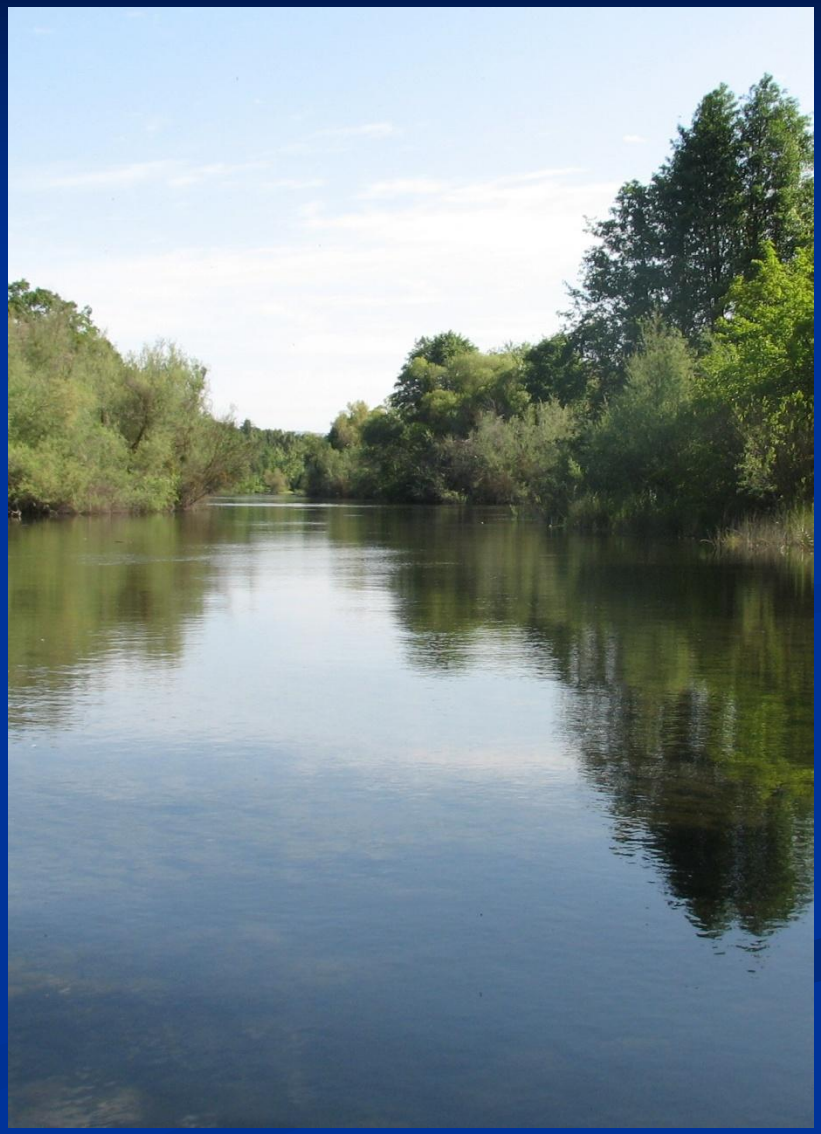
Stanislaus Operations Group

OCAP Annual Review – 2011

Randi Field (Reclamation) & Barb Byrne (NMFS)

Outline

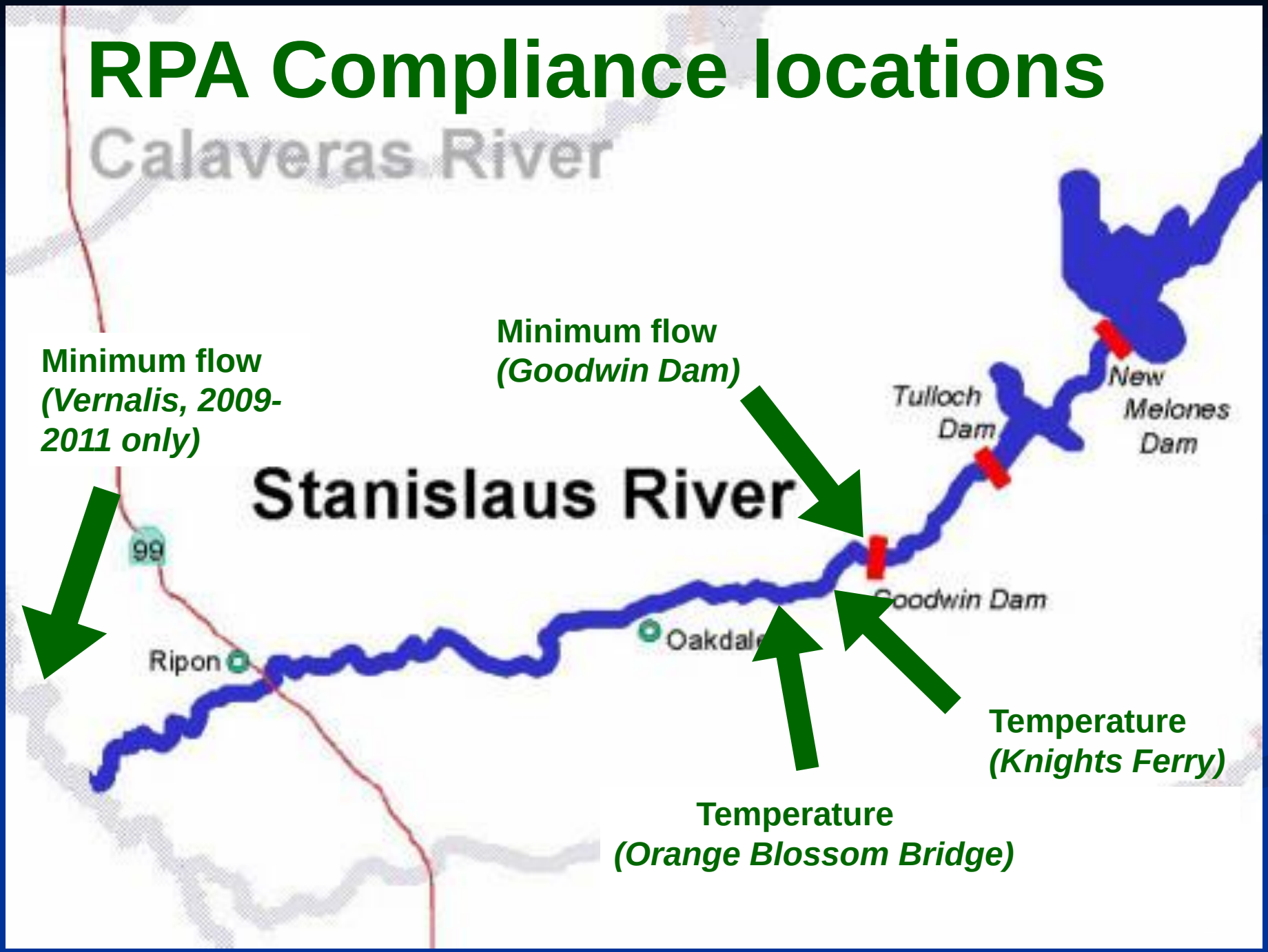
- RPA Actions overview
  - *Flow*
  - *Temperature*
  - *Habitat*
- Monitoring data
- Questions



