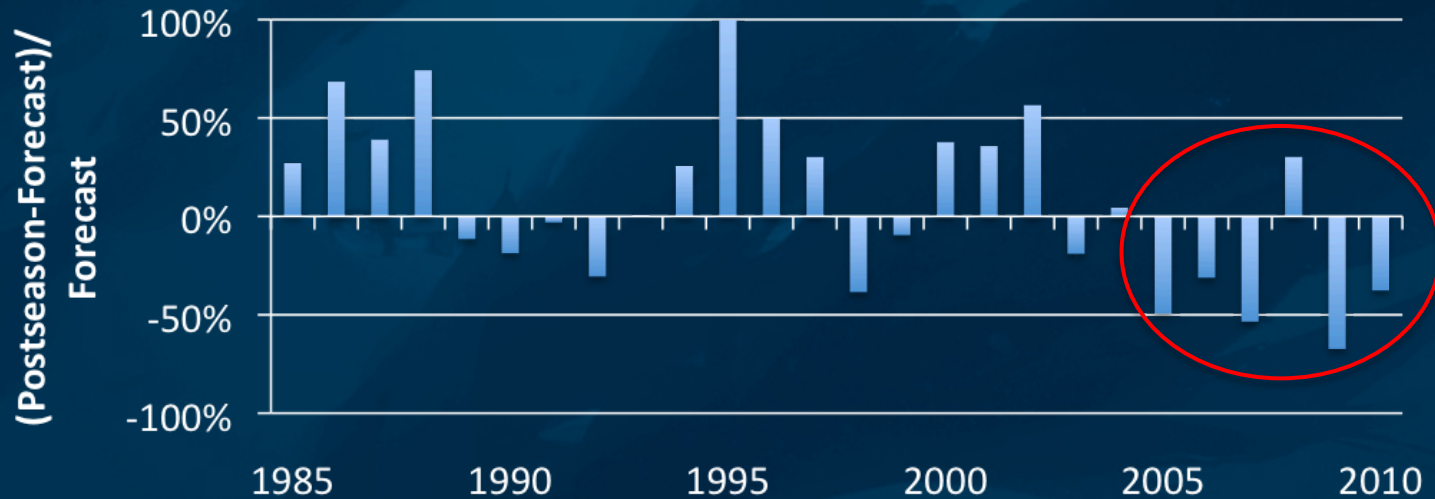
Central Valley Fall-run escapement 1952-2010



Sac Index Fall-Chinook abundance at all-time low



Actual index lower than forecasted in recent years

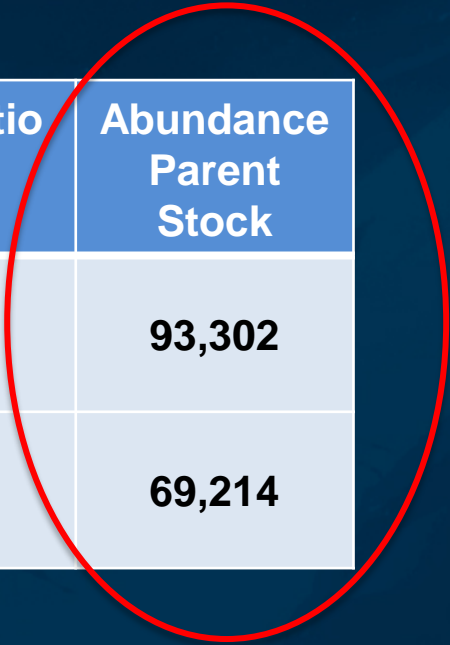


“The 2011 SI forecast has been made under similar conditions as the 2009 and 2010 forecasts . . . Hence there is potential for the 2011 SI forecast to be biased high.”

