

Environmental Law

Expert Analysis

The Perils of Relying on FEMA Flood Maps in Real Estate Transactions

A standard part of due diligence before real estate transactions is ascertaining whether the property is prone to flooding. The usual method has long been to rely on the 100-year-old flood maps of the Federal Emergency Management Agency (FEMA).

Such reliance is highly misleading. FEMA flood maps can be seriously out of date. They also reflect only historic conditions, not future flooding as a result of sea level rise and extreme precipitation. Moreover, large parts of the United States are not mapped at all.

Fortunately, several private entities and a few local governments have begun providing flood vulnerability information that reflects anticipated future conditions. These allow lawyers, brokers and others involved in real

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estate transactions to give better advice to their clients about flood risks, and architects and builders to design buildings that are more resistant to floods. They will also assist parties in complying with emerging laws on the disclosure of flood risks.

Flood Insurance and Flood Maps

Congress enacted the National Flood Insurance Program with the passage of the National Flood Insurance Act of 1968. Owners were encouraged (and later, if they had federally-backed mortgages or have received federal disaster dollars, required) to buy flood insurance if their property was vulnerable to flooding. (Most homeowners' insurance policies do not cover flooding.) Renters can purchase contents-

only policies. FEMA, which now runs the program, decided that the best indicator of vulnerability was having a one in 100 chance of flooding in a given year (meaning there was a 26 per cent chance of flooding within the life of a 30-year mortgage); that is the meaning of a "100-year flood." So FEMA established the Flood Insurance Rate Map (FIRM) system to identify the zones where this degree of risk was present and therefore where flood insurance was required.

Falling within a flood zone might make a property harder to sell or reduce its sale price. New construction within the flood zone is regulated and restricted. If a pre-existing building in a flood zone undergoes major improvements or needs substantial repairs after being damaged, such that it is subject to current construction codes, it may be required to be elevated above the flood level. This is very costly. Over time, flood insurance rates within flood zones will escalate. Due to all these difficulties, owners and their elected representatives often fight FEMA's

mapping decisions, and the mapping process has become highly contested, often involving battles of experts.

Many FEMA maps are several decades old. FEMA has a program to update its maps, but its budget only allows it to proceed very slowly. Old maps do not reflect subsequent floods nor how conditions may have changed due to topography altered by human or natural actions; changes in precipitation patterns, river flows, sea levels and storm surge; and other factors.

The official Flood Insurance Rate Maps for New York City date back to 1983 and were based on a hydrologic model from the 1960s. They were digitized in 2007 but otherwise changed very little. FEMA released preliminary revisions in 2015 that approximately doubled the number of buildings in the flood zone. The city of New York hired an engineering firm to examine the new maps, concluded they had inaccuracies, and invoked a FEMA appeals process. FEMA is now preparing a new set of maps, which it expects to release in 2022. Meanwhile, the 2007 maps (pretty much the same as the 1983 maps) are still in effect for purposes of setting flood insurance rates and purchase requirements. The city relies on the 2015 maps for purposes of Appendix G of the Building Code, Flood-Resistant Construction. The city considers the projections of the New York

City Panel on Climate Change in its land use policy decisions and in environmental impact review.

Historic vs. Future Conditions

FEMA's flood maps are based entirely on past floods. Thus they are blind to future climate change. Congress recognized this when it rewrote large parts of the federal flood statute in the Biggert-Waters Flood Insurance Reform Act of 2012, and required FEMA to convene a technical advisory council to suggest how to revise the maps. Congress weakened this enactment in 2014 in the face of protests over the rising flood insurance rates it would cause, but the mapping provision survived. In 2015 the council issued its report with numerous specific recommendations. They have been largely sitting on the shelf since then, and Congress has not provided funding to implement them. For much of the Trump administration 16 of the 20 seats on the council were empty, and its work has been impeded.

Without accurate flood maps, many people are unwittingly exposed to floods. For example, in 2017 Hurricane Harvey damaged more than 204,000 homes and apartment buildings in Harris County, Texas (which includes Houston); almost three-quarters of them were outside the FEMA 100-year flood maps, leaving tens of thousands of homeowners uninsured and unprepared.

