

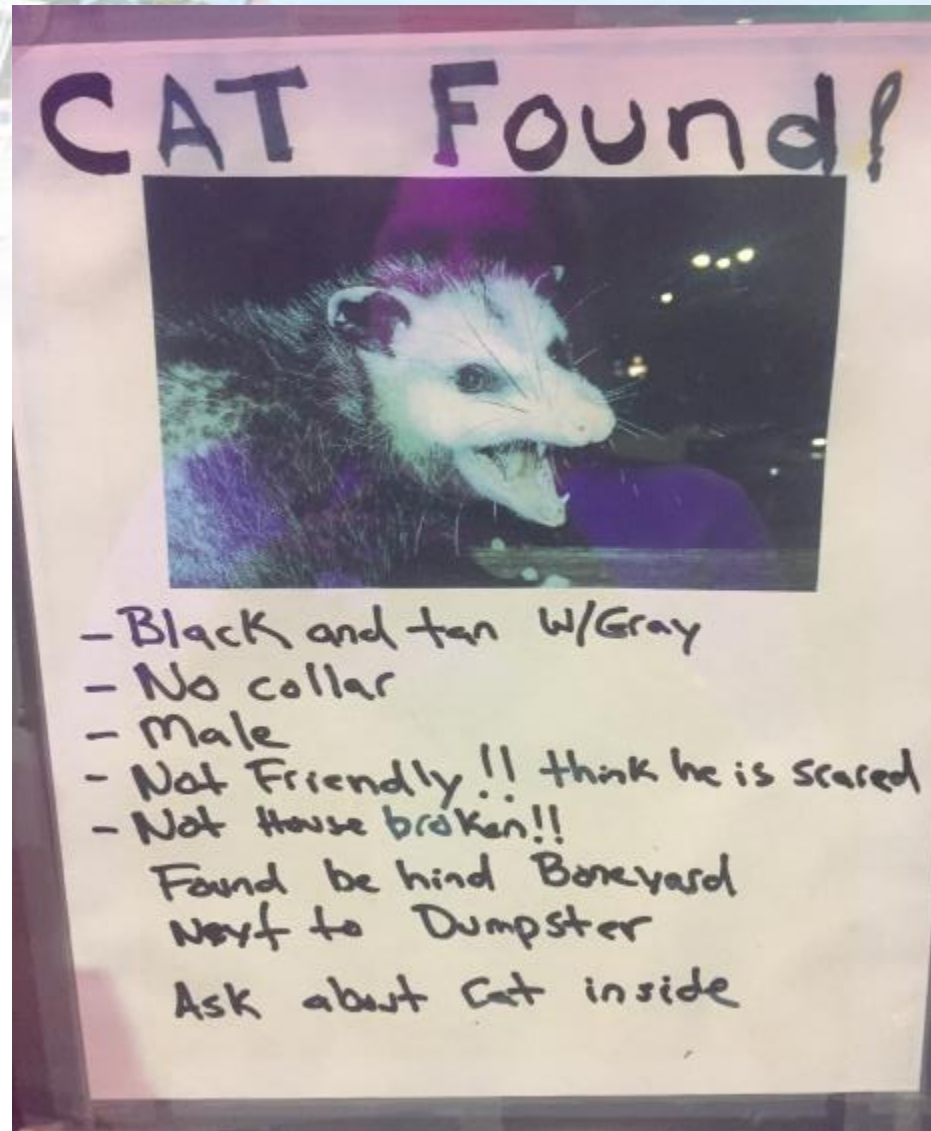


Climate Change and Sea Level Rise Implications for Regulation

Erin L. Deady, Esq., AICP, LEED AP

February 1, 2018

The Facts About Climate Law, Planning & Policy



- Who needs to start planning?
- How do we take the science and plan ahead?
- What policies do we need to put in place to do that?
- What are we required to start doing?
- Who's doing it (so its not so scary)?

**PART II- LAWS
AND LITIGATION
SHAPING
“CLIMATE
LIABILITY” AND
RESPONSES TO
CHANGING
CONDITIONS**




US Approach to GHG Reductions

- Response within U.S. (Prior to Paris):
 - In 1965 President Johnson’s **Scientific Advisory Committee Panel on Env Pollution** = unabated CO₂ emissions would, by 2000, alter the climate,
 - Section 1605(b) of the **1992 Energy Policy Act** = track GHG emissions and reporting standards
 - Numerous attempts at Federal legislation
 - **Mass v. EPA**: EPA has authority to regulate CO₂ as pollutants based on the definition provided in CAA section 302(g)
- **Endangerment finding** = 6 GHGs may be reasonably anticipated to endanger public health and welfare, and are emitted from automobiles, which would allow their regulation under CAA section 202
- Additional Federal Rulemaking and now “rollbacks”
- “Red Team/Blue Team”



The Law: Where Does Climate Change Show Up?

