

Terra Bowling:

My name is Terra Bowling, and I'm a staff attorney at the National Sea Grant Law Center. Today, we're going to be hearing from three of our law students about their research this summer, as well as our communications intern.

For anyone who might be new and not know much about us, we're the National Sea Grant Law Center. We're located at the University of Mississippi School of Law. We were founded in 2002, and our mission is to conduct legal research, education, and outreach for the wider Sea Grant network of 34 Sea Grant programs. If you're interested in our work or what we do, I encourage you to visit our website and to follow us on social media.

But now, what I want to get to is what everyone is here for today, which is a presentation of our students. Just a few bits of housekeeping, right now, everyone's on mute, but feel free to use chat if you have any questions. We'll try to answer those as we go. You can raise your hand to ask a question at the end. And just so you know, this webinar is being recorded. We will post it on our website as soon as possible after the webinar. So, now I'm going to pass it to our first presenter is Sam Stewart. There you go, Sam.

Sam Stewart:

Hi everyone. Yes, my name is Sam Stewart. I'm a rising 3L at Pace Law in New York, studying environmental law. This summer while with the Sea Grant Law Center, I worked with the Coastal States Organization to identify legal tools that can be used to facilitate managed retreat along the coastline to plan for the effects of sea level rise, so I'll be telling you about some of those legal tools. Next slide please, Terra.

Managed retreat is a planned process of relocating people, structures, and infrastructure away from coastal areas that either are currently being affected by sea level rise or will be affected in the near future. As this slide states, the goal is for managed retreat to be voluntary and essential for equity to be a key consideration. Ideally, local and state governments will be able to work with communities and residents to encourage people to move away from the coastline voluntarily. However, there are legal tools that could be used to initiate involuntary retreat, and we'll touch on eminent domain and the public trust doctrine as examples. Next slide, please.

Oh, wait, sorry, back one. The four legal tools that we'll discuss are the public trust doctrine and rolling easements, voluntary buyouts, transfer of development rights programs, and eminent domain.

Before getting into those four specific legal tools, a consistent consideration is whether there could be regulatory takings liability. The Takings Clause of the Fifth Amendment of the U.S. Constitution states that "Nor shall private property be taken for public use without just compensation." The Takings Clause applies to state and local governments through the Fourteenth Amendment. In order to defeat a regulatory takings claim, the government must show that the intended use furthers a valid public purpose and compensation was just or sufficient.

As far as public purpose goes, there are two definitions, a broad definition requiring that the taken property be used for the public advantage and a narrow definition that requires that the property must actually be used by the public or the public must have the opportunity to use the taken property. But in *Kelo versus City of New London*, the Supreme Court held that public use is to be interpreted broadly with significant deference granted to local governments. So, the broad definition is widely accepted, but worth mentioning that states may impose stricter public use requirements than the federal baseline established in *Kelo*. And for compensation to be just, it must be equal to full market value of the property.

The first legal tool we'll discuss is the public trust doctrine and rolling easements. Public trust is land held in trust by the state for the benefit of the public. Generally speaking, tidelands or lands that are exposed during low tide but covered during high tide are subject to the public trust doctrine. Once it has been determined that a body of water is navigable, the title to the land underneath it is passed to the state to be held in trust. Generally speaking, these lands cannot be alienated. Next slide, please.

The public trust consists of both federal and state-level doctrines, and state-level doctrines generally fall into three categories. Some states recognize the mean high water mark as the public trust boundary. This is the boundary under federal common law. Other states recognize the boundary as the mean low water mark, but a public trust easement exists over the area between the mean high water mark and the mean low water mark. This is done through state legislation, and then a third category of states recognize that the public trust extends to the first line of vegetation covering the dry beach.

As the mean high and low water marks move landward, the dynamic property line that designates the public trust land will also move landward. This is known as the rolling easements concept. As the line moves landward, these tidelands become property of the state. The public trust doctrine has the potential to be used by states to claim title to coastal property without being held liable for a regulatory taking, and some states have used similar justifications to impose a condition on building permits that requires the owner to remove any structures if it's no longer located on private property because the public trust boundary has encroached and moved landward. The property owner must agree to these conditions before development is approved, so this is a voluntary application of the public trust doctrine.

The next legal tool is voluntary buyouts. A 2020 study released by the National Institute of Building Sciences concluded that removing one million homes from flood-prone properties could save more than \$1 trillion over a 100-year period at a cost of 180 billion in upfront costs. This just goes to show you how significant this consideration is for local governments and the amount of money that is being used to rehabilitate homes that have been damaged by flooding events. Next slide, please.

Voluntary buyouts are the most common way for governments to acquire private property, but it's worth noting that buyouts is an umbrella term that encompasses many paths for federal, state, and local property acquisition. There have been over 48,000 buyouts, but most of these buyouts were property subject to riverine flooding and not coastal flooding. However, there have been large-scale, voluntary buyouts along the coastline, especially after Hurricane Sandy. So, there are five major federal funding programs, four programs under the Federal Emergency Management Agency and one under the Department of Housing and Urban Development. But most funding comes from the FEMA Hazard Mitigation Grant Program.