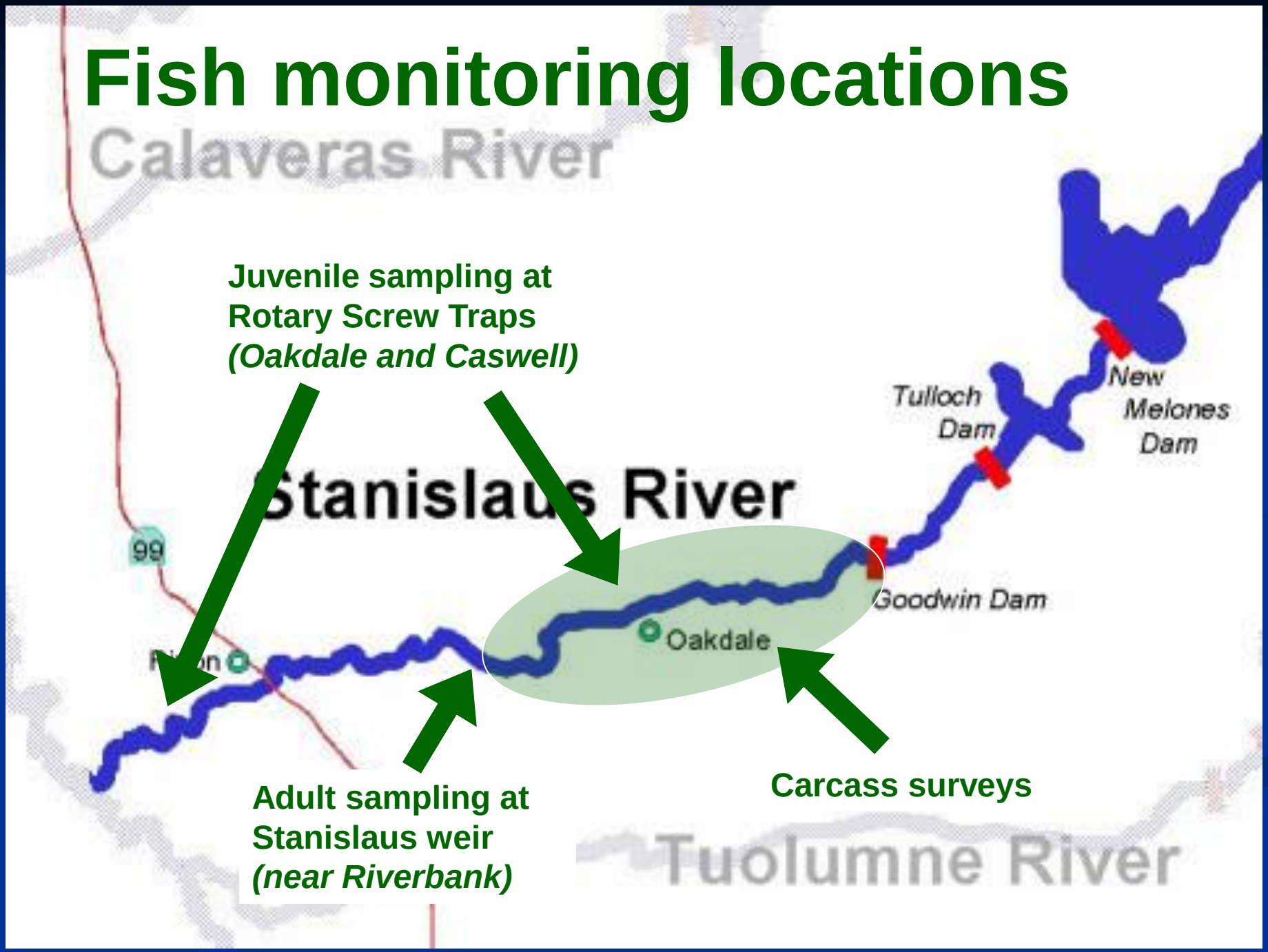
Stanislaus River species addressed in NMFS Biological Opinion

- Threatened Central Valley steelhead
- Chinook salmon as prey for endangered Southern Resident killer whales.

