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Kansas scientists are testing jacuzzi-like water jets to save a reservoir

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Heard on All Things Considered

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FROM  KCUR 89.3

What if jacuzzi-like water jets could save a lake or make sure reservoirs stay full of drinking water? Scientists in Kansas will test this as they work to prevent a reservoir from filling up with mud.

MARY LOUISE KELLY, HOST:

In times of flood, reservoirs across the country provide protection. In times of drought, they ensure a supply of drinking water. However, many of those manmade lakes are at risk of disappearing. The U.S. Army Corps of Engineers has a plan that could help, and it is using a reservoir in Kansas as its test. Celia Llopis-Jepsen of the Kansas News Service reports.

CELIA LLOPIS-JEPSEN, BYLINE: Half of Tuttle Creek Reservoir in Manhattan, Kan., is just gone. It filled up with silt, soil washing off farms like this one upstream, where Kansas is trying to slow the erosion.

ANDY KLINE: One farmer nearby said, I wish we could have done this project 15 years ago because I've lost about 15 acres of cropland.

All right. Keep going.

LLOPIS-JEPSEN: Andy Kline works for the Kansas Forest Service. He plops thousands of acorns and walnuts into the ground for a thick buffer of woods between the river and the cornfield. Three and a half football fields worth of dirt piled as high as the Empire State Building pour into this reservoir each year. John Shelley is with the U.S. Army Corps of Engineers.

JOHN SHELLEY: If something is not done, then there won't be water during, you know, major drought periods. There just won't be water.

LLOPIS-JEPSEN: Topeka and parts of the Kansas City Metro depend on this reservoir during times of drought. But reservoirs in Kansas and throughout the country are filling with mud. So the Corps will try a new twist on a technology called water injection dredging, using it to create an underwater mudslide.

ADMIN HUSIC: Yeah, you can kind of imagine it as sort of like - kind of like an avalanche.

LLOPIS-JEPSEN: Admin Husic is professor of water resources at the University of Kansas.

HUSIC: And I think if Kansas were to approve this as a successful concept, it would be a big jump forward.

LLOPIS-JEPSEN: Here's how it would work. Tuttle Reservoir has exit gates at the base of the dam. Engineers want to flush mud through those gates. So they'll lower pipes down to the lake bed and pummel it with water, like turning on a Jacuzzi, because the lakebed slopes downhill, so they hope the mud will slide down to the dam, out the exit and into the river. This worries Amy Burgin. She's a scientist at the Kansas Biological Survey.

AMY BURGIN: Rivers are not pipes. They're active biological communities.

LLOPIS-JEPSEN: Federal engineers have tested the lake mud for farm chemicals like pesticides and feel confident it is not a risk to the Kansas River. But Burgin is not

convinced.

BURGIN: This will impact water quality. And how that reverberates through the system is unknown.

LLOPIS-JEPSEN: Too much mud at the wrong time of year could hurt river life. Heidi Mehl agrees. She works for the Nature Conservancy in Kansas.

HEIDI MEHL: You know, a large slug of fine sediment can really choke fish habitats and affect their breeding success.

LLOPIS-JEPSEN: Still, Mehl says getting the mud moving again might be good since many plants and animals need cloudy rivers to thrive. Plus, dams throughout the country are holding back mud that used to flow freely and replenish eroding land. And if existing reservoirs fill up with too much mud, that could lead to other environmental problems.

MEHL: We're likely going to see proposals for new dams and new reservoirs, which would mean new valleys flooded, lands and towns lost.

LLOPIS-JEPSEN: The Corps starts its reservoir pilot test next year and will keep watch for any negative effects downstream. A promising result could prove to be a lifeline for some shrinking reservoirs in Kansas and elsewhere. For NPR News, I'm Celia Llopis-Jepsen in Manhattan, Kan.

(SOUNDBITE OF LIL WAYNE SONG, "SHOOTER FT. ROBIN THICKE")

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