Bureau of Reclamation
Regional Office
2800 COTTAGE WAY
SACRAMENTO, CA 95825
email to: Denard Fobbs Jr at dfobbs@usbr.gov

Re: SOURCES SOUGHT NOTICE for
Nimbus Fish Hatchery Operations and Maintenance
NAICS Code: 112511 – Finfish Farming and Fish Hatcheries

Mr. Denard Fobbs,
We are writing in response to the recent Sources Sought Notice for operations and maintenance at the Nimbus Fish Hatchery (NFH) in Gold River, California. We understand that this solicitation is not requesting a Scope of Work for the operation of NFH, but we strongly encourage the Bureau of Reclamation (BOR) to refine its mitigation objectives when creating plans for ongoing management operations at NFH. We respectfully offer the following recommendations regarding the published Draft Performance Work Statement for operations at Nimbus Fish Hatchery:

1. Mitigation requirements should include compensation for loss of spawning and rearing habitat above Folsom Dam, not merely the seven river miles between Nimbus and Folsom Dams.
Nimbus Dam was operational in 1955 and completely blocked access to salmon habitat upstream. Because Old Folsom Dam was in place prior to 1955, U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) determined that mitigation for Nimbus Dam was merely the 7 river miles between Old Folsom and Nimbus Dams. Mitigation at NFH was targeted at approximately 18,000 returning adult Chinook.

USFWS and CDFG did not consider the fact that Old Folsom Dam had a fish ladder which allowed salmon access to spawning and rearing habitat above Old Folsom Dam. Indeed, 3,300 adults passed Old Folsom Dam in 1944 ("A Plan for the Protection and Maintenance of Salmon and Steelhead in the American River, California, Together with Recommendations for Action," 1953). The exclusion of areas above Old Folsom Dam was inappropriate, as Nimbus Dam was constructed without fish passage.

When Old Folsom Dam was replaced by the contemporary Folsom Dam, mitigation targets were not reevaluated. There is no mitigation for the approximately 125 river miles of lost salmon habitat above Folsom Dam, which is also operated by BOR. BOR is ultimately and fully responsible for blocking access to all spawning and rearing habitat above Nimbus Dam; mitigation targets at NFH should reflect this reality.

2. Future mitigation targets should take into account potential new conservation objectives from the Pacific Fisheries Management Council (PFMC).
New work from PFMC Sacramento River Fall Chinook Workgroup (SRWG) indicates that the current conservation objectives of 122-180K returning adult fish throughout the Sacramento River and tributaries is insufficient to sustain fish populations and ocean and inland fisheries. Final results of the SRWG analysis are pending, but revised conservation objectives could be as high as 400K adult fish in the Sacramento River and tributaries.

BOR and California Department of Fish and Wildlife (CDFW) staff must incorporate this assessment of conservation objectives into production targets at NFH. We estimate productions targets should approach 12-15 million juvenile fall-run Chinook in order to support fisheries, hatchery broodstock requirements, and escapement targets.

Despite producing consistent numbers of juvenile Chinook, we have fallen far short of the current mitigation target of 18,000 adults returning to the American River. The mitigation target has only been met 4 times in the past 15 years (PMFC data).

3. Parentage-based tagging (PBT) should be implemented as rapidly as possible.
Current hatchery protocols dictate that juvenile Chinook are raised to smolt stage, embedded with a coded wire tag (CWT), and adipose-marked at a rate of 25%. Fish spawned in natural areas are not tagged or marked; as such, our understanding of the population dynamics of natural-origin fish is limited to extrapolation of results from CWTs collected from hatchery-origin adults.

Genetic parentage-based tagging (PBT) tools now exist that have the potential to supersede the CWT monitoring system. All fish carry DNA which will distinguish populations by their natal rivers. Correspondingly, all fish can be assigned to a stock that is defined by watershed and run timing. Hatchery fish, with known genetics of broodstock adults, can be further assigned to a single breeding pair, allowing deduction of spawn date, hatchery specifics, and release details.

PBT allows monitoring of adult survival rates, fisheries contributions, escapement, stray rates etc. In order to implement PBT coastwide, NFH must be part of a larger monitoring system with large geographic scope and input from multiple state and federal agencies. These efforts are ongoing. Full implementation of PBT will allow for responsive release strategies (see below), particularly release of fish at smaller size.

4. Release strategies from NFH should take into account hydrological and other environmental factors.
Currently, the majority of hatchery smolts are released directly into San Francisco Bay. The greatest factor determining release timing and location is the growth rate of juveniles; they must be large enough to accept the CWTs used for monitoring adult escapement and contribution to fisheries.

Implementation of PBT will allow for greater flexibility in release timing. Juvenile fish could be released before they are large enough to accept a CWT. This flexibility would allow releases at times that take greatest advantage of optimal river conditions and are coordinated with water operations at Folsom Dam.

There is opportunity to implement adaptive release strategies from NFH, thereby increasing life-history diversity, taking full advantage of ecological conditions, and increasing overall survival rates through the River and Bay-Delta system. Flexibility must be incorporated into release timing and location in order to adapt to environmental conditions. Release strategies should include trucking and net pens, as appropriate.

Pacific Coast Federation of Fishermen's Associations (PCFFA) is the largest statewide organization of commercial fishing families, representing commercial fishing associations from ports in every California port. Nor-Cal Guides & Sportsmen's Association (NCGASA) is an organization of professional river guides and recreational anglers throughout Northern California, and Golden Gate Fishermen's Association (GGFA) represents ocean charter boats from Monterey Bay to the Oregon border. The thousands of members and family businesses we collectively represent have historically relied on Central Valley salmon runs, including those supported by the Nimbus Fish Hatchery, to sustain their businesses, feed coastal communities, and maintain their way of life. As we endure the third consecutive year of closed commercial salmon fisheries, the urgency of taking strong action to support salmon survival could not be greater, and we are writing to ask for your help in this
effort.

Thank you for your consideration.

Sincerely,

Lisa Damrosch
Executive Director PCFFA

James Stone
Executive Director and
President NCGASA.org

John Atkinson
Board Member
GGFA