

EXHIBIT 1-A

Scope of Work
for
Revision of the 2003 List Engineering Report on the
Sleepy Hollow Steelhead Rearing Facility (SHSRF) Raw Water Intake System

List of items to be included in proposal for work:

- 1) Review latest versions of the Mussetter Engineering sediment characterization and sediment transport studies to determine probable daily suspended and bedload transport at the facility intake. Review the revised seasonal operations scenario as outlined in the Draft Steelhead Rescue and Rearing Management Plan for the SHSRF.
- 2) Evaluate how the sediment revisions affect the feasibility of options evaluated in the 2003 report, based on any changes in predicted suspended sediment and moving bed-load post SCD removal or reinforcement,
- 3) Evaluate whether the preferred 2003 option is still feasible and still the preferred option.
- 4) Evaluate the risk posed to the SHSRF water intake system by sediments in the Carmel River that may be compounded as a result of the Basin Complex Fire in 2008. This may include a review of the Natural Resource Damage Assessments/estimates made by CDF/USNFS. Total Suspended Solid (TSS) values on the Big Sur River reached 2,500 – 3,000 mg/L. Although concentrations are thought to have been relatively less severe on the Carmel River, these levels can be used for evaluating a potential, worst case scenario.
- 5) Is the preferred option in the 2003 report still the preferred option, given the aftermath of the Basin Complex Fire?
- 6) Do changed field conditions in terms of suspended sediment indicate a need to add fine suspended solids filtration to the intake design or affect the selection of a preferred retrofit option? Based on existing sediment samples, what additional post-diversion fine-sediment filtration options are feasible, with and without additional head loss and system flow? Evaluate new approaches, including rotating drum screens, arrays of compressed stacks of scored polyethylene disks, and large bag filters.¹
- 7) If a post diversion fine sediment filtration system is needed and added to the facility, will the intake pumps need to be increased in size to maintain system flow at 900 gpm.
- 8) Are the costs of addressing the issues in #6 such that a radial well (e.g., Ranney collector) or standard vertical wells now a more cost effective solution, and the new preferred option?

¹ Provide consultant with the particle size analysis of fine sediments taken from the Rearing Channel and analyzed by CSUMB; b) provide the particle size analysis done by MBAS on grab samples from below LPD during winter 2008-2009.

- 9) Review engineering details, then design and provide construction plans for an air supply system for the current intake screen to be self-cleaning during winter high flow events.
- 10) Does the risk of failure and inability to repair or clean the existing screen design make a radial collector well or standard well field a more cost effective or feasible option?
- 11) How much would it cost to drill and test one pilot well or do pre-project evaluations to determine the feasibility of a radial collector well?
- 12) As a new option, evaluate the cost and feasibility of connecting the SHSRF to the SCD 30" raw water line as a back-up intake source.
- 13) As a new back up option, evaluate the cost and feasibility of turning the Rearing Channel (RC) into a fully recirculating aquaculture system, using pumps in the tail-works or new intake galleries, and staged filtration for TSS and Total Dissolved Solids of 100% of the RC flow of 750 – 900 gpm.²
- 14) Is the new option in #12 more cost effective than the original preferred option for the intake retrofit, if it allows the existing SHSRF to operate in isolation from the river for up to 90 days?
- 15) Update all cost estimates for each option, taking into account the partial facility retrofit that was implemented after the 2003 report.

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² Provide consultant with effluent/tail-works water quality data collected in 2008 and previously for RWQCB.