Last week's New York Times Sunday magazine had two interesting articles that have relevance for environmental law and policy, specifically about how environmental law deals with uncertainty.

The first one has an obvious connection: It's about Arlene Blum, a chemist (and mountain climber!) who is leading a campaign to end a legal mandate that requires all upholstered furniture in California to contain fire-retardant chemicals, chemicals that might have significant adverse health risks. Because of the size of the California market, and the economies of scale in furniture manufacturing, the California mandate effectively applies to all furniture sold in the United States.

What was fascinating to me was the use of uncertainty in the policy debates over whether to repeal the mandate. Environmentalists have been regularly accused of resorting to scare tactics in calling for the removal or banning of chemicals. There is (almost always) significant uncertainty about whether a particular chemical causes cancer or other harmful effects in humans, but critics have alleged that environmentalists gloss over that uncertainty, play up the risks, and ignore the nuance in the debate. Perhaps the most notorious example of this was the debate over the use of the chemical Alar on apples in the 1980s. Environmentalists made this a cause celebre, causing the chemical to be removed from the market, but later analysts and scholars have argued that the scare was seriously overblown.

In this case, the uncertainty cuts both ways. We have uncertainty about whether the chemicals might cause adverse health effects. But there is also significant uncertainty about how effective (if at all) the chemicals are in retarding fire and saving lives, at least given how they are currently used in the furniture. The scientist who conducted the research that was the basis for the mandate eventually switched sides and supported Blum, arguing that his research was taken out of context. Lobbyists for the chemical manufacturers made extreme claims in testimony about the lives of children that had been saved by the chemicals; the heart-rending stories were apparently enough to sway legislators, but follow-up investigation raised claims about whether they were true.

The lesson here is that uncertainty is a tool that all sides use in these debates, and it will inevitably be used for political ends if one side (any side!) sees an advantage in it.

The next question is why is uncertainty so useful in these debates as a political tool. And that leads to the other article by Nate Silver (who does election forecasts for the Times) about weather forecasting. Silver's main point is that weather forecasting has gotten a lot more reliable over the past few decades because of a thoughtful combination of human

judgment and high-powered computer models. But Silver also makes a point about uncertainty in the article.

Weather forecasters deal with uncertainty all the time, of course. The question is how to present that uncertainty to the public. Historically, the National Weather Service tended to downplay uncertainty, giving more precise estimates. For instance, when the Service was concerned that a hurricane might hit a major population center, the Service would provide a relatively specific warning without a lot of nuance. On occasion, that meant that the Service was perceived as "crying wolf" but it felt otherwise that its warnings would be ignored.

Recently, the Service has changed its position, concluding that people can handle uncertainty and it is better to be up front about it. Thus, projections of future hurricane paths that the Service produces now have a "cone of uncertainty" that depict a general range where the hurricane is most likely to go, rather than a precise path.

The Service's efforts here are consistent with what scholars in environmental law and policy have been calling for agencies to do – make the uncertainties in predictions and assessments clear for the public, so that the policy judgments of the agency based on that uncertainty can also be clear.

But the Service is not the only player in the weather game. Lots of people get their weather information from private sources, like The Weather Channel. And while those sources frequently rely on the underlying data and projections from the Service, they usually put their own spin on them, in part to compete for attention from the public. And it turns out that one of the more important spins that these private providers place on their data is to reduce uncertainty, and provide more precise estimates – because they believe that is what the public wants.

So the lesson for environmental law and policy might be that efforts to make uncertainty clear are not necessarily going to be popular with the public, which likes clear and simple information. And this would also explain why it is so appealing and effective for interest groups to downplay uncertainty in their rhetoric, and play up how the data clearly establishes their position in the public policy arena. Whether there's anything we can (and should) do about this is a topic for another day.