MONITOR EDITORIAL

Lawmakers can't beat Mother Nature

By Monitor staff
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Twice in just the past five years, the Suncook River has overtopped its banks and created flooding serious enough to merit an official disaster declaration.

On Mothers Day 2006 the river rose 15 feet and cut through a sand and gravel ridge pierced by a unused road built in the days before road permits were needed. By doing so, the river shortened its journey from its source in Gilmanton to the Merrimack River by about a mile, leaving its old, winding river bed basically dry.

The Suncook now moves a massive amount of sediment downstream where, in high waters, it buries yards and farm fields in silt and sand that was once the bed of glacial Lake Hooksett. To remedy that, a group of well-meaning lawmakers led by Chichester Republican Rep. Brandon Giuda, wants the state to pay to put the river back in its old course.

Is it possible? We think not.

The question is one of money and science. Money may or may not be available. That's up to lawmakers. But money is secondary to science, which is what should determine the state's course of action.

The Departments of Environmental Services and Transportation and a consulting firm have studied the river intensively since it changed course. Outside what was then a restaurant above an old mill dam just south of Epsom Circle, the river once broke in two and flowed on each side of mile-long Bear Island. The riverbed is now 15 feet lower, and the Suncook flows only on the east side of the island.

Dredging and filling and building a large dam would, in an estimate made without knowing the distance down to bedrock, cost $7 million. But the spending would almost certainly be a waste of money, since even if the river could be returned, it's unlikely to stay put.

Shane Csiki is a fluvial geomorphologist, a state expert in how streams and rivers evolve. Csiki knows of no example of a river ever being returned to its old path. He puts the odds of success with the Suncook at zero for two major reasons.

First, if a river is blocked, it will constantly work to find a way around the obstruction. Any dam or other structure would have to be anchored to bedrock below and to something that won't erode on each side. That may not be possible in an area known for its deep gravel deposits.

Second, the water table in the area dropped along with the river. It too is now 15 feet farther down. That means, if blocked, the river will likely burrow under the obstruction.

No approach can guarantee that no future floods will occur, and up to 100 more homes could be eligible to join the 36 that the state has purchased, razed or otherwise paid to protect against flooding. Rivers work to maintain a steady gradient in their descent. When the Suncook River's bed dropped, the water began nibbled away at the step in the riverbed that was created. As it nibbles, the step or headcut moves upstream until it hits a material like bedrock.

The headcut on the Suncook River is now threatening to undermine the Route 4 bridge and the Blackhall Road bridge. To stop its migration, the state wants to install grade controls, most likely concrete structures that work like a bedrock ledge to drastically slow or stop the nibbling. It also wants to lower the river's level by removing the Buck Street dam in Pembroke to reduce flooding. The state's plan could cost less than $1 million, money that's far more likely to be found that a much larger sum.

In this case, the science says legislative good intentions are no match for Mother Nature. Giuda's plan is an expensive long shot. The state's plan is a version of one used successfully on the Pemmigewasset River and others. It's the plan that deserves a try.