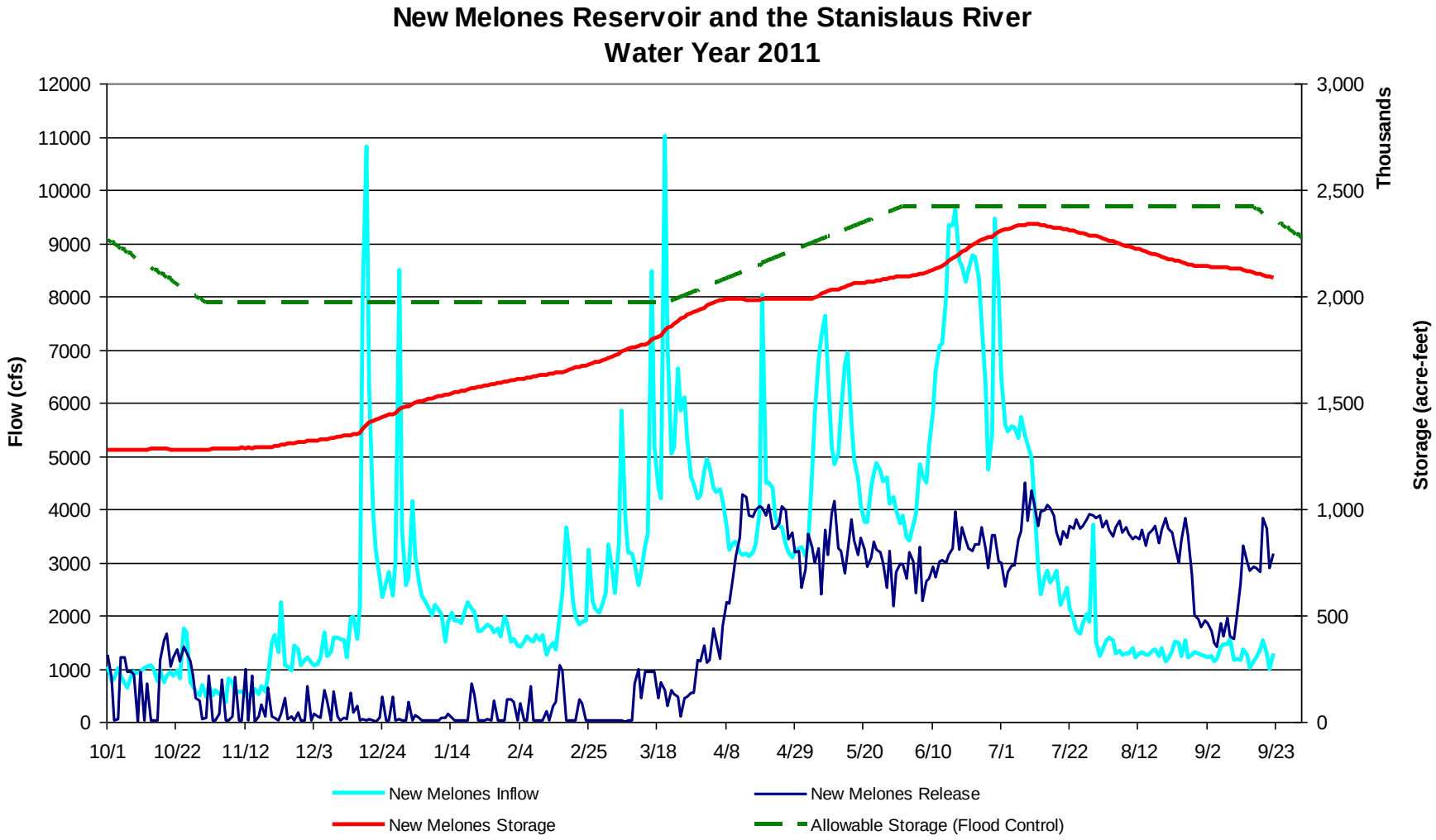
RPA Compliance locations



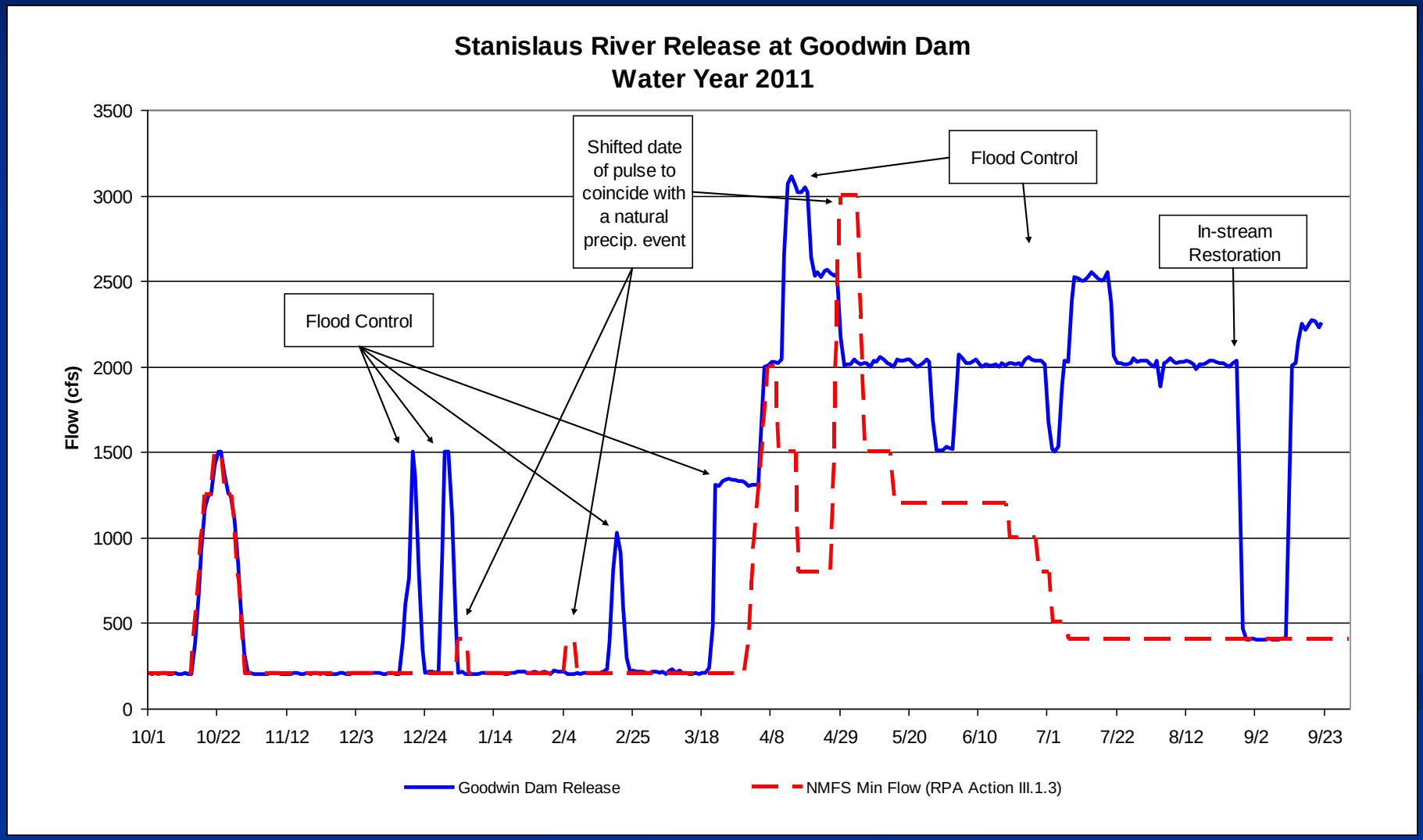
Fish monitoring locations



