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The Developing Climate: How Climate Change Affects the Development Industry

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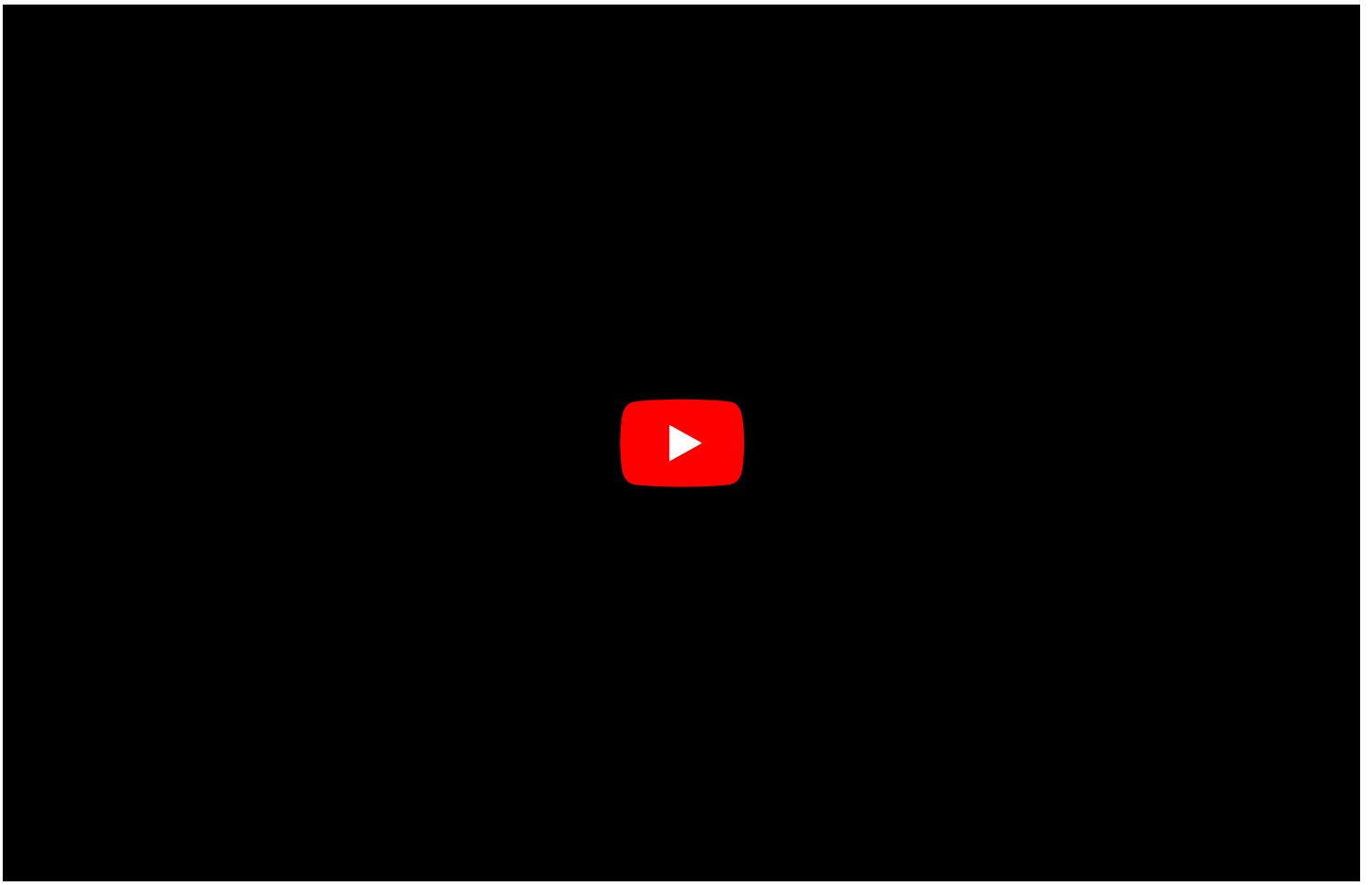

In this podcast, Ken Tinkler and James Parker-Flynn discuss what developers need to know about climate change and its impact on the development industry – now and in the future.