- ESA
- NEPA
- CAA
- CWA
- MMPA
- FOIA/1st Amendment
- Energy Policy Act
- Global Climate Change Research Act
- Corporate Reporting/Securities Disclosure
- FTC
- “Cap-and-trade” regulation where GHGE’s are capped and allocated through the distribution of “allowances” representing a right to emit.
- Regulate vehicle standards
- Regulate activities (public and private), failing to regulate or regulating too much
- Green & Energy Building/Codes (New Mexico case)
- Protestors and scientists
- Failure to consider climate in permits
- Money damages and common law claims
- Protect my future



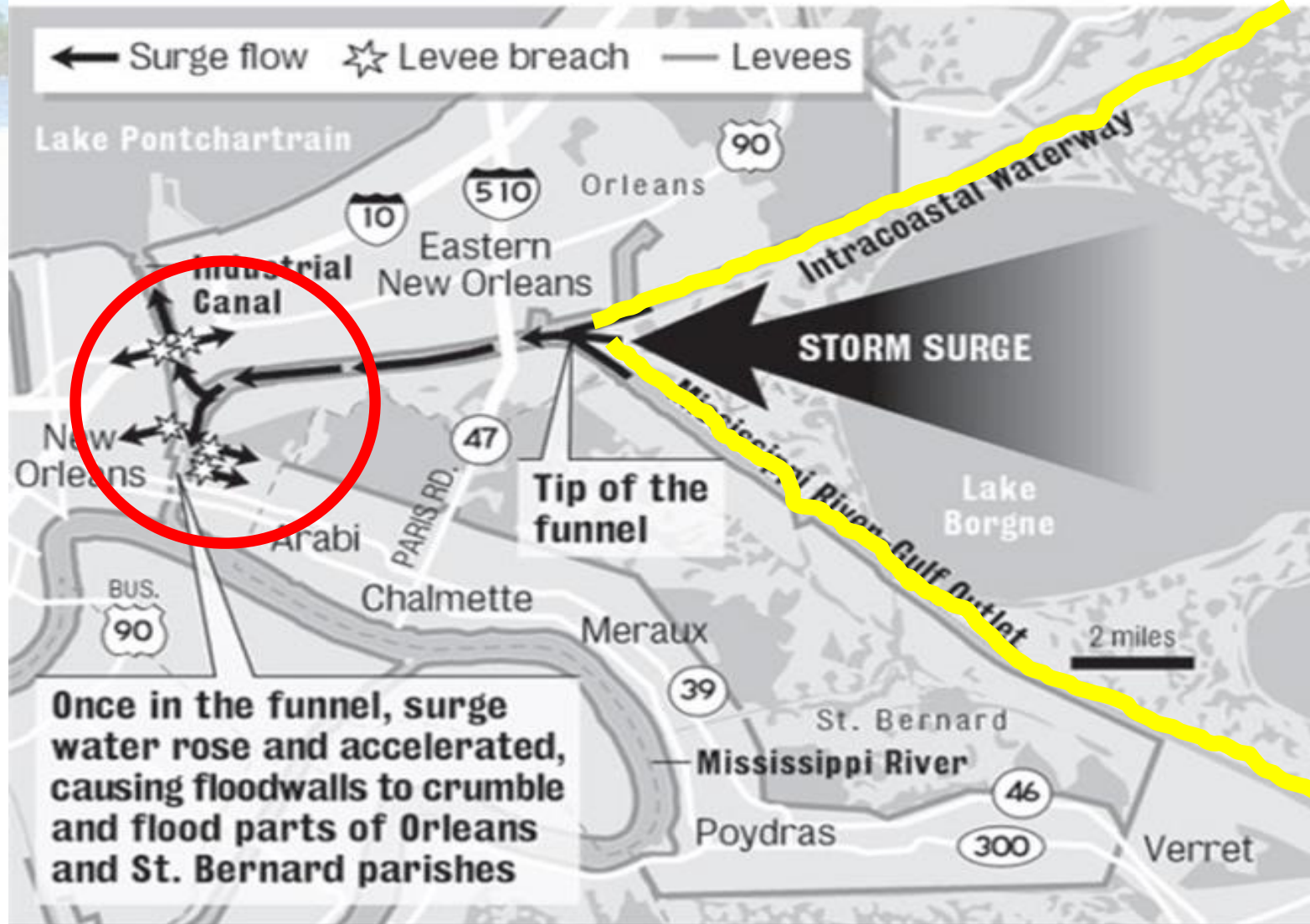
**785 total cases as of
June 2017 and its
growing**

