From: Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>
Sent: Thursday, September 21, 2017 2:43 PM
To: Michelle Havey; Jeff Rieker
Subject: Quick notes from Shasta RPA amendment workshop 3.5

Draft Proposed Shasta RPA Workshop

YES:
Reclamation: Jeff Rieker, Federico, Dave Mooney
NMFS: Maria, Evan, Eric Danner, me
PCWA
MBK
SLDMWA
WAPA
SWRCB
SWC
Natomas Mutual
Westlands
Redding Electric
DWR
NCPA
SMUD
Contra Costa WD
USFWS
NCWA
City of Redding
NRDC
CDFW
GCID
Friant
Exchange Contractors
San Juan WD
James ID
TCCA

NO:
Sutter Mutual
Santa Clara Water District
BLM
Trinity PUD
Hoopa
RD 108
ACID

Status update on Sacramento River summer temperature management:
-- Based on hydrology, opportunity to conduct a management study different than the RPA but in the proposed draft RPA amendment, that is, 53 degrees DAT at CCR
-- at workshop #3, relatively cool air temperatures, but going into a temperature spike
-- Since then, excellent summer temp management
-- One of the hottest, if not the hottest, summer on record
-- 5 temperature swings in July
-- 52.5-53 degrees, 1 day at 53.1 degrees
-- How does that correlate with 55 degrees 7DADM? Well below in July
-- August--Still above average, but lower. 1 day above 53 DAT, 2 days greater than 55 max
-- No side gate access yet
-- Temperature management has been highly successful as far as intention

Status update on computer modeling and analysis of draft proposed RPA amendment (Jeff)
-- Workshop #3: modeling results
-- Brief summary is minimum spring volumes, limited Keswick release schedule, minimum EOS volumes
-- Summary of water cost
-- Working on refinements to the model, working on tweaks to reflect real-world scenarios
-- Modeling identified impact distribution
-- Sensitivity analysis runs, incorporating TUCP measures

-- General ballpark of impacts disclosed during Workshop #3 has not changed much
-- Next step is to link CalSim and HEC-5Q temperature models to the biological mortality models, and to see if biological objectives can be met
++ Jeff Sutton (TCCA): Any of the modeling available? Jeff: Not yet. Need to QA/QC. Results will be provided at Workshop #4.

Status Update on Science Work Plan
-- Dave walked through the first 4 slides of the draft PPT that was circulated between Reclamation and NMFS
++ Steven Handy (City of Redding): Discussion of consequences of any operation on water and power?
== Dave: the Science Plan is focused on science. Results will be taken and translated into action on operations, then will look at consequences of those actions.
++ Frances Brewster: How will the info be synthesized and inform adaptive management?
== Dave: Will include synthesis, reporting, and closing adaptive management loop.
++ Steven Handy: Will there be a discussion on methods to measure success? How will we know if these measures are working or bringing a benefit? Should be included.
== Maria: Appreciates comment, we need to do that.

Maria:
-- Need to appropriately separate science and management so that science informs management.
-- Management questions help drive the science needed to inform management
-- Bins of management questions: Shasta management and operations, forecasting, species viability and variability, climate, interactions between multiple stressors, and structural modifications or adjustments
++ Paul Olmstead (SMUD): Objectives (e.g., numbers in the river), what triggers?
== Maria: Goes back to our proposal. Will present and explain in Workshop #4

++ Sheila Greene (Westlands): Focus is on temperature, concluded that mechanism for mortality is DO. Sheila recommends focus on DO metrics.

== Eric: Misnomer, issue is not the result of ambient DO in the river, but DO.

== Maria: We have a management question associated with this.

++ Sheila Greene (Westlands): Focus is on water temperatures and egg development. Trade off with slower growth, so that the fry emerge smaller. Would like a metric at RBDD, because there may be fewer, but more fit, individuals.

== Eric: Temporal exposure needs to be considered depending on when in the incubation period the temperatures change.

Submitted of management questions within 2 weeks
Dave and Maria offered to meet with individuals or groups

Sent from my iPad