Transcript:

Ken: Hi, this is Ken Tinkler with Carlton Fields in the Tampa office. I'm a shareholder in our development industry group and my practice focuses on land use, environmental and permitting issues, elections, ethics, all sorts of interesting things in Florida. Our topic today is climate change and how does it affect the development industry. With me today is James Parker-Flynn, an appellate lawyer in our Tallahassee office. James, did you want to introduce yourself?

James: Hi, Ken, thank you for having me. As you noted, I am an appellate lawyer here in Tallahassee but additionally I practice in the environmental arena, both regulatory and litigation. I have an LL.M. in environmental law from Florida State and I've also done a fair amount of academic research, writing and teaching about climate change, law and policy so I am very excited to dig into this topic with you today.

Ken: And didn't you teach last semester at Florida State on environmental issues?

James: Yeah, I did. I co-taught a class on environmental law, this sort of broad survey-level class on environmental and we did a section on climate change, law and policy. I'm hoping to do that again this upcoming fall and in the past I taught a standalone seminar on climate change, law and policy over in FSU Law.

Ken: That's great. James, to start off, can you give us the high level take on what is climate change?

James: Yeah, so, climate change generally refers to a change in the state of the climate that we can identify, you know, through statistical measurements and it can and has changed over time for a variety of reasons. So it can change due to natural, internal processes here on Earth or from various external forcing's that come from outside the planet so for instance, there are slight changes to the Earth's orbit around the Sun that occurs cyclically, they can start to trigger a climate change, in fact, that's how most scientists believe we now think the ice ages start and end. But as is relevant to our discussion here today, we're talking about anthropogenic or human forced climate changes and that is changes to the composition of the atmosphere or to changes in our land use which have affected the atmosphere. So, just to break it all down into terms that might be a little bit more simple, since the start of the industrial revolution humans have burned a tremendous amount of fossil fuels which have added just a massive amount of greenhouse gasses, primarily carbon dioxide to the atmosphere. And additionally, we've made changes to our land use by destroying what we might call as carbon dioxide sinks, or things that would otherwise pull carbon dioxide out of the atmosphere. And the result of that, is that the concentration of carbon dioxide in the atmosphere has increased greatly, it's gone from about 280 parts per million to now over 400 parts per million and certainly will be increasing in the future. And so the result of that is that these increased greenhouse gasses prevent long wave radiation, or heat, from leaving the Earth. So what happens is short wave radiation

comes in from the Sun, some of that is bounced directly back out, some of that gets all the way down to the surface of the planet and is absorbed by oceans and the land and then some of that is reflected back out into space again. And the increased amount of carbon dioxides are preventing more and more of that long wave radiation from leaving and this has left the Earth in what we would call an energy and balance, there's more energy coming in than leaving and so until that balances is itself, the Earth will continue to heat. It will start to exert more and more heat to try to get more long wave radiation out. And so, as the Earth warms, various parts of the climate system change as a result, so we see changes not only to the temperature of the air around us and to the temperature of the oceans, but we also see changes to the hydrological cycle and other changes to wind patterns and things like that and those are things that then, separately, impact a number of the natural and human built systems on the planet.

Ken: I appreciate you summarizing the science in that direct of fashion, that's very helpful, I think, for folks to think about this from very simple terms, in terms of how heat is trapped and how heat escapes. If you're a professional working in the development industry and obviously you hear a lot of things, a lot of noise about the politics and mixed with the science, what do they really need to know about climate change?

