Last Friday, the Fourth Circuit halted efforts to build a natural gas pipeline because the Administration had done such a lousy job of showing its compliance with the Endangered Species Act. This was one of the Administration's many losses in court. The case involved a perfect example of "arbitrary and capricious" decision making, to use the legal terminology. In simpler terms, the government's explanation for its decision was as full of holes as a sieve. This was such a textbook case, I'll be surprised if the court's opinion doesn't make it into one of the environmental law casebooks.

The case, *Defenders of Wildlife v. Dept. of Interior*, was actually back before the Fourth Circuit for the second time. In 2017, the U.S. Fish & Wildlife Service (FWS) issued a Biological Opinion saying that the project wouldn't jeopardize the survival of three endangered species but requiring the project to avoid disturbing portions of the land. About six months later, the Fourth Circuit ruled that the FWS had failed to explain why they couldn't place numerical limits on the number of animals killed, which is the preferred approach. The FWS then went through a whirlwind revision effort and completed its response in under three weeks. (More about that later.) It went back to the Fourth Circuit. This time the outcome was even worse for the agency.

For simplicity, I'm going to talk about just one of the species, the Rusty Patched Bumble Bee or RPBB — partly because it's the most accessible part of the court's opinion, partly because for some reason I happen to like bumble bees. The RPBB used to be widespread, but their populations have fallen over 90% since the late 1990s. It's now so endangered that every bee population existing is important to the survival of the species. A bee had been found in the general area, and based on the habitat preferred by this species, the FWS concluded in 2017 that there might be some nests near the proposed pipelines. Not too much is known about the RPBBs in particular, but FWS made some assumptions about how big the colonies might be (100-1000 bees) and how many nests would be likely. By the time that the FWS considered the issue again in 2018, however, the pipeline owner had had some very bad luck. Three more bees were found closer to the pipeline right-of-way. The FWS did some more calculations based on the larger area now thought to contain the bees, and concluded that there were probably 22 nests, each producing 30 queens that live through the winter to start a new nest in the spring.

All of that sounds very scientific, yet it was based on very shaky assumptions. Normally, the FWS would have done a survey to find out just how many nests were in the area. But not in this case, because they were told to move quickly. As one staff member wrote, "Our internal direction is that we can't require surveys and will not make further requests for surveys that interfere with applicant's project schedule since they are priority fast-track projects, and we will not state that we have insufficient information to initiate consultation and will not delay

initiation of consultation based on lack of baseline/species survey data." ("Consultation" sounds very collegial, but it actually means that the FWS decides whether or not to halt the project.). And the numbers that FWS used instead of doing the survey were dodgy. For instance, they assumed that there would be 30 queens per nest, but in recent years no one has found a nest with more than 30 bees including workers, drones, and queens. The University of Minnesota researcher whose studies provided the basis for the estimates said in an email to FWS, "all I have is a wild guess based on what I've seen in other captive and retrieved wild colonies."

Not surprisingly, career wildlife experts at FWS weren't exactly thrilled about all this. An internal email said that the FWS's work was out of step with its handbook and much more superficial than usual. The author added, "but we can get by that with my excessive wit, charm, and grace." The court apparently missed the irony that was probably intended by the author, saying, "Wit, charm, and grace, however, do not make for sound agency action." There were some other problems with agency's analysis regarding the bee, but I won't burden you with the court's discussion of those.

Some of the problems with the agency's decision to approve the project were probably simply due to the fact that it was a very hard decision to justify given the stringent protections created by the Endangered Species Act. But part of it was undoubtedly due to the incessant pressure to make a quick decision. That's not limited to this one decision or the FWS. For instance, EPA Administrator Wheeler announced last week that EPA was going to skip the normal consultation with an expert scientific board in its haste to wrap up new air quality standards for particulates by 2020 (or in other words, before Trump's term ends). The scientific issues there are far more complex, and EPA's haste is increasing the odds that it will blunder badly in its analysis. Which is OK with me, but may lead to the same result: a reversal in court.