

GEI Consultants receives dam rehabilitation award

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BOSTON — The Association of State Dam Safety Officials (ASDSO) recognized the Lake Burnt Mills Dam project in Suffolk, Va., with its 2009 National Rehabilitation Project of the Year award. GEI Consultants, Inc., a geotechnical, environmental, water resources, and ecological science and engineering firm, provided engineering services for the city of Norfolk, Department of Utilities, the owner of this project.

Lake Burnt Mills Dam is a high-hazard, earth embankment dam that impounds 10,300 acres of supply water and is one of a series of reservoirs and dams that provide fresh water to Norfolk and adjacent communities. Maintenance of this dam is critical for 820,000 residents of the Tidewater area who are dependent on the reservoirs for water supply.

GEI has provided extensive dam safety engineering services for Lake Burnt Mills Dam since 1993, primarily focusing on dam safety evaluations and remedial design. The dam was originally constructed in 1942 and includes a 45-foot-high by 1,900-foot-long embankment, an ogee spillway, and a low-level outlet.

"Good rehabilitation projects start with a motivated and knowledgeable client and project team," said R. Lee Wooten, P.E., vice president at GEI Consultants. "The city of Norfolk Department of Utilities understands how critical dam safety is to its central function of delivering water to the Tidewater Virginia area and have been engaged and supportive owners in the efforts to rehabilitate Lake Burnt Mills Dam."

ASDSO recognized the Lake Burnt Mills Dam project for "the innovative and effective components of this important dam remediation project." Remedial measures were constructed between

2006 and 2009 and include rebuilding the spillway; raising the parapet wall and extending the embankments to meet safety levels; installing a new low-level outlet by micro-tunneling through an abutment; and constructing a new outlet intake tower and access bridge. The design and construction of these remedial measures successfully addressed dam deficiencies and the city's requirement to retain the use of the reservoirs while maintaining dam safety during construction.

"Standard dam regulations and guidelines maintained by the Virginia Department of Conservation and Recreation Office of Dam Safety are extraordinarily helpful when pursuing a project like this," said Wooten. "We are fortunate that ASDSO supports all of us — state officials in their primary mission of motivating dam owners, dam owners in their obligations to maintain safe dams, and designers in our needs for innovative and cost effective solutions to dam problems."

The ASDSO National Rehabilitation Project of the Year award recognizes a unique remedial design that advances the field of dam safety and exemplifies the high professional engineering standards that dam safety requires. The award is presented to the rehabilitation designer and the dam owner at the ASDSO Annual Conference. Nominations must be approved by a state representative to ASDSO. Successful rehabilitation projects demonstrate resourcefulness in planning and in the solution of the design problems; pioneering use of materials and methods; innovations in construction or operation methods; and a high degree of reliability in operation, consistent with accepted practices in the field of dam safety engineering.