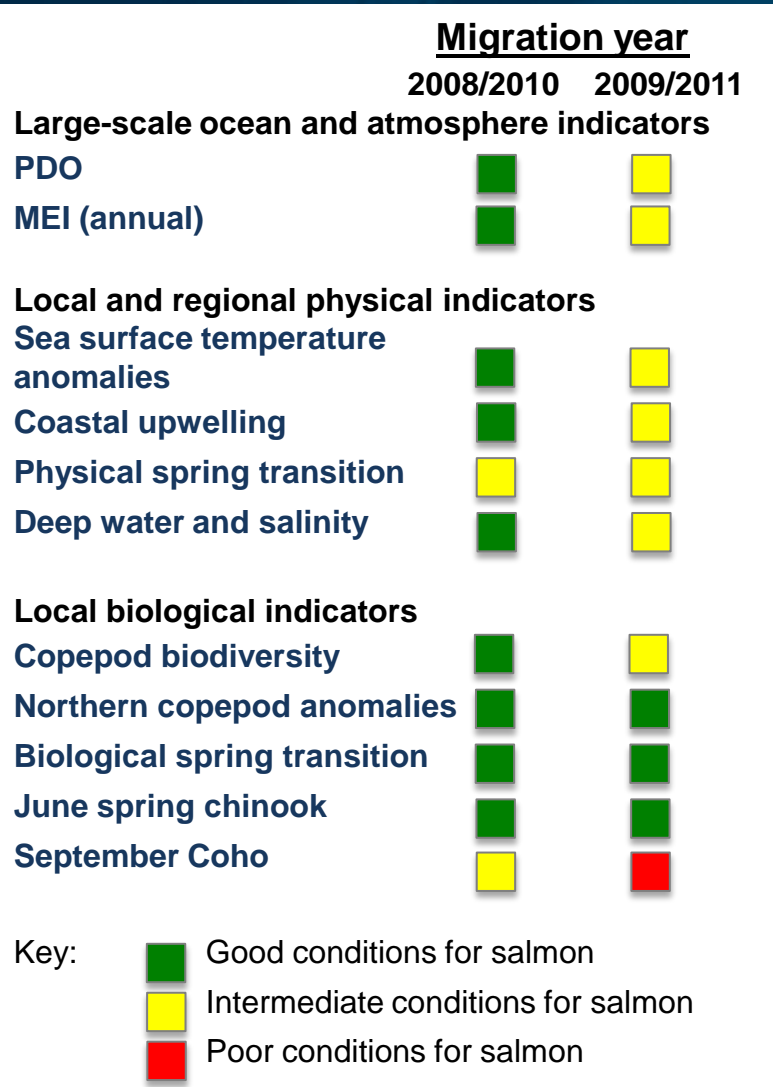
PFMC 2011

Parental stock abundance lower in 2011

Return Year	Escapement	Age at Return	Brood Year	Outmigration Year	Abundance Parent Stock
2010	152,831	3	2007	2008	93,302
2011	TBD	3	2008	2009	69,214

