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Troubled waters

President Trump's regulatory-reform agenda threatens the US government's Clean Water Rule. This regulation is grounded in science and should be strengthened, not repealed.

ast week, US President Donald Trump signed another executive order to advance his "regulatory reform" agenda. Building on an earlier demand that agencies dump two regulations every time they issue a new one, the policy requires government officials to assess federal rules and recommend ways to repeal, replace or modify them. What all this actually means is anybody's guess at this stage. One of the first major environmental regulations to be singled out, however, is the Clean Water Rule, a policy developed under former president Barack Obama to clarify which water bodies receive federal protection under the 1972 Clean Water Act.

The Waters of the United States rule, as it is also known, was designed to provide something that Republicans often say they want: regulatory certainty. And although it does definitively protect many wetlands, ponds and seasonal streams, it also excludes some that have been covered in the past — which helps to explain why many environmentalists have objected to it. If a sign of a good policy is that both sides complain about it, then this was excellent. The rule attracted dozens of lawsuits claiming that it exceeded the federal government's authority, and it was blocked by a federal appeals court pending the outcome of litigation.

At issue is an old political question with deep roots in science: where does the US government's authority to regulate water resources give way to that of the individual states? Interstate commerce falls under the purview of the federal government, and the courts have interpreted this to mean that the federal government has jurisdiction over navigable waters. The Clean Water Act rightly extended this coverage to water bodies such as wetlands, but the courts have ruled that there are legal limits to this: not all waters are waters of the United States.

Where this fluid line is drawn has real-world consequences for everything from farms and golf courses to energy exploration and housing developments. Where the US government is in charge, landowners and companies need permits for a host of activities. The US Environmental Protection Agency (EPA) and the Army Corps of Engineers — a federal agency involved in civil engineering and environmental regulation — have been processing these permits for decades, but new questions arose when the US Supreme Court waded into the debate more than a decade ago. The court said the agencies needed to prove that there was a "significant nexus" between landlocked waters and navigable waters in order to claim jurisdiction, but no clear definition was provided. As a result, lawsuits challenging the agencies' decisions kept coming.

Under Obama, the EPA and the Corps of Engineers attempted to create regulations to settle the issue. In January 2015, the EPA released a 400-page assessment documenting the full array of hydrologic, biological and chemical interconnections between isolated water bodies and their adjacent streams and rivers. Examples abound: contamination at the surface can migrate into shallow groundwater and reemerge in a stream or pond somewhere else. Even seasonal water bodies can be crucial resources for plants and wildlife, and wetlands can provide protection from flooding and erosion.

The agencies issued their final rule in May 2015, creating simple criteria to determine which waters are covered by the Clean Water Act. For instance, water bodies within about 30 metres of a high-water mark of a tributary are included, as are any waters within about 450 metres of the high-tide line in tidal regions. In all cases, these limits are conservative; if anything, they should be increased. The Corps of Engineers made

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this quite clear when it raised concerns with the EPA about losing jurisdiction over water bodies it has long governed.

It's clear that, under Trump, the Clean Water Rule's future is murky at best. One of the parties who sued the EPA to block the rule was none other than Scott Pruitt, the former Oklahoma attorney-general who now heads the agency. As *Nature* went to press, Trump was expected to sign an execu-

tive order clearing Pruitt to begin the long process of rewriting the rule. The administration would be within its rights to do so, but cannot change the science. Tampering with wetlands and other inland waters has downstream impacts that must be addressed when making decisions about land use, and the government has a role in this. To pretend otherwise would be to sell the US public — and its environment — down the river. \blacksquare

Counting people

All involved should acknowledge that global migration statistics are a mess.

ata and statistics must be handled with care. The pages of this journal — and thousands of others — are filled with reports and analyses that are only as strong as their weakest data set. So when the European Union's border guards issued an exaggerated estimate of migration figures for the first nine months of 2015, it's perhaps no surprise that it was an academic who called them out.

The headline "710,000 migrants entered EU in first nine months of 2015" blared from a press release that year by Frontex, the European Border and Coast Guard Agency in Warsaw. Not so, said social scientist Nando Sigona, an expert on refugees and migration at the University of Birmingham, UK. Frontex, he pointed out, had been counting the same people two or three times or more — for example, a person who was recorded on arrival in Greece and left the EU by going to Albania was again counted on re-entering the bloc by a different route. Frontex has since made this caveat clear in its releases