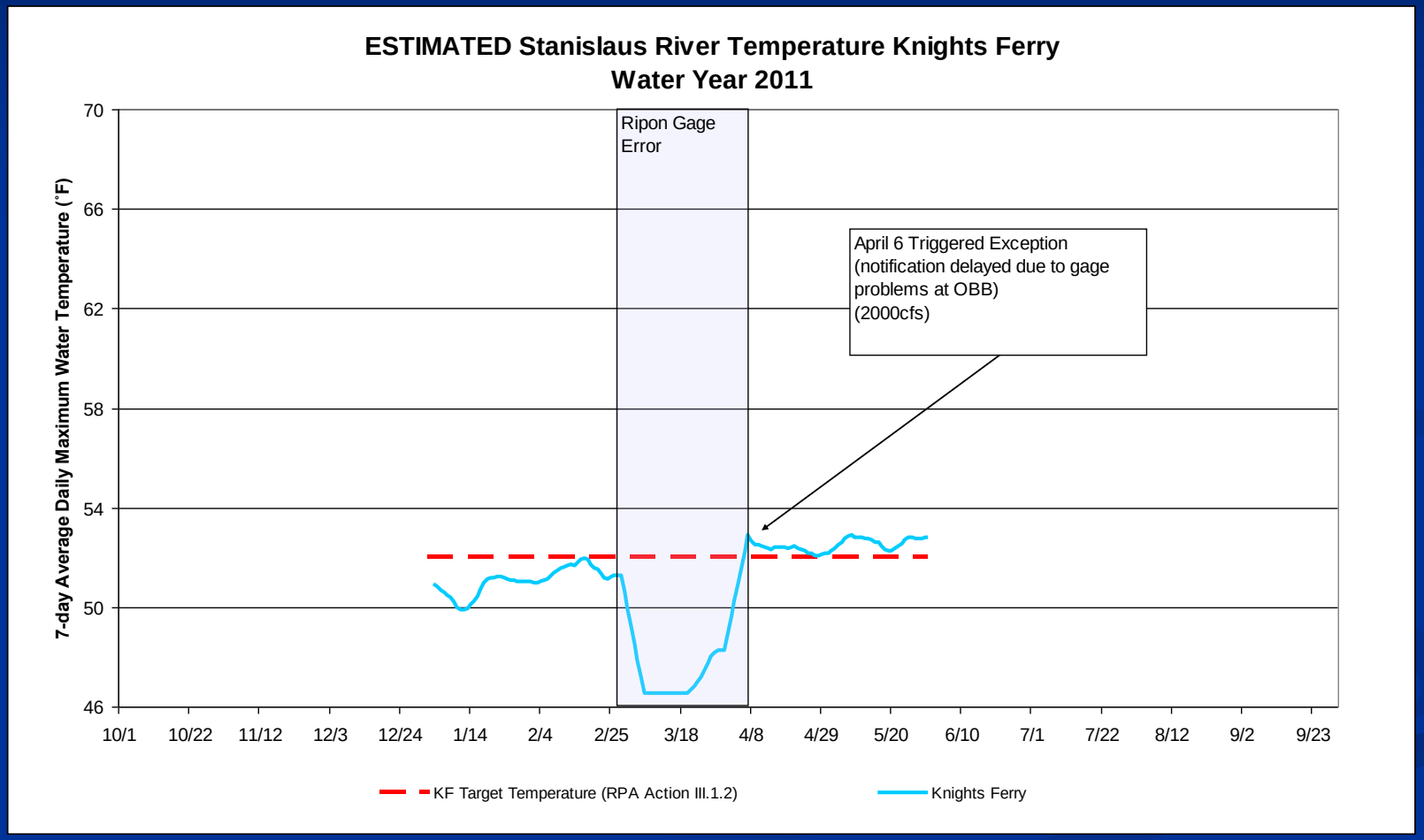
Operation Overview



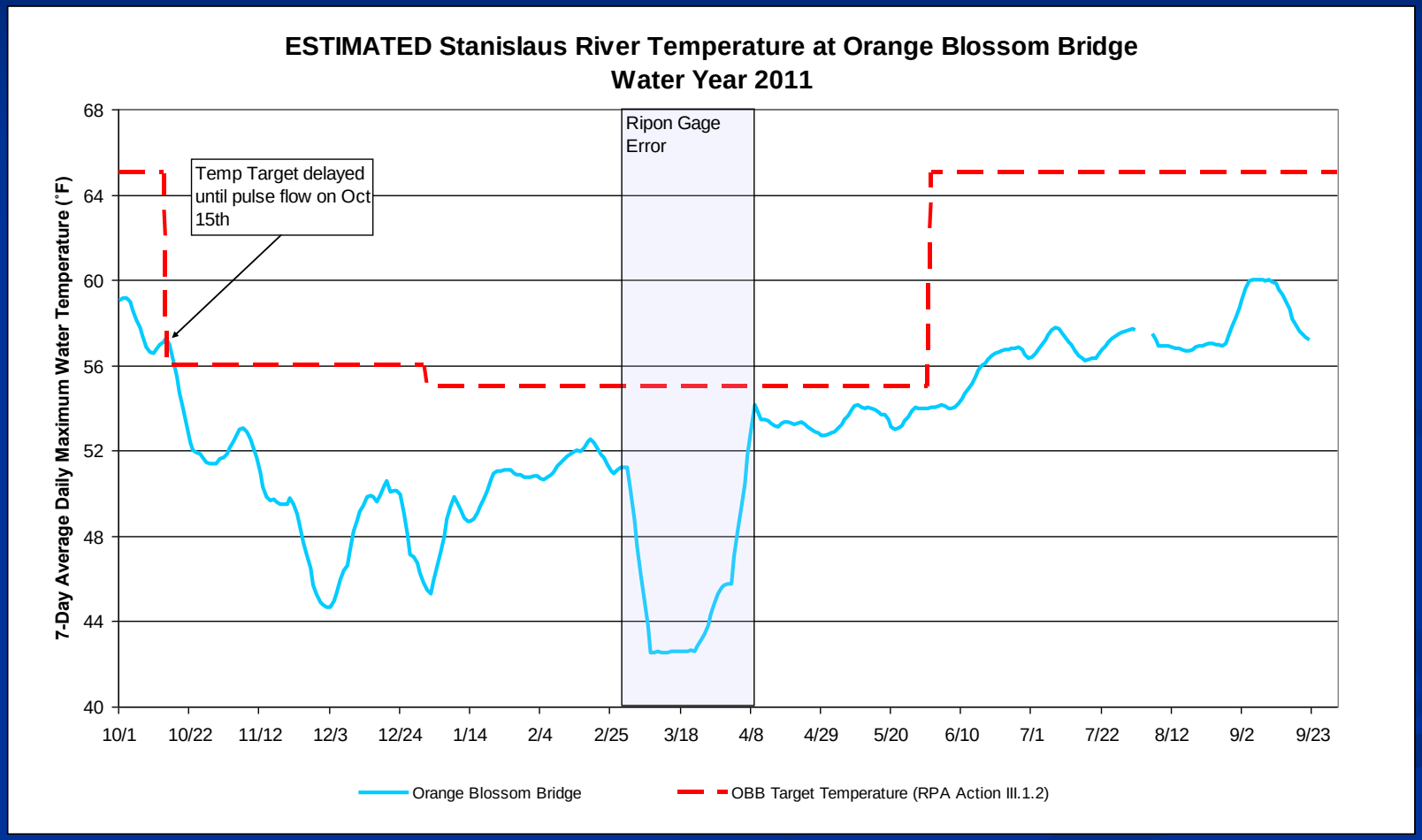
RPA Action – FLOW at Goodwin



RPA Action – TEMP at Knights Ferry