Katrina Liability- Corps & Temporary Takings (St. Barnard Parish v. US)

- Corps not liable on appeal in separate litigation (sovereign immunity)
- Case originally filed 2005. Federal judge (5/1/15) rules that Corps' construction and absent maintenance of MRGO created a "temporary taking" under the 5th Amendment
- MRGO contributed to increased **salinity** and loss of **habitat**, including wetlands, eroding **natural protection** and increasing **flooding risk**
 - "Certainly by 2004, the Army Corps no longer had any choice but to recognize that a hurricane inevitably would provide the meteorological conditions to trigger **the ticking time bomb** created by a substantially expanded and eroded MR-GO and the resulting destruction of wetlands that had shielded the St. Bernard Parish for centuries," Braden wrote
- May 4, 2016 Judge rules that Corps' liability for lost property values in St. Bernard Parish and the Lower 9th Ward of \$3.16 million plus interest to six landowners (temporary taking)
- Appeal July 6, 2016 by Justice (to U.S. Court of Appeals for the Federal Circuit), relying heavily on: *Arkansas Game and Fish Commission v. United States* (2012), USC holds that it's possible for government-induced, temporary flooding to constitute a "taking" of property under the Fifth Amendment to the U.S. Constitution, such that compensation could be owed to the owner of the flooded property.

STORM SURGE DURING HURRICANE KATRINA

Much of the area's flooding from Katrina resulted from storm surge that rocketed through a narrow "funnel" created where the Mississippi River-Gulf Outlet (MR-GO) joins the Intracoastal Waterway (GIWW).



STAFF GRAPHIC BY EMMETT MAYER III

Borough of Harvey Cedars v. Karan

- 3 story beach front home v. 22' barrier dune protection project
- Without project Karans had 56% chance of storm damage (over 30 years), with it, had 200 year “protection life”
 - Karans sought to exclude testimony on benefits
- Court determines “just compensation” when a portion of private property is taken for a public project – how do you calculate the “benefits”?
 - Benefits are general or special
- Trial jury awarded \$375k in just compensation (upheld at appellate level)
- NJ Supreme Court says erroneous valuation-- look at FMV before and after project (consider testimony on benefits)
- Reverse and remand- so what did they get???????