James: Well for the development industry, I would say that they need to know a few things; first they need to know that the way that climate change itself will impact their developments, right? So that's sort of the first thing that we talk about and there are a number of climate change impacts that will impact development, some of the biggest ones are pretty clear so as the climate changes one of the things that we're seeing is more intense hurricanes, we're not yet sure whether we're going to see more hurricanes generally but we do know that the intensity of those hurricanes is increasing due to warmer ocean temperatures. And so, warmer ocean temperatures are driving stronger and stronger hurricanes, stronger wind, additionally, because sea levels are rising as a result of climate change. We're seeing greater and greater storms surge from hurricanes and because of the increased temperature in the atmosphere, we're seeing more humidity which provides hurricanes more chances to accumulate and distribute rain, in the form of really heavy precipitation. And so we see these more intense hurricanes that can sort-of hit land, right? And impact developments that are either being built or that have been built in a number of ways through wind damage, through flood damage, either from storm surge or what we often call compound flooding where there's intense rain events and you have basically riverine flooding that is coming at the same time as storm surge is coming into those rivers and it causes massive inland flooding. And then you'll get events like Hurricane Harvey and Hurricane Florence where they're just dropping tremendous amounts of rain, so even where there's no riverine flooding or storm surge flooding, you might see flooding.

But even aside from hurricanes themselves, there's a number of impacts to developments that can occur. So there are flooding events that would happen absent of hurricanes so that's just where areas are now seeing more and more heavy precipitation events. So rain is coming in more and more

intense downfalls that is certainly something that can impact development. We're seeing the temperature rise, which can potentially structural issues with new developments in the way that they're being built. So there's a number of ways that the actual impacts from the climate changing itself can affect developers and development and they need to be aware of that. And they need to be aware of the science behind the engineering and everything else and how they're going to have to change those practices, to keep up with a climate that is going to continue to change. There's not sort of a new base line established that we can just say here's what you need to do now, they'll have to follow those trends to make sure as we move on into the future and as things continue to change, the developments that they create are not only ready for today but ready for a different baseline that we'll be seeing in 20 years, and then 50 years and 100 years.

Additionally, developers have to really be aware of the regulatory changes that are occurring or that are almost certain to occur in the future as a result of climate change. So the ways that it will impact their industry and there's a number of ways that could happen, changes to permitting regulations, changes to land use and zoning regulations, there could at some point be federal statutes related to this. So there are a number of different things that may impact developers and they sort of need to be aware of as much of that is relevant to their specific area.

Ken: Well it sounds like each of the players involved in the development project is going to be impacted, that their profession is going to change over time. What comes to mind first is we're always worried about, how we going to finance and insure our project and how do you see that changing as time is going on here?

James: That is a very hot topic of research but obviously it's going to be very important for developers because they need to able to not only insure their projects but the people that they sell to are going to need to be able to get insurance for those things which will affect all of this. And what we've seen with climate change in this sort of insurance market is that we think it's already having a tangible impact and will continue to do so. And the most glaring example of that is flood insurance and we're located here in Florida, so it's highly relevant for us. But for instance the national flood insurance program, which is one of the primary providers or at least primary mechanisms of getting flood insurance to, you know, protect yourself against these massive flood events. What we're seeing with these greater and greater hurricane events is a greater and greater burden on the national flood insurance program, so such that its run into debt issues and president Trump in 2017, I believe, had to essentially forgive a substantial amount of that debt. And so as a result, as these areas that are being developed are becoming more and more flood prone, the insurance premiums if they haven't already increased, which in many places they have are more likely to continue to increase pretty substantially over time to ensure that there's a big enough pool of money to pay out some of these catastrophic losses that we see.

Additionally, as the flood maps change and right now the FEMA flood maps are a little bit outdated, I think most people would agree, they're based on flood scenarios from decade's old information that really isn't relevant anymore. As those maps change in the future, more and more areas may be classified as, you know, sort of high risk areas and once they're in those areas, those places are required to have flood insurance. And so you may see development in areas that previously was considered low to moderate risk move to high risk and now all of sudden flood insurance is required.