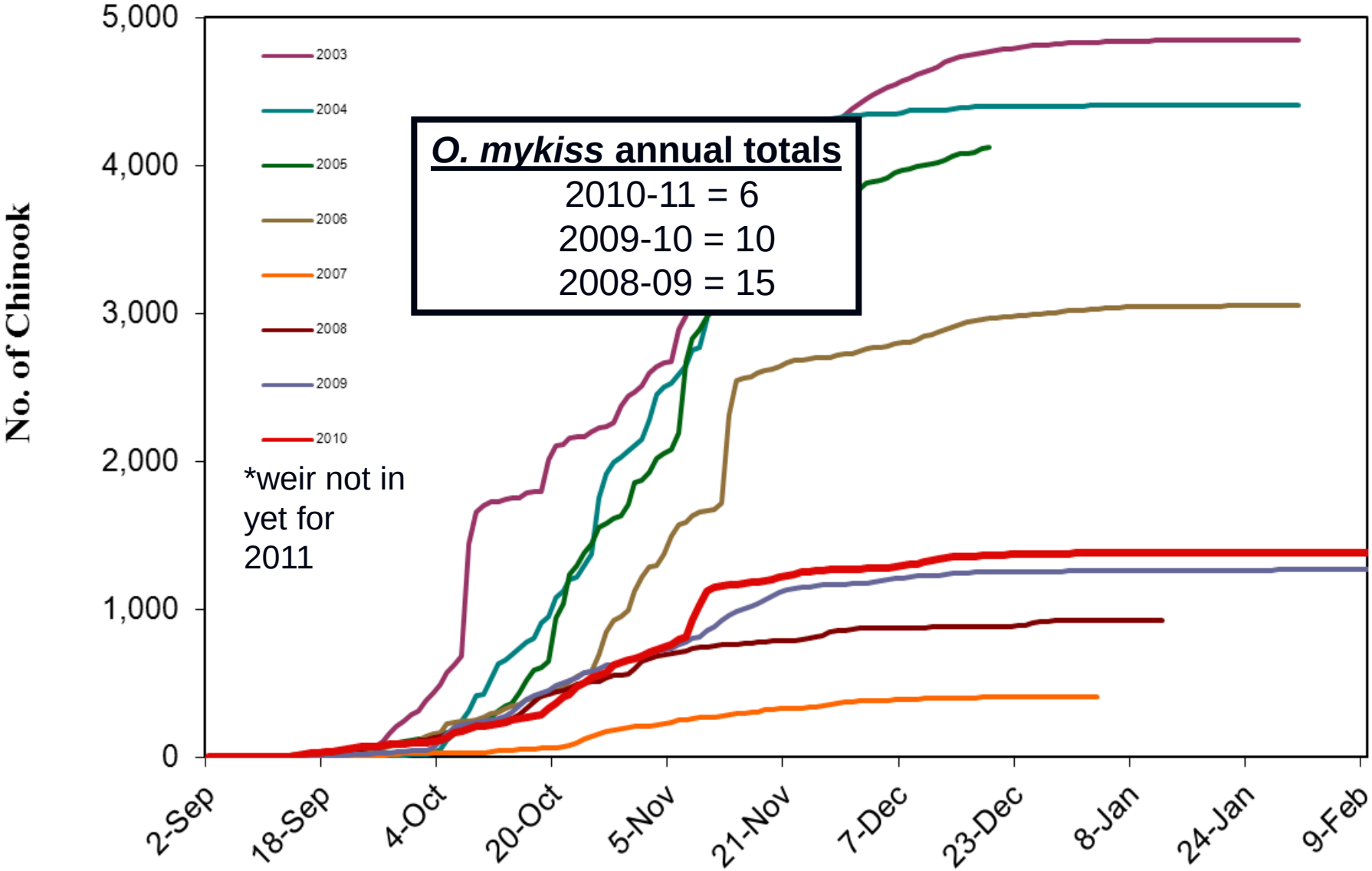
RPA Action – TEMP at Orange Blossom Bridge



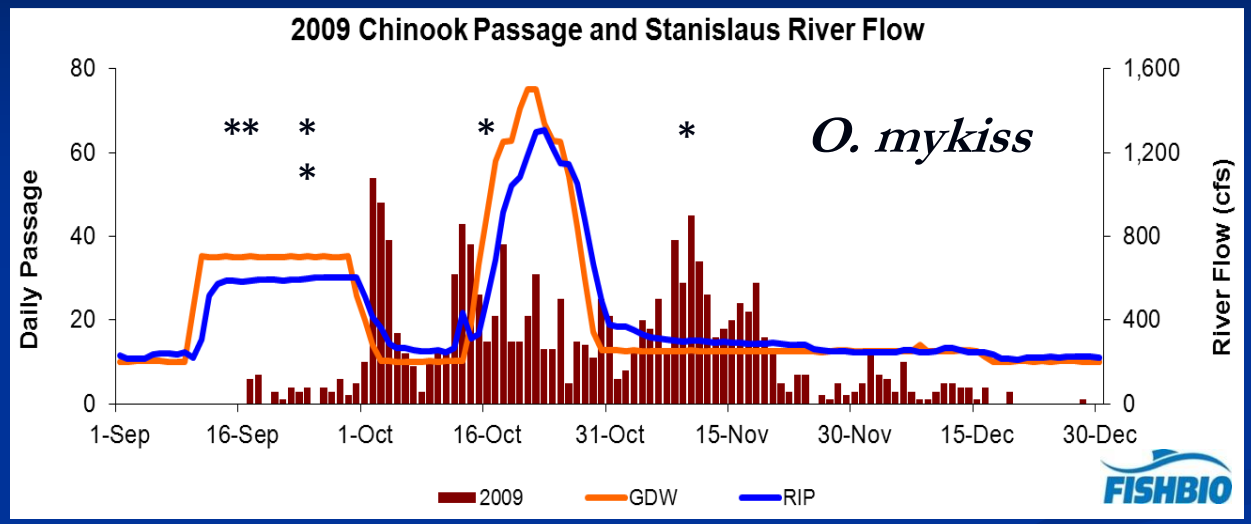
RPA Actions – HABITAT

