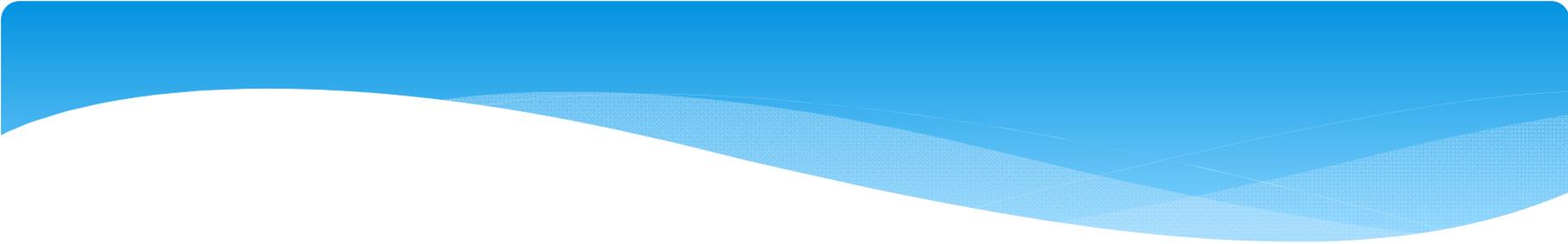


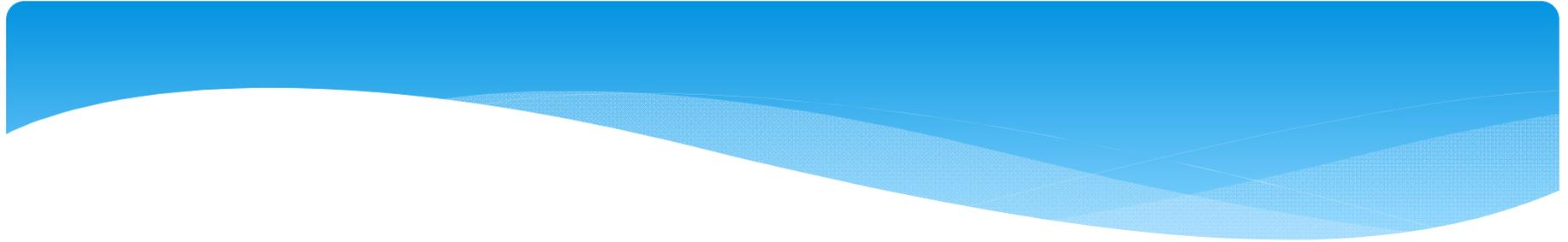
Initial Panel Findings/ Recommendations

LOBO 2013

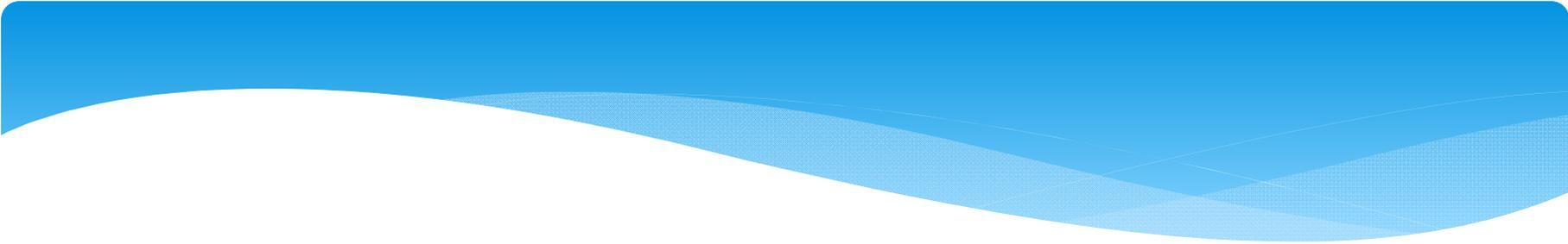


Hydrologic Water Year Review:

- Extremely dry year offers a perfect opportunity for analysis and refinement of landscape-level climate patterns that might affect management strategies.
 - An analysis of running-average curves for 10, 20, and 30 year increments can identify repeated patterns in the hydrologic cycle
 - Will create some very different estimates of long-term water availability



