

High Court Asks Army Corps To Measure Value of Wetlands

A divided Supreme Court wants the government to adopt rules on which wetlands deserve federal protection, but scientists say they all matter

Which wetlands are important enough to protect? That's the question the U.S. Supreme Court put to the U.S. Army Corps of Engineers last week when it ruled on two Michigan cases involving wetlands that property owners wanted to develop. The answer, which will require the corps to define more precisely its jurisdiction under the Clean Water Act, will have ramifications for wetlands across the country.

The 1972 act requires landowners to get a permit for certain actions that might harm wetlands. The corps has claimed an expansive reach that covers any wetland from which water eventually drains into larger lakes and rivers. But on 19 June, in *Rapanos v. United States*, the Supreme Court told the corps that's not good enough. For wetlands that aren't next to a navigable river, the key opinion said, the corps should draw up criteria to determine whether they provide significant enough benefits for clean water downstream to be regulated. "It is a critically important decision for our nation's waters," says ecologist Judy Meyer of the University of Georgia, Athens.

The diversity of wetlands makes that task a tough challenge. Meyer and other scientists fear that more-complicated regulations could translate into less wetlands protection, as developers could lobby for some kinds of wetlands to be left out of the rule. In the meantime, lawyers are likely to have a field day as the corps struggles to interpret the Supreme Court's decision on a case-by-case basis.

The lead plaintiff in the Michigan cases, developer John Rapanos of Midland, argued that the corps had no jurisdiction because the wetlands on the contested property were 32 kilometers from navigable waters and connected to them by a mere ditch. Four justices rejected the corps' argument that it can regulate wetlands adjacent to any tributary of navigable water, with Justice Antonin Scalia writing that the corps could only regulate wetlands with a continuous surface connection to "relatively permanent bodies of water." Four other justices took the opposite view, arguing that the corps' existing jurisdiction is reasonable.

That tie set the stage for Justice Anthony

Kennedy's decisive vote. He agreed with Scalia that the two cases should go back to the lower courts for further consideration, but he said the corps should have jurisdiction over any wetlands that provide a significant benefit to the "chemical, physical, and biological integrity" of downstream waters. Those whose contributions are "speculative or insubstantial," he wrote, should be outside the corps' purview.

The corps has aimed for rules that are relatively simple and easy to interpret. To decide whether a particular locale falls under its jurisdiction, for example, it has relied upon aerial photographs or topographic maps showing how surface water moves from that wetland to navigable waters. Likewise, the new rule will need



No limits. Scientists say a new rule should cover even small wetlands, like this Michigan fen, that excel at cleansing water.

to be "easily understandable for the corps analysts and the permittees," says Richard Ambrose, a wetland ecologist at the University of California, Los Angeles. "If you make it too complicated, it will be paralyzing."

But wetlands—and their functions—resist easy categorization. Their impact on water quality varies by location and other factors; wetlands near an agricultural field, for example, will likely process more nitrate and retain more sediment than wetlands near a pristine forest. And relatively undisturbed wetlands are likely to increase biological diversity in downstream waters, a factor the Clean Water Act is meant to protect. Water levels and flows also vary enormously, ranging from drenched cypress swamps to ephemeral vernal pools. Wetlands in

the arid west pose a particular conundrum: When water flows only irregularly, what metrics should be used?

Scientists say rough indicators exist to determine *whether* a wetland is having a positive impact on water quality. Joy Zedler of the University of Wisconsin, Madison, suggests looking at water birds and other aquatic wildlife, the potential to trap sediment and reduce floods, and other factors that can be readily seen or inferred. But those indicators don't answer what Justice Kennedy most wants to know: Which wetlands have enough of an impact on the integrity of waters to qualify for protection? "It is difficult to draw a bright line that works in the practical world of regulation," says wetlands scientist Barbara Bedford of Cornell University.

Even tiny wetlands, like those in headwaters and along small streams, can have a large cumulative impact, studies have shown. A weak current is better than larger streams at trapping silt that would otherwise degrade habitat for salmon and other fish. A slow flow also means that microbes have more time to convert excess fertilizer and prevent downstream algal blooms. In an experimental study published last September in the *Journal of Environmental Quality*, Stefanie Whitmire and Stephen Hamilton of Michigan State University, Hickory Corners, showed that small wetlands in southwestern Michigan were responsible for half of the nitrate removal in the watershed. These benefits diminish when the wetlands are degraded, scientists say.

The corps says it's reviewing the decision and declined further comment. Observers expect the agency to start work right away on interim guidance, although it could take a year or longer to issue a final rule. Until a rule is in place, the courts will proceed case by case. And so will the corps, which each year reviews about 85,000 requests for permits.

Reed Hopper of the Pacific Legal Foundation, which represented Rapanos, has already claimed victory. "The court rejected the idea that there are no limits on the federal government's regulatory authority under the Clean Water Act," he said in a statement. "It is not the role of the federal government to micromanage every pond, puddle, and ditch in our country." But environmentalists say that a seat-of-the-pants approach offers great potential for mischief. "It's an invitation to development interests to contest the corps' authority over wetlands," says Jason Rylander of Defenders of Wildlife in Washington, D.C.

—ERIK STOKSTAD