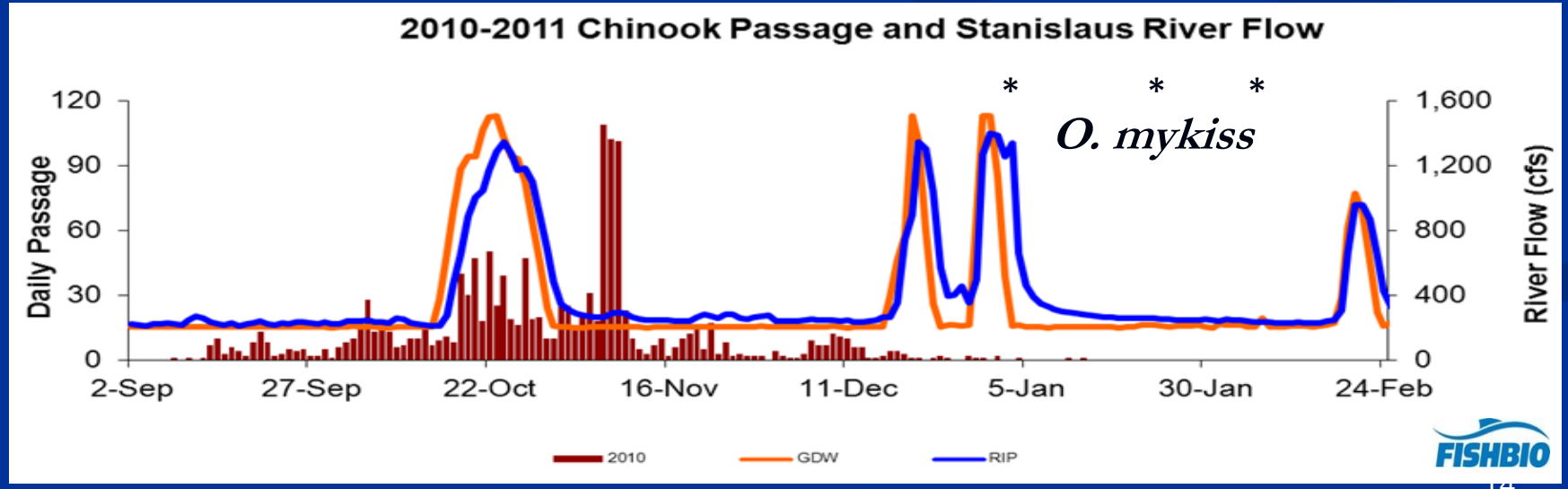
- Over 5000 tons of gravel placed in 2011
- Draft floodplain inundation plan submitted
- Ongoing restoration work

