

Res Dam plan calls for fewer lost trees

BY ROBERTO SCALESE
STAFF WRITER

There's a new plan for the Reservoir Dam — trees included.

Under state order to repair the dam to prevent a catastrophic breach, Arlington has been working on a new Res Dam over the past few years. Res enthusiasts have lamented the idea of removing all of the dam's trees to improve the structure and spillway. Specialists may have found a solution.

The idea, according to Weston and Sampson engineer Mark Mitsch, is an I-wall driven into the embankment. Instead of leveling all the trees to reinforce the earthen dam, the town will drive steel sheets into the dam, giving the structure the proper support and strength needed.

The top of the steel sheeting will be encased in concrete and only a few inches of that block would be visible from the dam's walking path.

"I have tried very hard to keep as many trees as possible," said Mitsch.

Apparently, the only other dam in the country with an I-wall is in Minnesota, near the headwaters of the Mississippi River. Mitsch discovered the dam while researching alternatives for the Arlington project.

The new design will still include the new emergency spillway and the replacement of the current spillway's gate. New bridges will be installed over the spillways and will be handicap-accessible.

Public Works Director John Sanchez said he hopes to have the work largely completed by next year.

"I'd like to move the project to a happy conclusion by 2005," said Sanchez.

Construction will require using a vibratory pile-driving hammer to force the steel through the embankment.

The vibrating motion is quieter than a conventional pile driver.

"Unless you were walking around there, I don't think you'd know it was happening," said Mitsch. "Probably excavating the trench will be the loudest."

Driving the steel will take about three months, said Sanchez.

Parts of the dam near the Lexington line will require geo-technical fabric to keep soil from eroding through the dam along with seeping water, said Mitsch. In those areas, there will be more trees lost than anywhere else.

Committee members stressed the project's focus is to strengthen the dam and not to decrease flooding. Flooding issues must be solved with work on Mill Brook, said Res Committee member Leslie Mayer.

"Nothing we are going to do here is going to help the flooding situation improve," said Mitsch. "Flooding is not impacted either way."

The switch in plans will be close to cost-neutral, said Mitsch, although the cost of steels fluctuates. Neither Mitsch or Sanchez had hard numbers available for the project.