GENERAL OBSERVATIONS



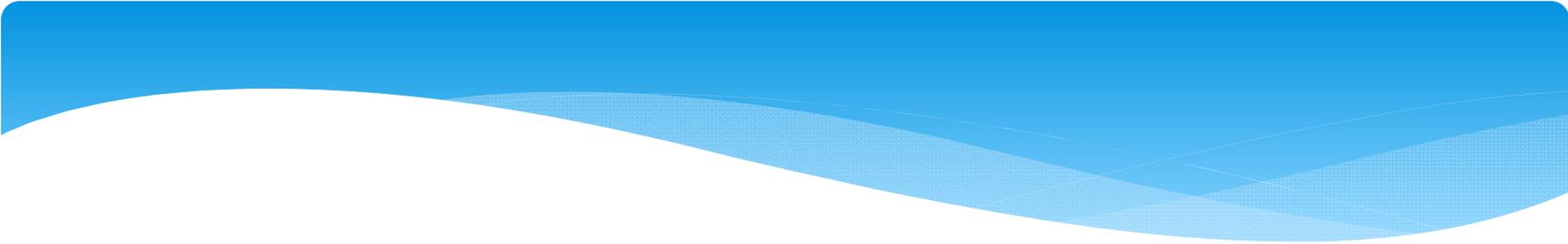
GENERAL OBSERVATION:

2012 IRP reiterated the need for collection and analysis of biological response data and linkage to physicochemical conditions / action targets. The various research teams continue to respond to that request. We suggest that groups continue to move from fixed targets to multiple biological response measures.



GENERAL OBSERVATION:

Enhance existing research programs to support operational plans that facilitate expanded species distribution (gain) rather than reducing loss.



**Sacramento River Temperature
Task Group / Shasta Operations
and Fisheries Summary (USBR
and NMFS)**

Sacramento River Temperature Task Group / Shasta Operations and Fisheries Summary (USBR and NMFS)

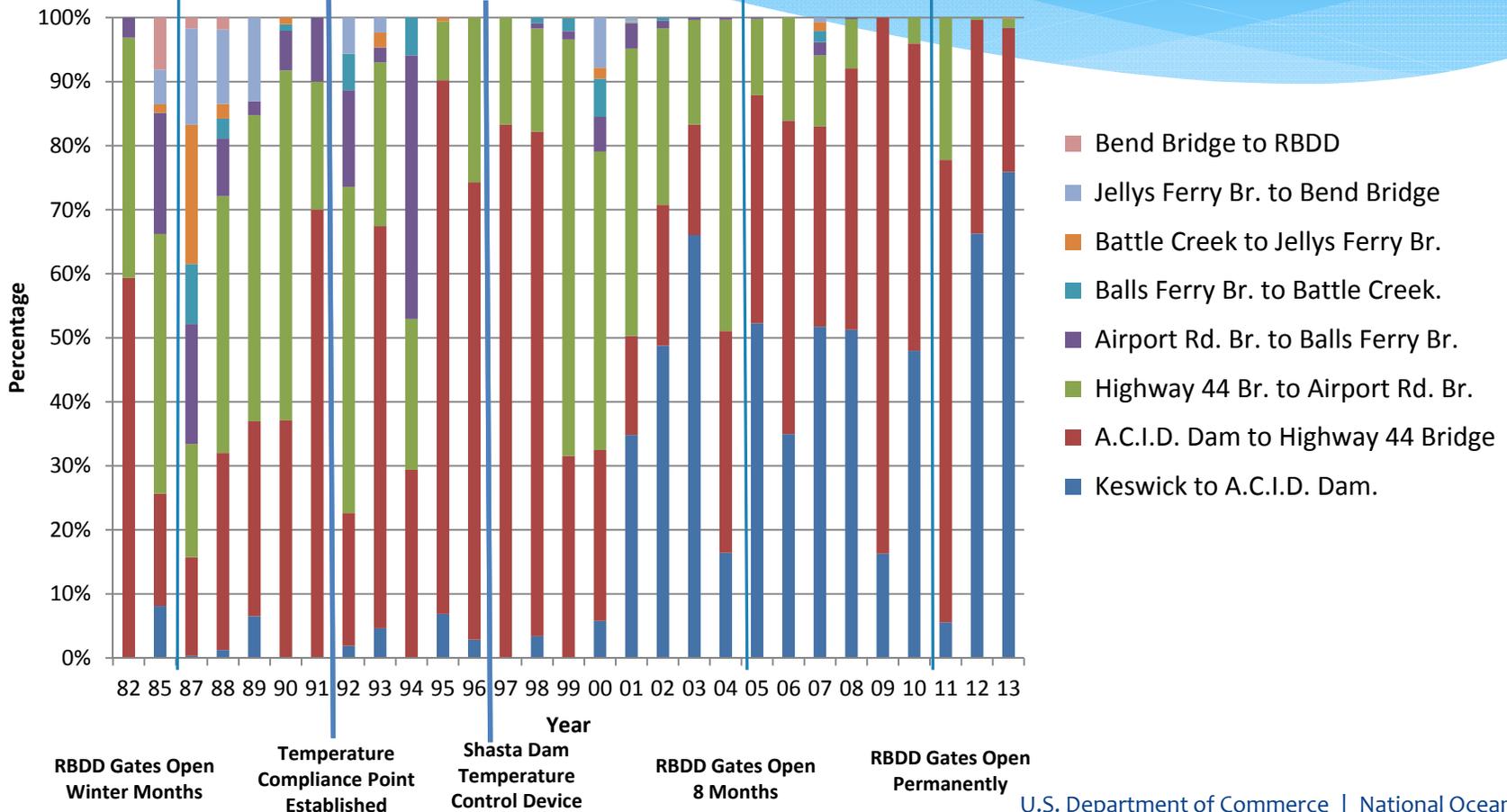
- * This dry year will establish opportunities to obtain response data for species sensitivities
- * Better elucidation of downstream water quality related to releases from various reservoir strata [supplemental models to HEC-5Q]
- * Dry year resulted in increased diversion from Trinity River. What is the impact on Trinity River Fish?