When land is purchased through the voluntary buyout process, future development of the land is subject to limitations. By way of example, FEMA buyouts require that the land be dedicated as open space for the conservation of natural floodplain functions and remain so in perpetuity. And there are similar restrictions for HUD funding.

A significant challenge with the buyout process is property owners may receive pre-disaster, fair market value for their property. This does not discourage homeowners or developers from developing floodplains because they could be bought out if they're determined to be eligible. And just to provide an example, after Hurricane Sandy hit New York and there was a buyout on Staten Island, over 20% of property owners who sold their property to the state ended up purchasing property in another coastal flood hazard area, so it can result in increased total dispossession over time if those landowners have to be bought out again. Next slide, please.

Next is transfer of development rights. TDR programs are a market-based strategy that allow landowners to transfer the development rights from their regulated parcel to another parcel or parcels in an area that is more suited for development. The purpose of TDR programs is to compensate landowners of regulated property for their decrease in property value. This is a zoning technique, so it's implemented as part of the zoning code and must be in conformance with the municipality's comprehensive plan.

This graphic here shows how TDR programs can be used to change density. We'll say that the parcel on the left is in an agricultural district that is zoned for 2.5 units an acre. The parcel on the right is in a more urban area, and it is zoned for eight units an acre within the same municipality. If the municipality wants to preserve wetlands in the agricultural district, which is considered the sending zone, they limit density but allow development rights to be transferred to the urban area, which is the receiving zone. So, TDRs, in most cases, allow developers to exceed the zone density, building height, or other land use restrictions in the zoning code. The sending property owner generally must agree to a permanent conservation easement to ensure that the property remains undeveloped.

TDR programs have been used to protect environmentally sensitive areas, preserve farmland, and restrict development of historic neighborhoods. They have not been used specifically to regulate property along the coastline, but there are two main challenges that would arise from TDR programs along the coast, first being that the high value of coastal property makes it difficult to transfer development rights inland and match the value of the property, and then second, because TDR programs along the coast likewise seek to restrict or prevent future development, local governments may be concerned about regulatory takings liability.

The role of TDRs in a regulatory takings analysis has historically been unclear. There's no binding precedent from the Supreme Court. However, in a concurrence written by Justice Scalia, he concluded that TDR should be limited to the compensation side of the takings analysis because they're not relevant to the use of the affected land and instead provide a right to develop a new piece of land. So, this is a form of compensation rather than a reduction of the original taking.

I contributed to an article earlier this summer for the National Sea Grants publication, which is The SandBar, on this topic. And in *Shands versus City of Marathon*, the Florida Third District Court of Appeals reached the same conclusion as Justice Scalia on the issue of TDRs in a regulatory takings analysis, so this will be something to watch for as TDRs come up more frequently in a regulatory takings context. Next slide, please.

The last legal tool we'll discuss is eminent domain. Eminent domain is the power possessed by federal, state, and local governments to seize private property for the benefit of the public. It requires no constitutional authority, but the use of eminent domain is also limited by the takings clause. As we discussed, the government may only take property for a use that benefits the public and must provide just compensation. For a use that benefits the public, it may not necessarily need to benefit the public at large. A taking that benefits a particular geographic area, a group of people is typically considered to be a valid purpose so long as the end is for the public good and not to benefit a private party. Eminent domain is widely considered the most extreme and invasive tool to facilitate, managed retreat. For this reason, it's highly vulnerable to regulatory takings challenges.

Some of the challenges with eminent domain, the affected party is likely to argue that the intended use of land does not further a valid public purpose. This is where *Kelo* comes in as a consideration. There are generally few legal barriers to eminent domain because it's a recognized government function, but eminent domain is increasingly unpopular and politically fraught, so local governments are highly likely to avoid exercising eminent domain if possible.

Courts have recognized flood protection and infrastructure to mitigate flood damage as public uses for eminent domain, and ecological preservation is also a valid public use. So, legal scholars generally agree that moving people away from the coastline to protect the public welfare would be a valid public purpose, but as I stated, eminent domain is likely to be a last resort because of its political impact.

Just to go over what we have discussed, there is political hesitancy to initiate involuntary retreat, and for this reason, voluntary buyouts remain the most common way of acquiring private property. But the main question as we anticipate managed retreat from sea level rise is how can municipalities encourage property owners to voluntarily move away from the coast? Under the Public Trust Doctrine, that's deed restrictions that the property owner must agree to before development is approved, for voluntary buyouts, emphasizing the benefit of buyout programs and encouraging property owners in flood-prone areas to participate, and then for TDR programs, limitations on coastal development, but still giving the property owner the ability to benefit from development in other areas.

Eminent domain is likely a last resort. And as I'm wrapping up my research for the summer, I'm looking into the legal implications of abandonment and donation, which is mostly focused on how local and state governments must manage hazard-prone property that they acquire through one of these processes.

Thank you. Thank you all for listening. Thank you to Terra, Stephanie, Annika, and John for your help and guidance throughout the summer. We should have some time at the end for questions, but I'm going to pass it to Gabriela Martinez, so thank you.