Additionally, financers may themselves require flood insurance and so the premiums are starting to go up as the sort of damage from climate change, not only in these catastrophic events but other events increases, and their payouts increase, they're starting to increase premiums. And as a result that will affect what a developer may pay or what the user may pay. But what I think we might also see in quite a lot of high risk areas is insurers that are just no longer willing to insure in those areas which could really hinder the ability to develop them whatsoever to get financing for that. So, the insurance industry is something that all developers will really have to keep an eye one moving forward as it's a very fluid situation right now but, I think that the trend is clear, that premiums are going to go up, some areas will essentially become uninsurable, particularly if we see the worst impacts of climate change that have been projected by the various reporting groups.

So, that is something to keep in mind and additionally, last caveat, there's a study out from Harvard, I think last year, that showed that in Florida, the lower elevation home values were increasing at a lower rate than higher elevation home values. And, so we're already seeing that sort of getting baked into the market itself which mean financing for development in some of those lower elevation areas may just start to disappear. Those home values are still increasing but they're not keeping up at the rate that the higher elevation homes are so we may see less development in those areas simply as a matter of market choice where people are baking this into their decisions about where they want to build and where they want to buy because they don't necessarily have to deal with floods that require them to repair or rebuilt their homes every decade or two or whatever it may end up being.

Ken: And thinking about our office footprint it seems like New York and Connecticut have had as many, if not more, of these storm events than we have in Florida and obviously California has had its own unique challenges.

James: Yeah and I think that's, you know, really good point when you look at the sort of New York area, you know, you don't have to be down here, sort of near the tropics where we are. Up in New York with both hurricanes Irene and Sandy or which at the time they hit were no longer hurricanes, but because of that sea level, you get stronger and larger storm surges in these big storm events, they can drive inland of course flooding and storm surges really tends to be most destructive part of hurricanes is the part that tends to effect a large area. And so, yeah, you don't have to be in what you would consider hurricane prone area to really experience really intense disastrous flooding and we've see that not only as a result of these big storms but we've seen it in places like Nashville and

recent years and Atlanta where just massive rain events in a very short amount of time have led to exceptional riverine flooding or other types of flooding, that are causing people to have to repair and to rebuild. And so again, a lot of it gets back to those FEMA maps, a lot of places think that they are not in the 100 year flood plain because of these FEMA maps and really they might now be 'cause those flood are not only happening every 100 years, they're happening every 5, or 10 or 20 years. And so, a lot of areas that were previously, sort of, thought they didn't need flood insurance really will.

Ken: You had mentioned impacts to permitting structures and I'm thinking also of building code requirements, are there examples of where you've seen changes made already?

James: Yeah, you'll see, so there's some and to give you some pacific examples. The building code requirements in themselves are likely to change, and Florida's has changed a couple times in the past two decades in relation to hurricanes. Pacifically in changing wind requirements and things like that. But, so much of the actual permitting changes happen, you know, at the local level, and it can be obviously tough to track, thousands of municipalities across the country. But, you know, we see things like in Miami for instance, raising the required height of sea walls, where's there's new construction. So, it has to be higher than it was just a few years ago. In order to comply with that, you're gonna have to build a higher sea wall. We see things like that, pretty frequently. You see changes to for instance, the coastal management elements of comprehensive plans. That may try to discourage development in high risk flood zones, so very low lying elevations near the water. And we have seen that in several comprehensive plans here in Florida, that element has been added.

In additionally, we see some other changes that, you know, may not say climate change, but they tend to relate to those same issues. So, they may be green building sort of indicatives, or relevancy indicatives. So, we've again seen, in Miami date and expedited permitting process for green building process for green building, and building that apply with lead certification. And, moving forward, I think we're gonna see a lot more of that, both the sort of requirements for greater and greater resiliency. So, that the buildings are able to withstand more and service, you know bigger threats and maybe higher elevations off the ground. We're certainly see that in coastal areas, and we'll like see more incentive programs to encourage developers to go ahead and start implementing those measures now, as suppose to waiting until something happens.

Ken: You know, I've seen a lot of consortium kind of efforts, between local governments. Especially, South Florida and now starting up in Tampa Bay. Were at least it appears different governments are trying to work together to come up with new plans, new permitting structures. Is that something you're seeing in other places as well?