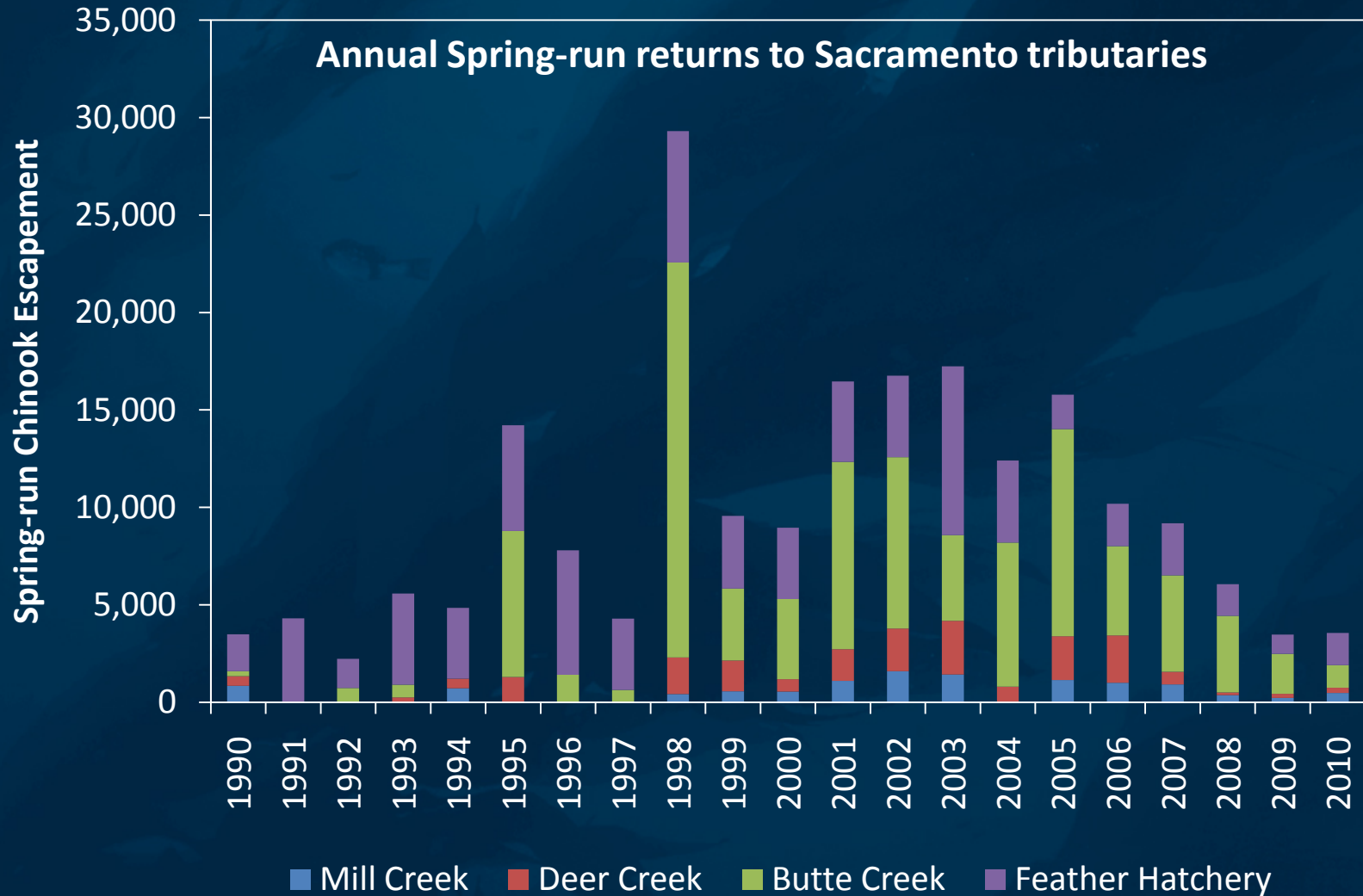


Ocean conditions worse at juvenile entry for 2011 stock



- **Northern California Current ocean conditions during juvenile stage were better for majority of fish contributing to 2010 escapement than for 2011.**
- **Conditions for juveniles outmigrating in 2009 and returning as Age 3 in 2011 were considered “intermediate” conditions, ranking 7th out of the 13 years.**

Harvest should be constrained by decline in Spring- and Winter-run



Hatchery fish and the future of harvest

*...considering the reliance of the population on hatchery fish and the influence of hatchery fish on the decline of wild runs, **substantial effort will be needed to sustain a population that can support a commercial fishery.***

Moyle et al. 2008

Summary

- **Sacramento Index abundance still depressed**
 - **Harvest has been exceedingly high and largely been supported by hatchery production, with negative consequences**
 - **Biased Forecasts - need to address STT concerns regarding lack of age-specific escapement and river harvest data for the Central Valley**
- **SJR wild chinook are currently low in abundance, but may contribute important phenotypic diversity to CV stock**

Recommendation

The Sacramento Index is in overfished condition and harvest should be curtailed to prevent further stock declines, especially in San Joaquin Basin.

Thank You

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