

## **Talking points for Shasta RPA amendment**

Updated January 26, 2018

- The winter-run escapement estimate of 1,155 in 2017, with >70% hatchery returns, is ongoing evidence of the low population of winter-run and the near-term challenges to stabilize and increase this species throughout all of its life history stages.
- The estimated 44% egg-to-fry survival of juvenile winter-run to Red Bluff Diversion Dam provides a strong indication that the pilot/operational study of 53 degrees F daily average temperature at CCR in 2017 was effective at providing better water temperatures for egg and alevin incubation.
- NMFS appreciates the modeling work that Reclamation has put in to evaluating the potential system-wide effects of implementing the Shasta RPA amendment, to link the CalSim modeling outputs to the temperature model, and especially to link those outputs to the temperature-dependent mortality model.
- NMFS and Reclamation continue to have ongoing discussions associated with the assumptions/inputs into the system-wide modeling.
- NMFS and Reclamation agree that additional analyses need to be conducted to determine the appropriate seasonal storages and other measures that provide for adequate water temperatures throughout the temperature management season.
- NMFS and Reclamation agree to another pilot/operational study in 2018 as we continue to work through the modeling and commitments associated with the proposed draft Shasta RPA amendment
- NMFS and Reclamation agree that a 53°F daily average temperature is a better temperature and location for operations and winter-run egg and alevin incubation.
- NMFS and Reclamation agree that additional work and studies need to be conducted in the upper Sacramento River and early life stages of winter-run in order to fill in data gaps in our understanding of their needs. Therefore, we jointly propose a science work plan that includes a list of management questions to work towards filling in some of the data gaps.
- NMFS and Reclamation agree that it is helpful to receive feedback and ideas from stakeholders on our proposed amendment.