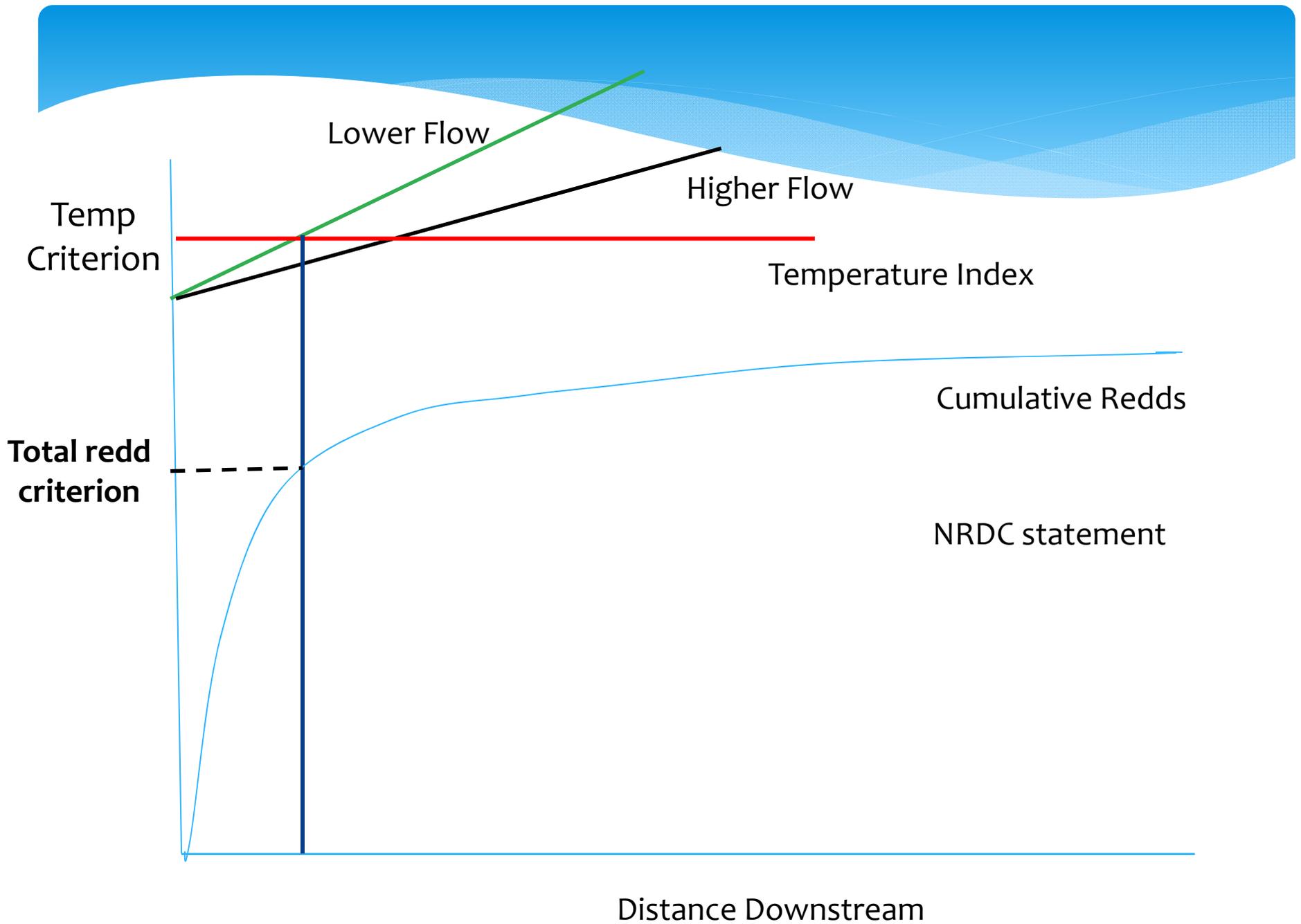
Sacramento River Temperature Task Group / Shasta Operations and Fisheries Summary (USBR and NMFS)