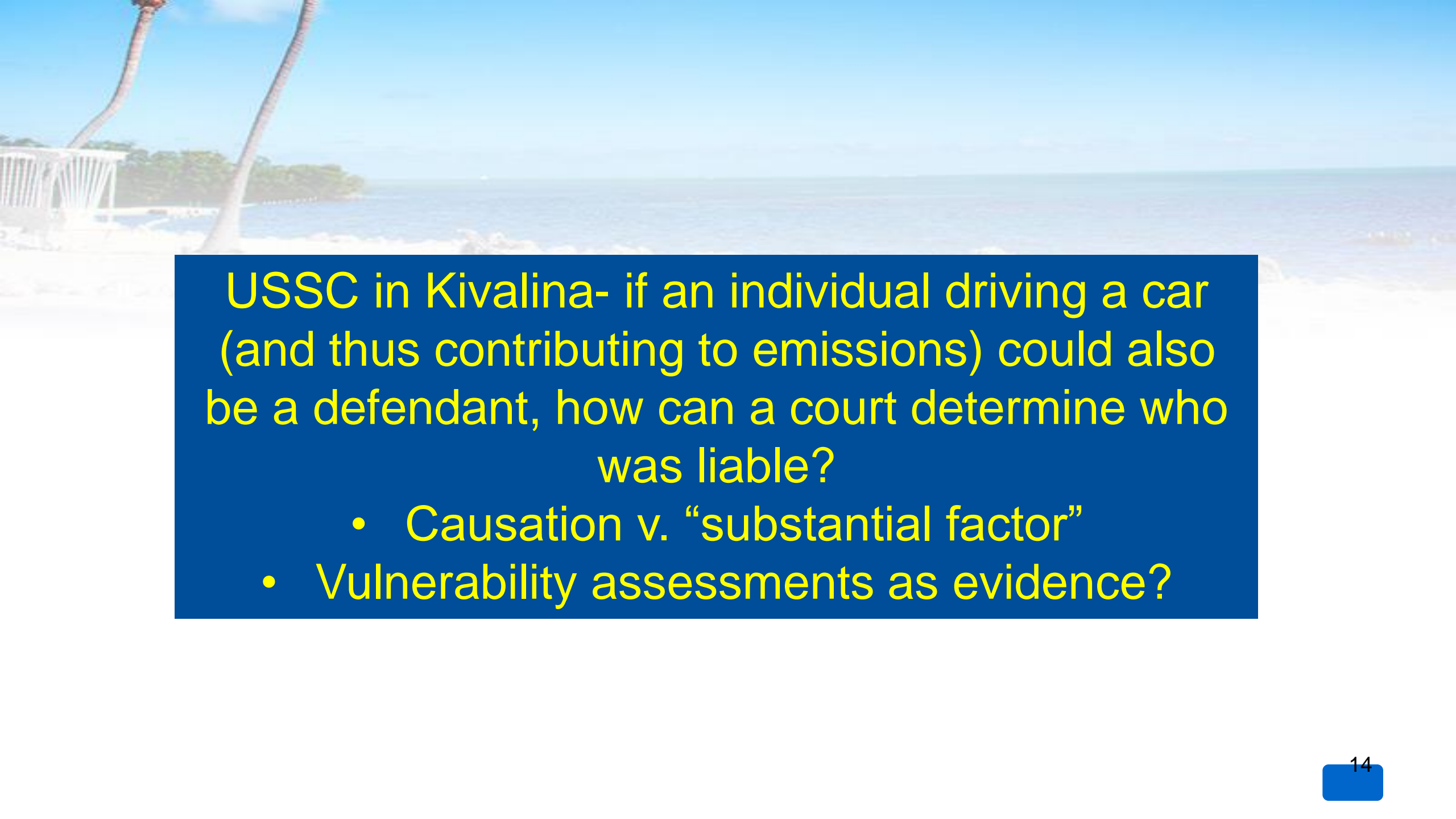






Plaintiff v. Fossil Fuel Companies

- *San Mateo County, Marin County and the City of Imperial Beach v. Chevron*- (37 D's) public nuisance, failure to warn, private nuisance, negligence, and trespass- **they knew and hid it and now....** energy companies need to pay for the costs the local governments are incurring to adapt to sea level rise and for the companies' own willful, deceptive, and malicious behavior (filed 7/17/17)
- ...“coordinated, multi-front effort” to “discredit the growing body of publicly available scientific evidence and persistently create doubt.”
- NY State Attorney General email investigations



USSC in Kivalina- if an individual driving a car (and thus contributing to emissions) could also be a defendant, how can a court determine who was liable?

- Causation v. “substantial factor”
- Vulnerability assessments as evidence?

On a Recent Front-Center for Biological Diversity v. USFWS (Potentially?)



Future Flood Risk Litigation: Trends in Post Storm Theories

Flooded homeowner sues bank for recommending he reject flood insurance

By L.M. Sixel | October 2, 2017



Deola Ali bought a house in Kingwood six years ago and considered buying flood insurance. Instead, he says, he followed the advice of his mortgage lender, which said he didn't need flood insurance because the property wasn't in a flood plain.

Other Evolving Legal Aspects

NFIP Reform

- FIRM Existing Flood Risk
- Technical Mapping Advisory Council
- Future flood risk
- Expired 9/30 and reauthorized until 12/8
- Band aid or full reform?

CRS

- Sea Level Rise Credits ~ 500 pts.
- Mapping
- Improvement of rating score
- Example- County x receives a CRS score of 5, but to improve to a 4, these points are pivotal.

Corps of Engineers

- Previous "Incorporating Sea-Level Change Considerations in Civil Works Programs"
- Sea level rise calculator (2017) with 3 scenarios
- Guidance on Inland Climate Change
- Principles for Risk in Planning

NEPA

- Agency determines whether GHG emissions/climate change impacts would be significant
- "Rule" to ensure analysis is appropriate
- 8/2/16 guidance - # on GHG effects
- E.O. 17- could to withdraw

FFRMS

- Federal investments in Haz Mit Ass and Assistance Programs
- FEMA Land con "fe"
- E.O. re FFR signed 8/15

