Will the wedge stop sand in the Kankakee?

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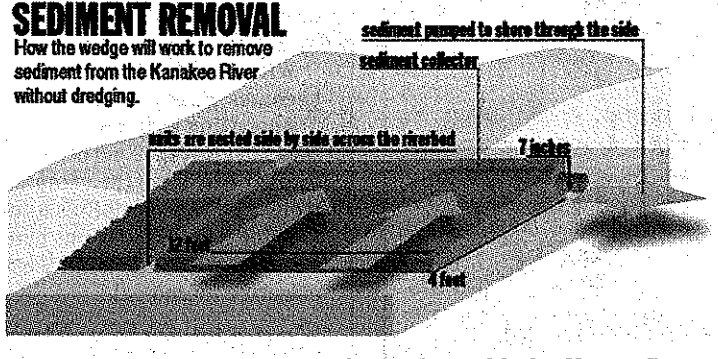
5-25-01



Journal graphic by Nancy Burgan

Can a wedge stop the seemingly ceaseless flow of sand into the Kankakee River?

Hydrologists with the Rock Island Corps of Engineers think so.

They are working to see if a wedge-shaped sediment collector designed by Randall Tucker of Findlay, Ohio can be adapted to sand removal near the Indiana state line.

"I've been developing this product over the last six years," Tucker says of his Streamside Systems sediment collectors.

He cites tests conducted in Michigan that show the device 91 percent effective in removing sediment on small streams during normal flows.

"Its really a big wedge in the river, maybe 4 feet by 12 feet and only 7 inches tall," explained Steve Russell, a hydrologist with the Rock Island District.

"Basically it has slots in it. Sand going across the surface falls into the slots and into a collection device," Russell said.

Interconnecting units can be used to span any size stream, Tucker said.

Computer controls will activate a pump to move sediment from the collector to a storage area on the north side of the river.

"We are looking at putting the system from bank-to-bank across the channel. We are trying to determine what would be best ...not sure yet where to put it," Russell said.

Its low profile would not impede boat traffic in the relatively shallow river channel of the Momence Wetlands.

The device has also attracted attention because it offers an alternative to dredging or other disruptive sand removal systems.

Corps officials are now trying to determine how well the system would work during high flow periods on the river.

"If the flows gets really strong, we want to make sure the slots are big enough to work," Russell said.

Over the past year, the Corps has eyed various devices, including a sand collection basin and an eddy pump that would suck sand and water from the river.

Similar to a "wet vac," the pump would deposit sand on land for later removal while the water would return back to the stream.

"They are looking at all the alternatives to removing sand as it enters Illinois," explained J.R. Black, chairman of the Kankakee River Basin Partnership.

Another option being considered would involve placing "some structure across the channel that the sand would follow," Russell said. "The current would push sand into a trough that would run at angle back upstream."

Among the challenges that face sand removal near the state line is the need to minimize harm to nearby homes and fragile ecosystems.

"Nobody wants to cause flooding or destroy any more habitat simply to solve the problem," Black said.

"I'm pleased with the care and attention the Corps has given so far. It takes time to study something this complicated.

Still the state line project seeks only to remove incoming sand. It does not directly address removal of existing sand.

Black believes devices like the eddy pump may be one solution. But the pump can only be used in areas where there is room to store sand and water and access to truck the sand away.