- * How many fish are being impacted by meeting (or not meeting) a given fixed TCP ?
- * What are the interactions between fish life stage and location of TCP? Diagram of redd distribution suggestions more integration of relationship between redd temperature, flow and depth

Winter-run Redd Historical Distribution

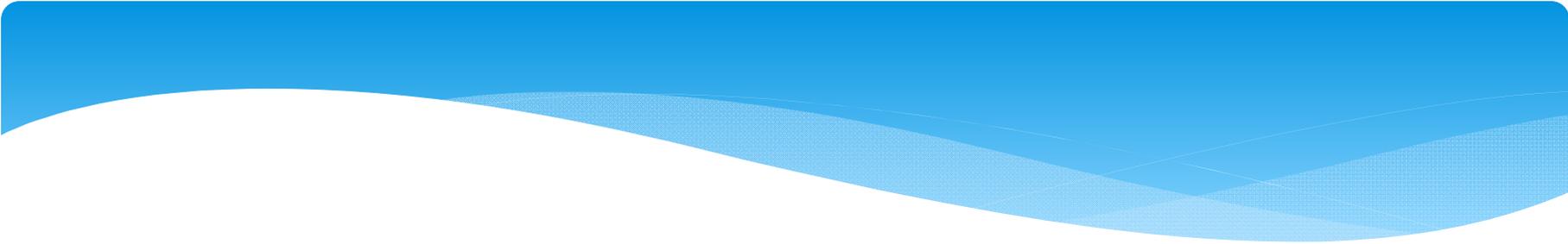
Winter-run Redd Percentage Distribution, 1982-2003





Sacramento River Temperature Task Group / Shasta Operations and Fisheries Summary (USBR and NMFS)

- * Value of use of 7DADM? Depends upon lethal and sub-lethal effects in local populations. What is the best way to measure that stress (duration)? What has been gained by this change? Has not been determined. Suggests two criteria to control “daily spikes” and “smoothed daily max” levels.



**Term and Condition 2a: A
synthesis of recent and historic
information to develop loss
equations for listed
anadromous species (USBR and
DWR)**

Loss Estimate Model

- * Need for more research on whole facility survival
- * Current model based upon Jahn report
 1. Error propagation model is flawed
 2. Annual loss is underestimated: (1) variable survival (2) handling of inserted zeros
 3. Uncertainty is greatly understated because standard errors are inappropriate.
 4. Model survival, salvage, and loss as random variables



Retrospective Analysis of Water Operations and Delta Smelt Protective Actions

Delta Smelt

- * Have already concluded that their objectives have been met – Criteria were met but did it have an effect on the population? Apparently, unknown.
- * Emphasizes loss prevention rather than enhancement
- * Is this the wrong target? Can we predict that the delta smelt population will be higher this coming year?