- **PART 2:
WHAT'S GOING
ON IN THE
STATE
RELATED TO
PLANNING FOR
THESE NEW
CHALLENGES?**



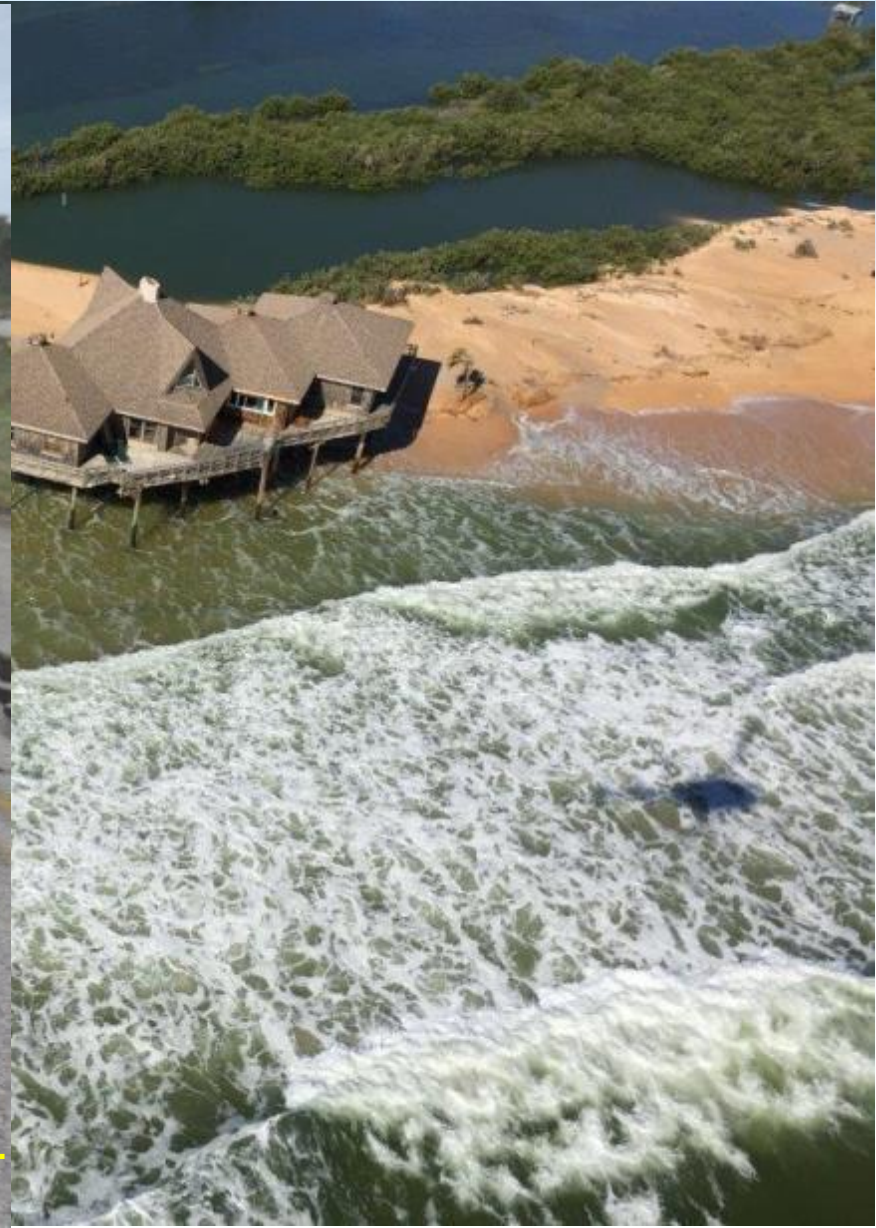
Florida Trend & Associated Press

Basic State Legal Concepts in Government Actions/Liability for Capital Improvements and Roads

But wait, there's one more thing to consider... government inaction (*Jordan v. St. John's County*)...

1. Maintain v. upgrade obligation?	Generally there is a duty to “maintain” (roads) but <u>no</u> duty to “upgrade”. There is no direct case on duty to maintain or upgrade <u>from sea level rise</u> yet...
2. Planning versus operations.	Duty to maintain or upgrade due to sea level rise could depend on whether decisions are deemed “discretionary planning” actions or “non-discretionary operations/maintenance” actions. Once you build it, you must maintain it with “reasonable care” to function as designed (now it becomes a non-discretionary operations).
3. Sovereign Immunity	Discretionary planning decisions are immune from liability under the Tort Claims Act. Cases have held there is <u>no liability</u> for failure to build, expand or modernize capital improvements, cases have deemed these “planning” actions (road widening). Nor liability for basic design of roadway and decision on whether or not to upgrade (planning level).

St. John's County Post *Jordan* / Post *Matthew*



Photos, Patrick McCormack, Esq.

Florida Policy on GHG Reductions and Climate

- EO 07-127: Reduction of emissions to 2000 levels by 2017, to 1990 levels by 2025, and by 80% of 1990 levels by 2050 & California vehicle emission standards reductions (22% by 2012 and 30% by 2016).
- Building Efficiencies/Energy Code, Chapter 553, F.S. increasing standards
- HB 697 (GHG reduction strategies in local government's Comprehensive Plan). Some requirements later eliminated.
- Adaptation Action Areas (2011)
- HB 7117 (Energy Bill- 2012)- increase solar output
- 2015- 5 Bills Passing Related to flood insurance, wind insurance, construction standards/building codes, Citizen's insurance, Peril of Flood (SB 1094)
- 2016- Solar Constitutional Amendments
- 2017- SB 90 on solar disclosures and Amendment 4 Implementation & Natural Hazards coordination

Natural Hazards Coordination- SB 464

- “Natural hazards” includes, but is not limited to, extreme heat, drought, wildfire, sea level change, high tides, storm surge, saltwater intrusion, stormwater runoff, flash floods, inland flooding, and coastal flooding
- Executive branch, WMDs, PSC and DEM
- ¼ meetings
- Progress reports to Governor, House and Senate

Image: Terrell Forney



What are local governments doing?