(Homeowners outside the mapped flood zones may still purchase flood insurance policies, but most do not.) In 2018 Hurricane Michael demolished 70% of the homes on the coast in Mexico Beach, Florida, in an area where FEMA said the flood risks were minimal. More than 20 square miles of the area of New York City that was inundated in Hurricane Sandy in 2012 was outside the mapped flood zone.

Map Coverage and Disclosures

While most coastal areas are mapped, roughly half of all the flood disaster declarations since 1990 were in landlocked states. Flood risk maps only exist for about one-third of the nation. A 2018 study found that almost 41 million people in the United States live in places with a 1-in-100 annual chance of flooding, but only 13 million live in areas on the FEMA 100-year maps. A 2020 study concluded that, due to inadequate disclosures about flood risk, homes in the United States that are vulnerable to flooding are currently overvalued by a total of \$34 billion, "raising concerns about the stability of real estate markets as climate risks become more salient and severe."

Many people buy houses or commercial property without knowing they are in the flood zone or have been damaged by floods. In all, 29 states have some sort of law requiring disclosure of flood risks to buyers, but these disclosures

often come only at the closing (at which time it's very hard to back away from a purchase), or are in the fine print that no one reads, or can be (and often are) waived if the seller pays a modest fee. Without legal compulsion or liability risk, real estate brokers have little incentive to make sure buyers are fully aware of flood risks, because that could kill a sale. A bill now pending in the New York Senate, S8439, introduced by Senator Brad Hoylman, would add information about a property's flood history and flood insurance requirements to the Property Condition Disclosure Statement; would end the usual option of allowing a seller to avoid disclosures by giving a \$500 credit to the buyer; and would require that some flood information be given to tenants.

Executive Order 13690, issued by President Barack Obama in 2015, provided that "agencies which guarantee, approve, regulate or insure any financial transaction that is related to an area located in an area subject to the base flood shall, prior to completing action on such transaction, inform any private parties participating in the transaction of the hazards of locating structures in the area subject to the base flood." President Trump rescinded this order in 2017.

New Sources of Information

In 2017 the New York State Department of Environmental

Conservation issued official sea level rise projections, as required by a 2014 statute. It is based on a 2014 study. In December 2019 Consolidated Edison (working with Columbia University) issued a Climate Change Vulnerability Study with the latest sea level rise, temperature and precipitation projections for the New York City area.

The New York City Department of City Planning has developed a website called the NYC Flood Hazard Mapper, which shows current coastal flood hazards, and those anticipated to occur in the future out to the year 2100 under several different climate change scenarios, based on the work of the New York City Panel on Climate Change.

The nonprofit First Street Foundation has a free website where one can enter an address and see its "flood factor" based on past floods, current risks and future projections. The nonprofit Climate Central and the for-profit Zillow have a free website called Surging Seas: Ocean at the Door that maps the flood vulnerability under various climate scenarios of many coastal areas of the United States. Several for-profit entities will, for a fee, generate customized reports about various risks such as flood, fire, heat and wind facing specified properties or entire real estate portfolios. These include Jupiter Intelligence, Four Twenty Seven, and Coastal Risk.

It is not yet standard practice in residential real estate transactions

to look beyond FEMA flood maps in examining flood risk. In contrast, sophisticated buyers of commercial or industrial property often use one of the commercial services that identifies the known locations of soil or groundwater contamination on or near the site, as acquisition of contaminated property could lead to a legal obligation to clean it up, or to liability to third parties. But no such obligation or liability is usually associated with acquisition or sale of property that is prone to flooding. Disclosure of the financial impacts of the physical risks of climate change is increasingly accepted in corporations' securities disclosures (though not usually at the property-specific level), but it is much less common for individual property transactions.

Climate change projections show that sea level rise and more intense precipitation will lead to much more coastal and inland flooding in the years and decades to come, making better mapping and fuller disclosures all the more important to everyone involved in real estate transactions.