

Rehabilitating America's National Fish Hatcheries

Critical Water Management Structures — the Heart of the National Fish Hatchery System



**Fisheries
& Habitat
Conservation**

For 133 years, the National Fish Hatchery System has made America a leader at home and abroad when it comes to the development of cutting edge fish and aquatic species culture and management. Today, the System's history, reputation, and dedication are under serious threat by the gradual deterioration of the delivery, treatment and effluent systems that circulate the lifeblood of the National Fish Hatchery System: water.

Charged with the culture and distribution of 111 species of fish and other aquatic species, and increasingly involved with threatened and endangered aquatic species, the National Fish Hatchery System (NFHS) operates and maintains a huge and complex linkage of wells, pumps, valves, piping, filters, heaters, chillers, ultraviolet and ozone treatment systems, and electrical and alarm systems that keeps water clean and moving 24 hours a day, seven days a week. These assets are the heart, arteries and blood vessels of the NFHS — 69 hatcheries, 7 fish technology centers, 9 fish health centers, and 1 historic national fish hatchery — **its critical water management structures**. In short, these systems are the reason the Service can hold, produce, rear, and distribute aquatic species. These mission critical components make up two-thirds of the NFHS's real property assets, with a replacement cost of \$762 million.



*Pipe break undermined pump house —
Nashua NFH, NH. USFWS Photo.*

Unfortunately, over time these structures have deteriorated to the point that the NFHS established and now maintains a tracking system of fish losses or diminished fish quality that result from water system inadequacies or failures. The Department of the Interior recommends that costs to repair properties critical to performance of agency missions should be 2 to 3 percent of the total property value. Currently, those

repair costs within the NFHS are significantly higher. Over the next 5 years, the National Fish Hatchery System will continue to focus its maintenance efforts on reducing the backlog of repairs and improvements to its critical water management assets. Deficiencies in those mission critical assets are identified through the Department's Comprehensive Condition Assessments, thorough inspections of each asset by qualified personnel who determine the need and cost for repair or replacement of a property item.



*Corroded saltwater pump station —
Bears Bluff NFH, SC. USFWS Photo.*

The NFHS's Real Property Asset database contains detailed information on \$1.2 billion in fixed assets. During FY 2004, the NFHS's Maintenance Team undertook an extensive clean-up of information in the database to avoid duplicity, separate capitol improvement needs from deferred maintenance deficiencies,



Apache trout. USFWS Photo.

and improve overall accuracy and fidelity of data. These management initiatives and accomplishments have significantly reduced the deferred maintenance backlog in the database. A deferred maintenance backlog that stood at well over \$300 million a year ago has been reduced to \$245 million through these efforts, demonstrating the constant need for vigilance in managing maintenance data and backlogs.

In FY 2005, the Congress approved a \$4.0 million reallocation of deferred maintenance funds into the NFHS's annual maintenance account. This raises the available annual maintenance funds to the level required to accomplish day-to-day maintenance across all NFHS facilities. Although this will slow progress in reducing the deferred maintenance backlog, the importance of this reallocation is that now, minor and emerging repair needs can be proactively addressed before they become more costly deferred maintenance needs. This preventive maintenance approach is anticipated to significantly reduce the growth of the deferred maintenance backlog over time. An example of deferred maintenance projects to be accomplished in FY 2005 include the following: 1) at Makah NFH (WA), the primary water storage impoundment will be rehabilitated to ensure delivery of good quality water for Pacific salmon restoration; 2) at Orangeburg NFH (SC), the deteriorated fish holding house built in 1911 will be reconstructed to enable the facility to hold endangered shortnose sturgeon for a cooperative restoration program; and 3) at North Attleboro NFH (MA), the water control structure that regulates delivery of water for incubation of Atlantic salmon eggs will be repaired.

The Service stands ready to work with the Department, the Office of Management and Budget and the Congress as we ensure that critical water management structures, in particular, operate at maximum efficiency — as the NFHS continues to work to protect, restore and recover America's living aquatic resources.

For more information about Rehabilitating America's National Fish Hatcheries, contact U.S. Fish and Wildlife Service's Fisheries and Habitat Conservation at 202/208-6394 or visit us on the Internet at <http://fisheries.fws.gov/>.

**U.S. Fish and Wildlife Service
800/344-WILD
<http://www.fws.gov>**

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Rehabilitation of fish production ponds — Genoa NFH, WI. USFWS photo.



Water distribution structure — Welaka NFH, FL. USFWS photo.



Water supply sand filter and control box — Warm Spring NFH, OR. USFWS photo.



Salmon fry rearing tanks — Green Lake NFH, ME. USFWS photo.



Electric control panel for water supply — Welaka NFH, FL. USFWS photo.



Tank room ultraviolet treatment system — Warm Spring NFH, OR. USFWS photo.