Adaptation Action Areas














- 195 local governments have Coastal Management Element
 - 161 municipalities and 34 counties
- As of May 2017:
 - Approximately 43 (22%) explicitly mention or address **sea level rise in their Comprehensive Plans**
 - Eleven (11) mention **AAAs** in their Comprehensive Plans
 - Five (5) have a physical designation:
 - **Satellite Beach** designates ocean side and bayside AAAs
 - **Village of Pinecrest** designates AAAs
 - **Broward County** sand bypass project at Port Everglades
 - **Ft. Lauderdale** 16 areas 38 stormwater projects
 - **Yankeetown** designated natural resource AAA

Flood Peril Legislation (SB 1094)

What are the principle requirements?

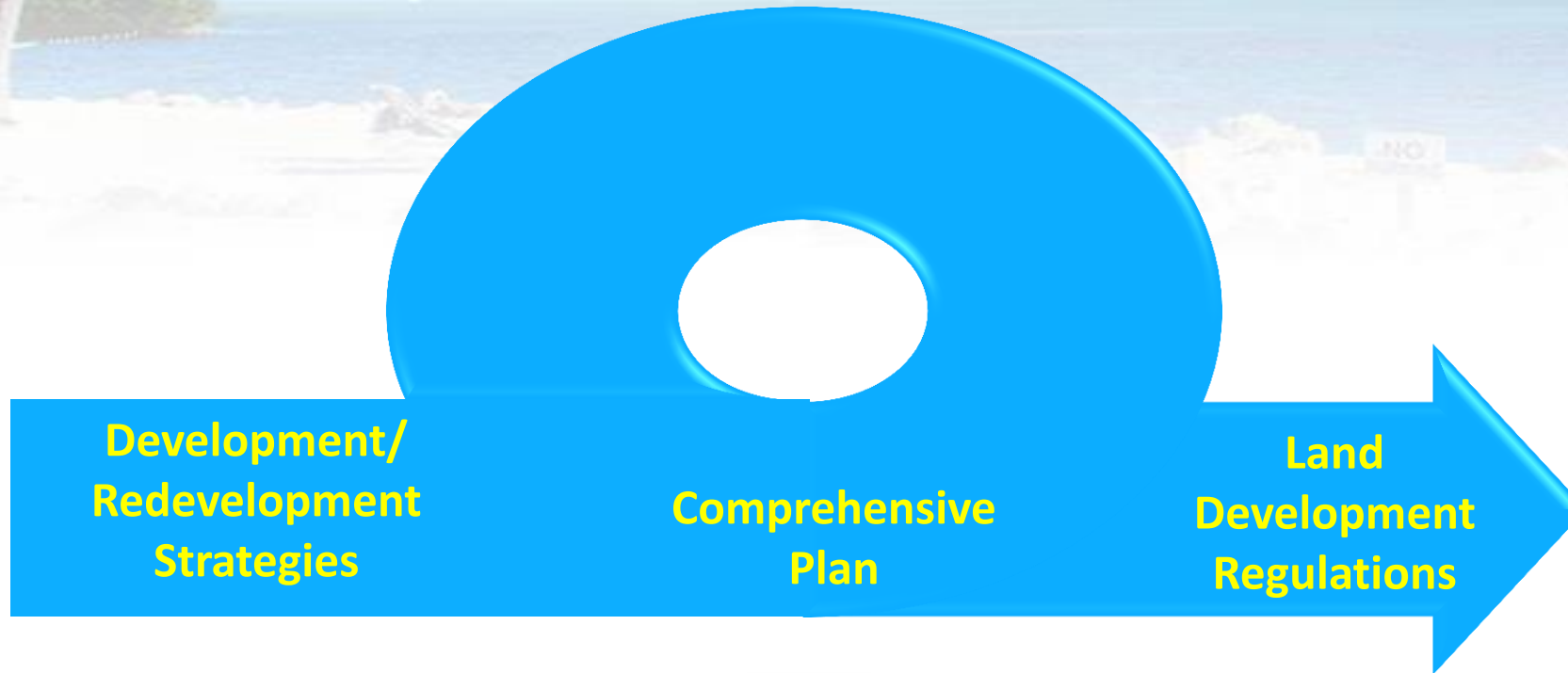
- Development and redevelopment principles, strategies, and engineering solutions that reduce flood risks and losses
 - Elevation certificates submitted to DEM
 - “Flexible” flood insurance coverage
 - Other provisions such as flood insurance policy requirements
1. **principles and strategies**, that reduce the flood risk from high-tide events, storm surge, flash floods, stormwater runoff, and **the related impacts of sea-level rise**.
 2. **Best practices** for the removal of property from FEMA flood zones
 3. **Site development techniques** that reduce flood insurance losses and claims
 4. Consistent with, or more stringent than, the flood-resistant floodplain requirements **in the Florida Building Code**
 5. Construction consistent with **Chapter 161**.
 6. Encourage participation in **Community Rating System**

