

# New England District Team inspects Woonsocket Dam

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Consistent maintenance of the New England District's flood damage reduction projects are critical to keeping them operating smoothly. A special team of New England District employees from Engineering, Safety and Operations performed a detailed Hydraulic Steel Structures (HSS) inspection of the four tainter gates at the Woonsocket Falls Dam in Rhode Island. "The primary purpose of HSS inspections is to evaluate the structural adequacy of these flood control features on a regular basis," said Jason Paolino, Chief, Structural Engineering Section. "This includes hands-on assessment of critical structural members and connections prone to failure in tension."

According to Joe Zanca, Project Manager, the tainter gate system allows the dam to keep the river elevation above the dam at a constant level at any river flow. "By adjusting the four gates up and down, the river flow can pass over and under the gates," he said.

Paolino said the HSS inspection is physically demanding while working at heights, requiring climbing access to all parts of those large structures. "Coordinating set-up access and fall protection measure are critical," he said.

Inspecting a project of this size is a long and detailed process. "Park Rangers Mark Larson and Drew McInerney gathered and brought all the fall protection equipment and prepared the area by placing ladders of all kinds onto areas for the inspection team to access," said Zanca.

Zanca manipulated the gates to keep the inspectors dry by opening and closing them, allowing water to pass around the inspection work area. According to Zanca, lowering the pool during low flows is a long process as they lower the elevation of the river to allow full control of the water flow, allowing the inspection. "Each year, during low flow periods when stakeholders are not using the flows, we lower the river, approximately 10 feet, for about 30 days, to perform inspections of the dam and channel," he said.

Jim Hachigan, Basin ECO, and Basin Manager Adam Durando provided assistance and general safety and logistical oversight. Structural engineers John Kedzierski and Adam Stewart did the actual climbing inspection, with support from George Claflin, periodic inspection coordinator, and Kane Turmelle, Safety Office. Paolino was impressed with the skillful work of Kedzierski and Stewart, and pleased with the inspection process. "This effort went smoothly, efficiently and safely due to the close coordination of the entire team," he said. "It will serve as a model for future inspections."

"During the post inspection meeting, Operations was notified the gates are structurally sound," said Zanca. "We will continue with normal operations."

Zanca said the Woonsocket Dam is a "water use" dam, constructed in 1959 and operated to keep a small elevation pool above the dam for water use. Used in the 1950's for rubber and textile mills, the dam is used solely for hydropower. The New England District took over operation and maintenance of the Woonsocket Flood Damage Reduction project in January 2009. The project was transferred from the city of Woonsocket to the District. Woonsocket is managed by the West Hill Dam Project Office Staff.