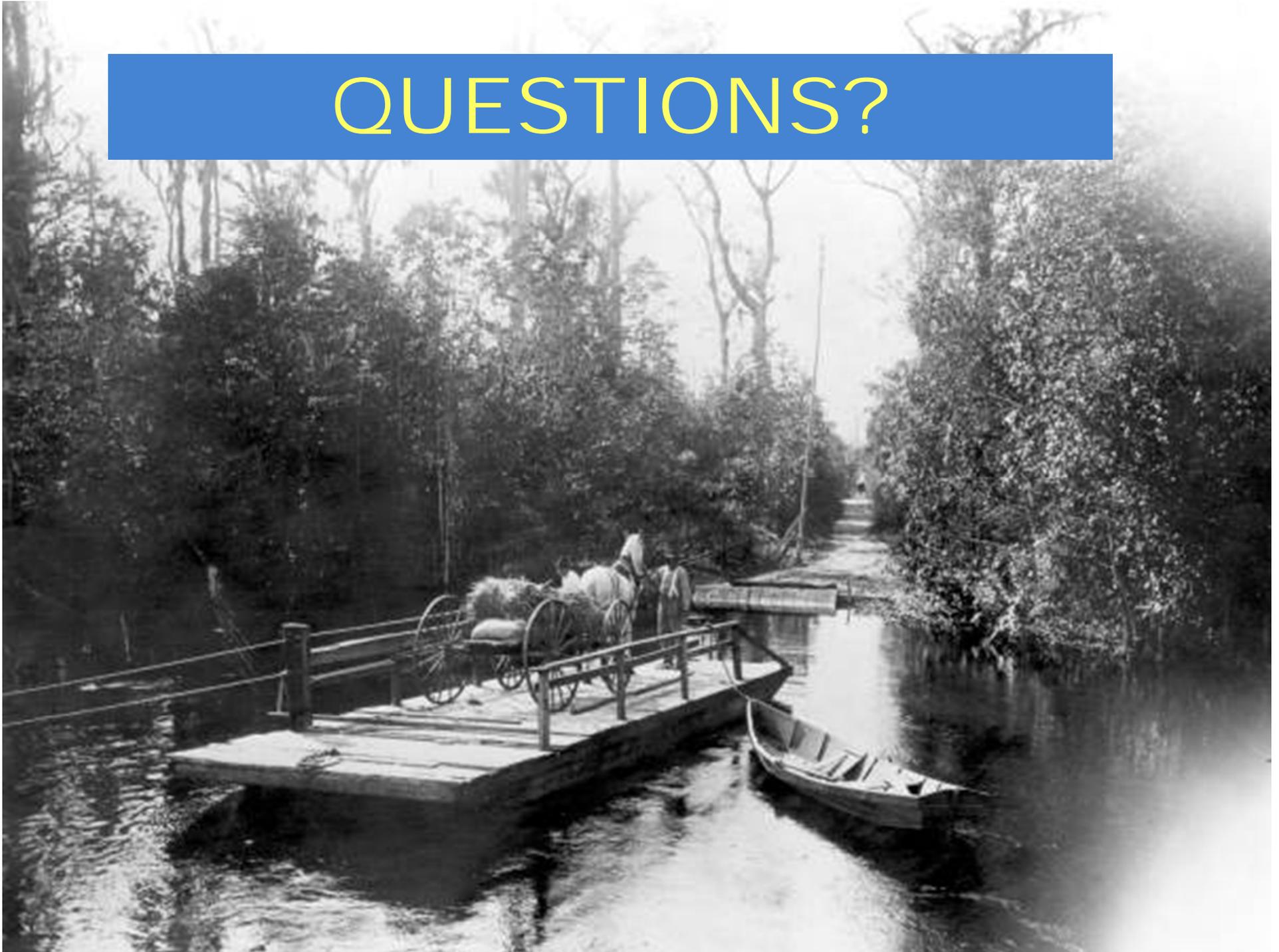
Delta Smelt

- * LOO 2012 concluded that the PARTICLE TRACKING MODEL WAS LIKELY NOT A GOOD ESTIMATE FOR SMELT TRAVEL. Suggests new model giving them a vertical behavior and horizontal movement across tidal areas, as well. Greater emphasis on behavioral responses. Need to understand sensory responses of fish; to changes in flow, pressure, stage, turbidity, etc., as well as the components of turbidity. Much of the information already exists. Greater emphasis on behavioral responses

Delta Smelt

- * Anticipate a first flush and blunt the turbidity by operating project differently to reduce the negative OMR. Under what circumstances might this be possible?
- * Long-term record of when the first flush occurs 40 – 50% of the time. When does it occur? What are the other “triggering criteria”?

QUESTIONS?



SCHEDULE

- * **Finish drafting and send lead author (15 Nov)**
- * **Lead author incorporates comments and sends first draft to panel (21 Nov)**
- * **Panel sends comments back to Lead Author (25 Nov)**
- * **Teleconference? (27 Nov)**
- * **Lead Author revises, and sends second draft (30 Nov)**
- * **Panel sends final comments back to Lead Author (5 Dec)**
- * **Final Panel report sent to Delta Science Program (7 Dec)**