Recent and Current EAR Based Amendments

In Compliance with SB 1094			
West Palm Beach		Yankeetown	
Ponce Inlet		North Miami	
Santa Rosa County		Palm Bay	
Boynton Beach		Clearwater	
Jupiter		Broward County	
Jupiter Inlet Colony		Pinecrest	
Sunny Isles Beach			

Sample Planning Strategy

How do these requirements relate to or affect planning activities and infrastructure investments in the short- and mid-term?



Short Term

- Compliance (POF) Strategy (timeline and scope)
- Frame “development”
- Short term capital projects
- AAAs

Mid Term

- Comp Plan Goals, Objectives and Policies
- Review land uses

Long Term

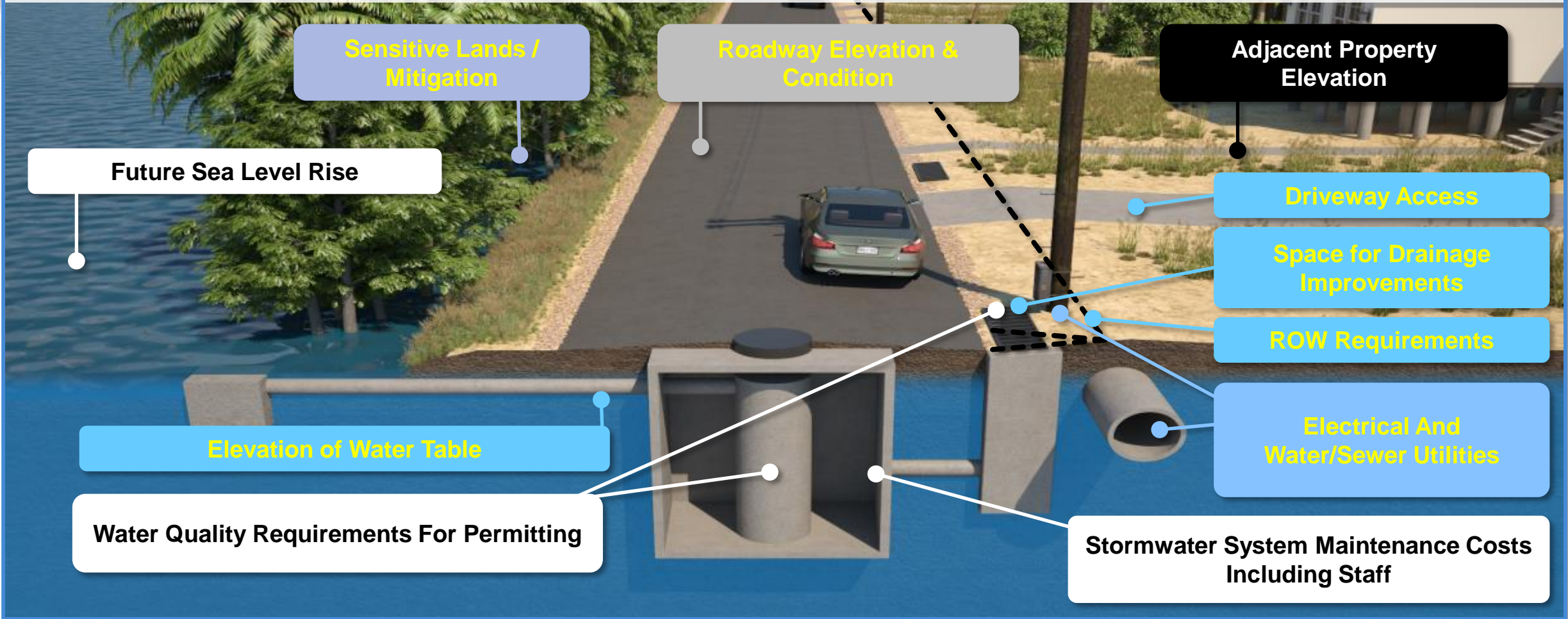
- LDRs: Development / design standards
- Areas subject to flooding
- ESLs
- Infrastructure LOS