James: Yeah, you see it in other places, and the South East Florida climate compact is really, nation wide, one of the leaders in that regard. And, for obvious reason, they've been dealing with a lot of these sea level impacts sooner, than other places. And, so they've had to deal with this issue, you

know, way before everyone else, and frankly don't have time to wait for State or Federal Governments to decide what they want to do. They say, we're gonna band together and do this. And, as you mentioned there's one in Tampa, that's currently occurring. You see some of these else where, where they're at least starting the process of trying to assess. How is climate change going to impact our specific area, because again the impacts are going to be different in, you know, the Midwest then they are on the coast. There could be changes there related to aridity and changes weather the land is still air able. Changes to heat, in the way that is going to effect how communities need to be built. And, so yeah, you're starting to see that and the first step in that, is also assessing how is this going to effect our area. Starting to come up with broad policy goals and then some suggested implementation that the members of the compact can start actually put into place in their local plans and their local permitting.

Just a couple more examples, of things you might see. Larger developments may be required to have more open space to try to account for some flooding. Developments may be required to build more trees into their development to both mitigate the impact of climate change, by you know, having more trees that can pull more carbon dioxide out of the atmosphere. But also to provide more shade to hopefully keep some of these built environments cooler and you're likely to see just more and more requirements for less paved area in developments. So, yeah these compacts are arising in many places now and Florida has really been a leader in that regard.

Ken: As you mentioned the building code tends to change on every few years, as technology improves, and this is always a challenge for developer trying to plan out a project. It sounds like we're gonna be heading into a time period, where there's going to be more and more changes coming at a more repaid pace. How do you require a developer stay informed on these kinds of issues.

James: Well, there are a number of resources that developers can use to try and stay informed. So, just to give you an idea the Columbia Climate Law Center as a number of tools on its website that relate to state and local resources. That relate to regulations, both federally and at the state level. So, that's something that can really beneficial for them. The federal government has a tool kit on its cite, toolkit.climate.gov that has a number of resources for developers or the developers can at least look at to try to stay informed, to may sure they're up to date. One of the best resources on the internet is a site called dsireusa.org. Which continually tracks various incentives related, both to renewable energy, but other sort of green building incentives. Nation wide, and you can click on your state and get a list of them, and they'll tell you weather they're federal incentives or state incentives or even local incentives. And then, within Florida there's the floridagreenbuilding.org which try's to also, in addition to providing links to other places, discusses the incentives in the state already for some of these green building incentives.

Ken: Well, and that's a great point, thinking about this from a positive take on how developers can focus on the incentives that are out there. I know many of our clients have worked with brown field

incentives, with lead certification, green building and different concepts that also have an impact on what they can sell and what they can market. Are there specific tax incentives, other incentives that you would recommend a developer look into?

James: Again, what I would recommend for the developers, generally to first go to the dsireusa.org for their area, and look at what incentives are available. There are federal tax incentives, there's the business investment tax inventive, that is still available that relates to the use of renewable energy in various projects, and that can be both at the residential and commercial level. So, that's and incentive that was renewed in the past couple years. But then state locally, you're gonna have to see what is being offered there, because that changes pretty frequently. But, yeah it will be a changing landscape for them. And so, one of the best things that I would certainly recommend to any developer and this is not just to try to encourage our business, but it's to stay engaged with attorneys who practice in the field, in the industry. But, also in their area who can hopefully monitor the local and state wide incentive packages and also help push for some of those. And, I think the developers who attempt to sort of stay ahead of the game. The developers who are attempting to comply with these things early and often, are gonna be the ones that are going to see the most success, because if you try to get around that and continue to build the old way. I think they're likely to see values decrease, less financing for those sorts of projects moving forward. So, I think the creative developer is the one that's gonna really thrive in this atmosphere.

Ken: A lot, of pro active steps that can be taken to take on this challenge.

James: Absolutely.

Ken: Alright, well thank you James. I appreciate the quick take here on what developers need to focus on, and I'm sure we'll be talking about this topic again.

James: Absolutely, thank you very much Ken.

Presented By

Kenneth A. Tinkler

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