



Journal/Bill Byrns

LOOKING EAST from the Illinois state line provides a ment. At right, a stream of sand flows into Illinois dramatic view of the Kankakee River in Indiana. At down the channelized main channel of the river, left, in the photo above, is the original river bend, Illinois is considering a sand removal project in now little more than a backwater clogged with sedi- Indiana to help capture sediment in Illinois.

Sand solutions may lie in Indiana

Work in both states is critical to reducing Kankakee River load

By Bill Byrns 4-19-02
Journal writer

Stand at the State Line Bridge and look east along the altered Kankakee River in Indiana and you begin to realize the scope of the problem.

Stopping sand here is not just an Illinois problem. The river and its sand are primal forces now locked in mortal combat.

Shaped by glaciers and altered by man, the river has always baffled those who have tried to control it or change its ways.

So it's no surprise that the river has again defied a technological solution to sand control at the Illinois state line.

"It's a very complicated issue," said Stream Biologist Jim Mick who coordinates the state's Illinois River Basin project for the Kankakee and Iroquois watershed.

"At the state line, we and the (U.S. Army) corps have looked at trying to remove or collect sediment with a passive system rather than by dredging.

"As we started the project we tried to test numerous ideas. Our plans have changed, we've had to rethink the problem as we learn more about sediment transport."

In a nutshell, the corps has learned that a passive system such as the Wedge, a sand collector tested last fall, is not cost effective nor will it significantly stop the flow of sand into Illinois.

"We've learned that the main steam of the Kankakee is not the sole source of sediment. Tremendous concentrations of sand are also filling in the backwaters at the state line and at the Mokense Wetlands."

The volume of sand has grown



Photo courtesy of the IL Dept. of Natural Resources

A VIEW OF LANGHAM, top, and Willow islands at the Kankakee River State Park shows how sediment buildup which created the island has also dramatically widened the main river channel. On either side of the island riffles are visible as the current speeds up where the river flows through a narrower channel.

to the point where the peak flows have decreased and annually flooding is no longer enough to clean out the sand and silt deposits.

"There is 25,000 cubic yards of sand passing the state line every year as bedload," Mick told members of the Kankakee River Basin Partnership last week. "Ten thousand cubic yards of that is excess sand."

"If no action is taken, the river between Mokense and Indiana will lose about two feet in its deepest pools and about six inches on average along the entire channel over the next 40 years," Mick said citing the latest corps models.

River profile studies by the

State Water Survey also show that during low flow, "the average depth between Mokense and the state line averages less than three feet in pool area," Mick said.

The findings are ominous for walleye recovery on the Kankakee.

According to the Fish and Wildlife Service, walleye require at least four feet and preferably five feet of depth in pools during low water times of summer.

"It's not hard to see the problem," Mick said. "It's logical to assume that shallow pools in summer low water times have caused the general decline in walleye.

"A passive system like the Wedge can only capture between 10 and 20 percent of that excess sand load," Mick said. Factor in the cost to truck away sand and the project could run up to \$250,000 a year — a heavy burden for a state already facing a fiscal crisis.

Mick doubts that more aggressive sand removal methods such as dredging alone would make much of an impact.

"Hydraulic removal will allow us to get only about 20 percent of the excessive load in Illinois. That's not much better results." Taking out 20 percent of the excess sand at the state line would only affect the river for 50 yards or so downstream, Mick said.

"What the corps studies show is that it is necessary for us to do work in Indiana in order to capture more of the excess bed load before it gets to Illinois."

Hydraulic methods such as eddy pumps or valve pumps are less expensive sand removal systems costing around \$30,000 a year.

"But we cannot do it only in Illinois. We need to work on the river in Indiana and on the Singleton Ditch in order to be effective," Mick said.

Planning for a bi-state project is already in the preliminary stages.

Jack Nelson, president of the Indiana Kankakee River Basin Commission, said his agency met recently with the corps and with Indiana Congressman Peter Visclosky. D-Merrillville, to enlist his aid to fund river projects.

KRBC is also looking for sites where bank erosion and buffer strip projects could be effective.

"Because channelization has changed the slope of the river, the flow on the upper Kankakee is now incising (cutting) the banks and resulting in massive bank failures," Mick said.