

Author's Introduction

2026-2027 Edition

This annual update offers an overview of novel technologies and legal challenges that are raising new issues in the prevention of product liability. Such liability can arise from personal or property injuries, environmental remediation, or costly recalls. Fortunately, these risks are also amenable to management through proactive assessment and management of knowable hazards. With increasing knowledge comes the expectation for what is “foreseeable”—this becomes ever broader as the “state of the art” encompasses new fields from epigenetic toxicogenomics to barely foreseeable economic impacts from emerging technologies marketed with US regulatory approval, but not approved for export to major overseas markets. New risk management tools are arriving with the emergence of advanced knowledge systems like artificial intelligence. These tools will yield more precise analysis of product liability threats. Liability metrics will be more widely used in industries to predict and prevent emerging tort liability, and sustainability initiatives will reduce liability risks over time.

In agricultural biotechnology, 2026 once again saw massive tort liability potentially coming home to roost with genetic editing in agriculture potentially raising mass tort class action. Legal decisions in any future case could redraw boundaries of tort liability for economic impacts to allow recovery for distant but arguably foreseeable economic impacts of negligent conduct involving every new technology from nanotechnology to artificial intelligence. The parties to the Biosafety Protocol are calling genetic editing a form of “synthetic biology” and more parties to that treaty will follow the EU’s lead to regulate this technology in more countries than just the EU as time goes on. These overseas approval requirements raise trade barriers that could lead to mass tort liability after markets are negligently disrupted. While nearly all biotech seed companies recognize the risks of not having major market approval, it is now clear that US regulatory approval of biotech crops will not preempt state tort law. In the aftermath of Syngenta’s various lawsuits with growers and grain traders, all biotech seed companies and particularly genetic editing companies will be potentially liable for failing to secure approval in many major overseas markets. To date, however, no mass tort liability suits have been filed against any genetic editing company.

Even more alarming is the threat of litigation and regulation of PFAS-etc. (various poly-fluorinated compounds). This edition

has a new chapter entirely devoted to PFAS. Rough estimates of potential liability go as high as \$17 trillion per year in costs. Another published estimate projects that the global GDP of \$106 trillion would be needed to remove all PFAS. This PFAS cleanup issue will stand as the most preventable and perhaps biggest mass tort in the history of litigation. With a potential superfund listing two of over 20,000 PFAS and Clean Water Act NPDES permits issuing, the EPA is starting to regulate PFAS. As this unfolds, the costs of environmental remediation could skyrocket. Litigation over the health effects of PFAS could go on for years to come. A 2025 study found none of the cancer risks identified by the historic C8 joint expert group were actually reproduced in subsequent study. The only study finding a health effect under current science was on childhood obesity. More study will be needed to document the health effects of PFAS.

Climate change lawsuits around the world are increasingly meeting judicial acceptance, as liability for climate change rapidly evolves in various jurisdictions. The first judicial decision in Montana points toward a future where costs will escalate, with the Supreme Court of Montana affirming this historic decision in December 2024.

The world is getting ready for the widespread launch of unmanned autonomous vehicles on highways worldwide, with more deaths being reported from use of a new driving technology that will ultimately lead to a significant reduction in driving-related deaths and disability. Uber and other ride services, along with trucks on the highway, are starting to enter US roadways. Globally, agriculture is using robo-tractors and drones, while struggling to keep the “big data” generated thereby safe from prying eyes. These new tools will potentially reduce liability risks while posing a challenge to regulators and consumers (widespread acceptance of autonomous vehicles remains uncertain). Using the risk management tools set forth in this book, manufacturers of unmanned vehicles can avoid undue exposure to enterprise-threatening liabilities.

The novel technology of editing the genes of human beings, like all emerging technologies, poses liability risks once it becomes commonplace and not banned worldwide by agreed ethical standards. Industry conferences have addressed liability standards, and tools are available to manage liability for negligence or strict liability for the genetic editing of a new child.

What’s New in the 2026-2027 Edition:

- Regulation of germline editing in the U.S. and other countries varies, leaving open the possibility of privately-funded genetic editing of human embryos. [See § 24:30]
- Microplastics liability continues to gain momentum in environmental and product litigation, with potential claims span-

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ning public nuisance, product liability, and false advertising. The liability risk for microplastics is expected to grow as scientific evidence accumulates linking microplastics to human health effects. [See § 27:4]

- Disputes over environmental damages from pipelines raise questions as to how nuisance claims interact with property rights and federal-state compacts. [See § 31:8]

- The regulation of artificial intelligence (AI) systems continues to loom large, as the U.S. administration declares its intention to harness these systems for American infrastructure and the EU considers legislation to govern them. [See Chapter 32]

- Concern over potential human-health impacts of PFAS chemicals is growing, prompting federal and state regulation, voluntary removal of the chemicals from such products as fast food, cleanup of contamination sites, and increasing litigation with a widening scope. As technologies to combat this “forever chemical” evolve, and scientific study uncovers the full health impacts of PFAS, courts must wrestle with a legal fallout potentially rivaling the magnitude of asbestos litigation. [See Chapter 33]

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