



# Alden and Collaborators Presented with the Distinguished Project in Fisheries Engineering and Ecohydrology Award

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HOLDEN, MA, USA, July 11, 2013 /EINPresswire.com/ -- [Alden](#) Research Laboratory, Inc. (Alden) of Holden, Mass., together with Northeast Utilities, the United States Geological Survey (USGS—Conte Anadromous Fish Research Facility), and the U.S. Army Corps of Engineers, was presented with the Distinguished Project in Fisheries Engineering and Ecohydrology Award at the 2013 Fish Passage conference in Corvallis, Ore. The award was given by the Fisheries Engineering Committee, a joint committee of ASCE-EWRI (American Society of Civil Engineers – Environmental and Water Resources Institute) and AFS-BES (American Fisheries Society—Bio Engineering Section).

According to the award letter, “The Uniform Acceleration Bypass Weir (UABW or NU/Alden Weir) represents the full circle of using the best science to develop and implement an instream improvement, with wide reaching and long term habitat benefits.”

One of the major challenges of hydropower facilities is to safely pass downstream migrating fish and to keep them from going through the power generating turbines, where they may be injured or killed. The UABW had its genesis in the observation that, while downstream migrating fish often approached bypass weirs at intakes and forebays, they tended to avoid going through them, due to high water acceleration and the often dramatic reduction in flow area through the bypass. This prompted the concept of a weir design that would accelerate flow uniformly from the forebay to a bypass channel, eventually reaching a velocity higher than the maximum swimming speed of the target species. If successful, fish would become entrained in the high velocity flow and be unable to escape back into the forebay. Initiated by Northeast Utilities (now FirstLight Power), Alden developed the design through the use of numeric modeling and scaled physical modeling. The design was then tested with multiple fish species at the Conte Anadromous Fish Research Facility, followed by full-scale design, construction, and deployment at several dam sites on the Connecticut River. These have been operating for over ten years, and are now considered a standard design feature for many new bypass entrance designs in the northeastern United States. The concept of a low water acceleration weir bypass was subsequently applied successfully in the Pacific Northwest at much larger facilities by the U.S. Army Corps of Engineers, Walla Walla District.

“Alden is pleased to have received this award,” said Stuart Cain, president. “It was an effective collaborative effort of the team members, representing both industry and government.”

About Alden: Alden (Alden Research Laboratory, Inc.) was founded in 1894, and is an acclaimed leader in solving flow-related engineering and environmental problems. The firm has 100 employees and over 150,000 sq feet of indoor lab space on a 32 acre campus in Holden, MA, and an additional 25,000 square feet of laboratory space in Redmond, WA. Alden provides engineering, physical and computational flow modeling along with environmental and flow meter calibration services. For more information, please visit [www.aldenlab.com](http://www.aldenlab.com).

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