Example Planning Efforts Around the State (not all listed)

Jurisdiction	Activity
West Coast Southeast Florida	Regional Collaboration and involvement of regional planning councils
Broward	Enhanced modeling: seawall heights and future conditions groundwater maps
Miami Beach	Stormwater pumps, road elevation and seawall policy
Ft. Lauderdale	Adaptation Action Areas (19), seawall ordinances for design criteria
Monroe County	Road elevation policy accounting for sea level rise and demonstration projects & SLR Modeling through CRS (to achieve "4" rating)
East Central FL	Satellite Beach- HAZUS modeling and plan development (new Volusia and Brevard initiatives)
St. Augustine	Historic properties, post-Matthew infrastructure and planning
Multiple Cities/Counties	Sustainability/Climate/Vulnerability planning initiatives (Central FL, West Coast, South Florida)
DEO	Pilot / demonstration vulnerability analyses in 3 communities

Monroe Road Elevation Considerations

LOCAL CONDITIONS AFFECTING FINAL DESIGN RECOMMENDATIONS



Initial Results – Elevation Conceptual Cost Estimates

	Twin Lakes – Key Largo		Sands Community – Big Pine	
Elevation	Length of Roadway Elevated	Total Roadway <u>and</u> Drainage Cost	Length of Roadway Elevated	Total Roadway <u>and</u> Drainage Cost
6"	0.25 miles	\$0.92 million	0.3 miles	\$2.22 million
12"	0.7 miles	\$4 million	0.35 miles	\$2.63 million
18"	0.8 miles	\$5.8 million	1.3 miles	\$8.9 million
28"	0.9 miles	\$7.3 million	1.5 miles	\$10.5 million

Costs factored in: Maintenance of traffic, mobilization, design, construction, 15% of costs for construction engineering and inspection, 25% contingency and stormwater features.

Costs not factored in: right-of-way (~12" is threshold), driveway improvements



Some Solutions

- Immediate, case specific:
 - Work with stakeholders to design upgrades (recognizing new inherent obligations to maintain)
- Capital planning & funding: general revenue, special assessments, infrastructure bond referenda, etc.
 - Special assessments can apportion risk (similar to CPTED or neighborhood improvement assessments)
 - Referenda can require voter support (Miami Forever \$400M)
 - Doing nothing can risk bond ratings (Moody's "Climate Change & Sovereign Credit Risk")
- Better regulations and incentives:
 - Integrate "future conditions" into permitting
 - Old Ex: FFRMS (government buildings/facilities)
 - Ex: Broward groundwater capacity
 - Monroe County Road Design criteria
 - "Above code" resilience incentives- FORTIFIED

TEXAS POLITICS

Texas-size \$61 billion Harvey plan includes 'Ike Dike,' new reservoirs, buyouts

Mike Ward and Kevin Diaz | November 1, 2017



Public Trust Theories- Juliana v. U.S.

- Plaintiffs- young people ages 8-19, Earth Guardians and Dr. James Hansen (acting as guardian)
 - Allegations- fossil fuels burn carbon, U.S. allowed emissions to get out of control and they sought: (1) a declaration their constitutional and public trust rights have been violated and (2) an order enjoining defendants from violating those rights and directing defendants to develop a plan to reduce CO2 emissions
- Defendants – US, DOE, EPA, OMB, etc. filed MTD



Aji Piper, WA



Hazel Van Ummersen, OR



Xiuhtezcatl Martinez, CO



Sahara Valentine, OR



Levi Draheim, FL



Victoria Barrett, NY



Nick Venner, CO



Miko Vergun, OR



Journey Zepher, HI

US: Your MTD is DENIED

- Federal defendants file Writ of Mandamus to stay proceeding and evaluate denial of MTD filed 6/9/17- hearing next week
- 11/10/16 – “The questions before the Court are: 1) whether defendants are responsible for some of the harm caused by climate change, 2) whether plaintiffs may challenge defendants' climate change policy in court, and 3) whether this Court can direct defendants to change their policy without running afoul of the separation of powers doctrine.
- Fossil Fuel companies intervene and withdraw (after MTD denied)
- See you in court? 2/5/18?

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Why the Law of Climate Change Matters: From Paris to a Local Government Near You

by Erin L. Deady

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Climate change has received much national attention recently, but the laws, regulations, issues, and caselaw evolution, have a history that is not well known. International strategies are one important element in solving the climate change challenge. Impacts locally such as street flooding, compromised drainage, habitat and species changes, accountability, and liability confluence bring a new reality to the importance of understanding what is being done, or not done, at all levels of government. This article summarizes the climate change law highlights at the international, state, and local levels and provides insight as to why it matters.



Thank You

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