Cumulative Chinook Passage at the Stanislaus River Weir

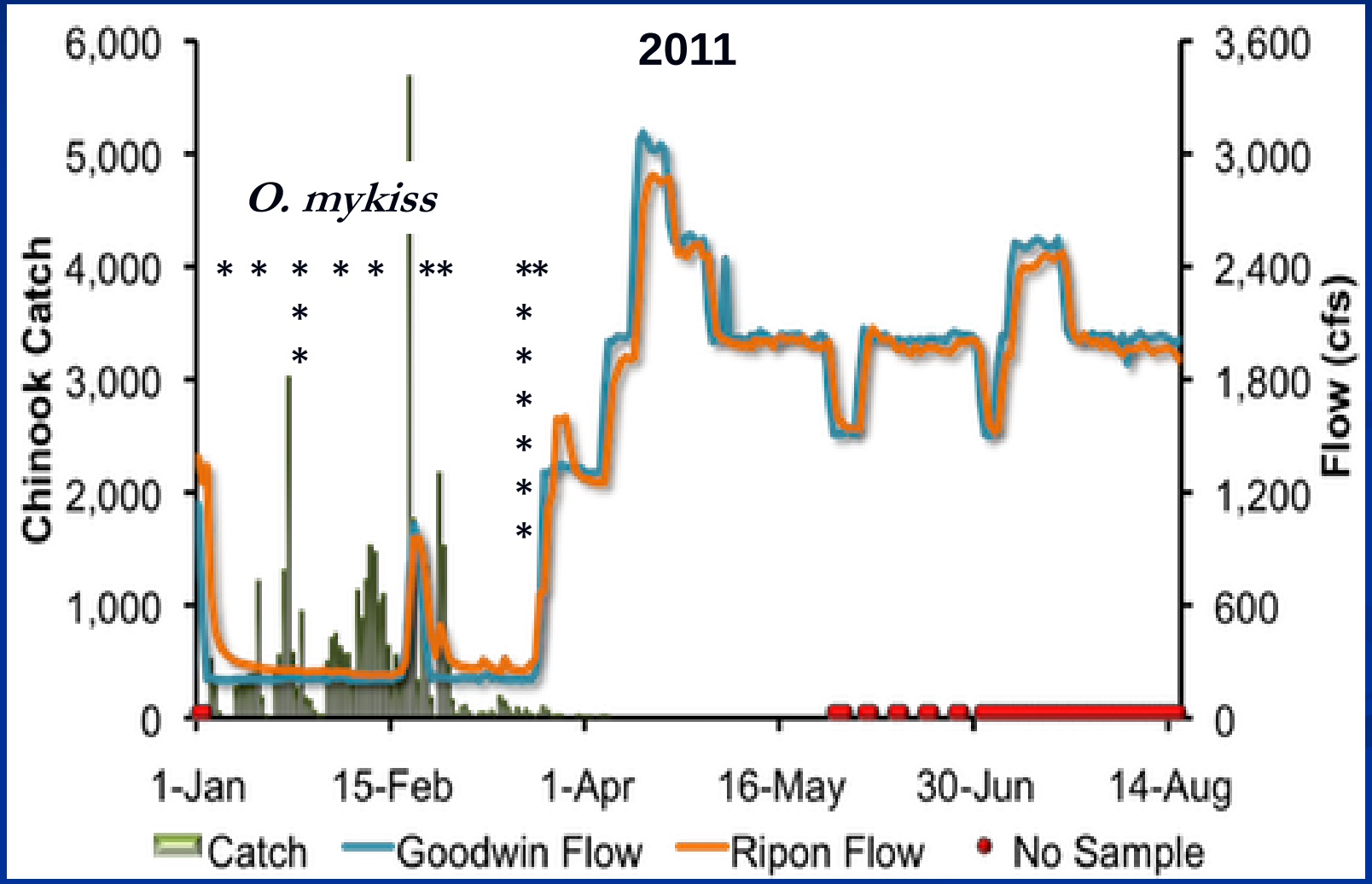


Adult Chinook Passage at the Stanislaus weir





Juvenile Chinook Passage at the Oakdale Rotary Screw Trap



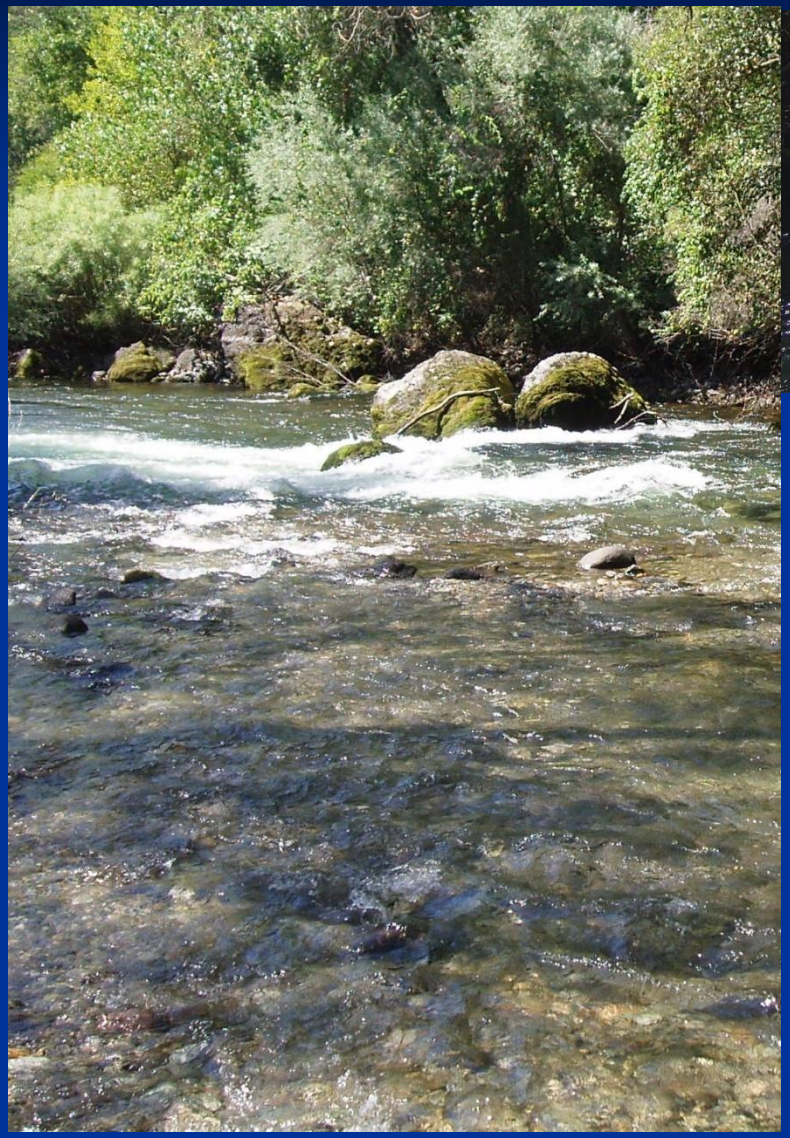
Juvenile Chinook and *O. mykiss* Passage at the Oakdale Rotary Screw Trap

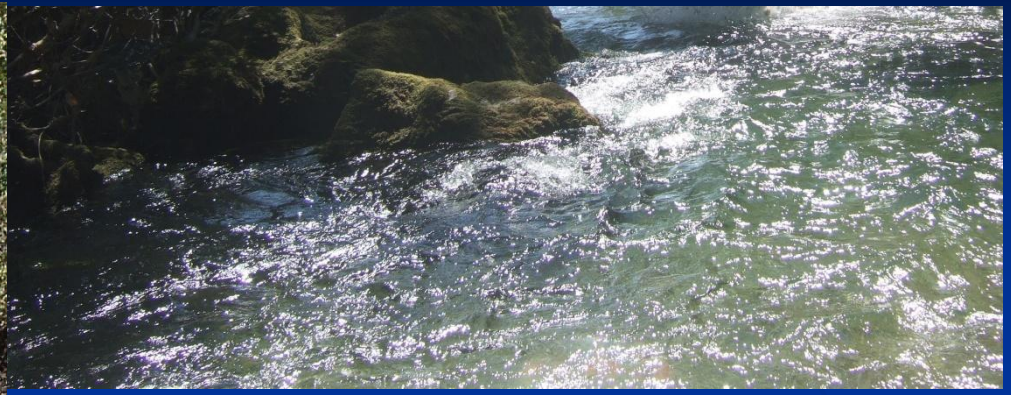
2011 Data				
			Average	
Species	Age Class	#	Fork Length	Weight (g)
Chinook	Fry (< 50 mm)	3,929	36 (26-49)	0.4 (0.2-5.0)
Chinook	Parr (50-69 mm)	629	59 (50-69)	2.2 (0.3-7.3)
Chinook	Smolt (≥ 70 mm)	328	86 (70-140)	8.4 (3.3-31.4)
O. mykiss	Age 1+ (100-299 mm)	21	234 (160-292)	110.0 (14.0-264.0)

Using data for adaptive management

- **Example Action:** winter instability flows
- **Objective:** simulate natural variability and enhance access to varied rearing habitats

Data available





PHYSICAL

--historical hydrology

--historical temperature

--River 2-D topographic data

(coming soon)

Data available

BIOLOGICAL

(mostly on Chinook salmon):

-- adult escapement and migration timing

weir data since 2003

carcass survey data since the mid 1950's

-- juvenile migration

Oakdale RST data for most years since 1993

Caswell RST data since 1995

-- other studies

Possible uses of available data

- Use River 2-D model to evaluate areal and temporal extent of shallow rearing habitat under alternate pulse shaping

Possible uses of available data

- Use juvenile migration data to evaluate average size, timing, and number of outmigrating juveniles in years with different types of instability flows

Possible uses of available data

- Use analysis of historical hydrology to develop a flexible range of pulse shapes and timing

Request for feedback

- Options or techniques for analyzing existing data
- Methods for generating better data for steelhead management

Questions?

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SOG website: *http://swr.nmfs.gov/ocap/sog.htm*