Gabby Martinez:

Thank you, Sam, and good afternoon everyone. Yes, I am Gabriela. I go by Gabby Martinez. I am a rising 2L at the Elizabeth Hub School of Law at Pace, and I am the 2023 Sea Grant Law Diversity Internship Program intern. I'm going to use my time today to highlight a little bit on my placement week in L.A. and share a preview of my biggest project of the summer which focused on sporeless kelp aquaculture, which is basically the farming of sterile giant kelp that does not have a reproductive mechanism, so it cannot reproduce, unlike any other normal wild kelp. And I'm just very excited to share the work I've been doing with both the law center and Sea Grant USC at the Southern California University. Next slide, Terra, please.

My priorities included producing ... and production is still in progress ... a white paper predicting what sporeless kelp agriculture laws will look like in the state of California, as well as supporting the South Central L.A. Seafood Equity Hub and mapping out a how-to guide for food hubs interested in selling seafood. I was blessed with the opportunity of flying out to L.A. ... I'm originally from New Jersey ... to participate in site visits and meet with USC professors, California regulators, and scientists to hear directly from those in the industry on what some of the biggest concerns are for the emerging aquaculture industry, which I think was really important as I came face-to-face with actual facilities that grow seaweed, oysters, mussels, and shrimp, all with this idea of producing a locally-sourced, sustainable, regenerative food product that all, including those from lower-income households, can have access to farm and to eat. Next slide, please.

But why the push? Why are we talking about farming seaweed in the ocean? Well, currently the global seaweed industry is generating \$13 billion and experts predict by the time we reached the year 2050, we'll be harvesting 15 times more seaweed. This is all at the same time as the American demand for seaweed products increases, the human population keeps growing, large-scale agriculture systems drain our natural resources, and, of course, climate change. We must look towards other options for food.

So, this option, seaweed, just happens to offer nutritional and environmental benefits and has the ability to serve as various end products from human food to feed-for-agriculture animals to bioplastics, biofuels, pharmaceuticals, and more. However, aquaculture through a public lens has not had the best reputation, especially with its history with fish farms and water pollution, so farming a sterile, locally-sourced species eases some of those issues that have previously come up with aquaculture like invasive organisms and gene flow between farmed and wild species, which causes biodisruptions in biodiversity. Because sporeless is sterile, it theoretically cannot transfer any genes and cannot reproduce with wild kelp. Next slide, please.

To produce an opinion on what the regulatory framework of sporeless in California will look like, which is currently non-existent, I looked at what's already established. So, I based my predictions on seaweed aquaculture laws with a focus on California as well as alluded to other sterile organisms like triploid oysters and triploid carp. Triploid means you have three sets of chromosomes instead of two like most animals do, which makes them sterile so they can't reproduce.

So, I was tasked with approaching this paper from various perspectives and diving into a comparative case study. From a food access and equity perspective, my goal is to assess how interested parties can become involved in farming and or consuming sporeless kelp, and from a regulatory perspective founded on precautionary principles, I had to assess how this new biotechnology could affect ocean health, land use, and marine biodiversity.

To ease the concerns of environmental impacts on ocean health in creating another industry that wants to build farms and systems in the open ocean, two big factors proving that sporeless kelp is actually sterile and demonstrating that its broodstock, its mama and papa, came from local waters is critical to help the industry move forward. Next slide, please.

I think that proving sterility in sporeless kelp will likely follow some of the federal regulations that triploid carp requires. For example, a majority of the states that allow the use of triploid carp require participation in the U.S. Fish and Wildlife Service's National Triploid Grass Carp Inspection and Certification Program, which requires farmers to check each fish before an NFWS representative comes to the facility to retest. And the burden of proof leaves no wiggle room. It requires 100% triploidy in 120 randomly selected fish from a ready-to-be-shipped container. The test used to verify triploidy, which again, is sterility, employs a particle size analysis machine, which basically demonstrates blood cell diameter. The bigger the cell, the bigger the nucleus is indicative of triploid because three chromosomes are going to appear bigger than two chromosomes in a nucleus.

Not all states require this specific certification to grow or stock triploid carp, but those states still have, respective to their own statutory authority, their own test in place to ensure sterility. California, for example, their hatcheries for triploid fish have to ensure the triploid status of each fish using blood samples, and they must provide the customer with documented certification proving triploidy. On the other hand, the customer has to maintain copies of the certification and invoices with the purchase. They have to obtain a stocking permit to hold these fish. They also have to submit annual reports to the California Fish and Game Commission stating how many fish have died, what's the current count, and just the general health status of the fish on an annual basis.

Terra, can you please press enter twice? One and two. Thank you. Because the California Department of Fish and Game alongside the California Fish and Game Commission oversee commercial fishery activity, I believe they will definitely be involved in the regulation of sporeless kelp sterility. And the certifications in place are likely going to require 100% sterility via DNA sequencing, RNA testing, demonstrating failed production of spores, or even visually observing that the reproductive mechanism is not there amongst other ways.

Although the use of triploid carp is limited to closed waters, whereas sporeless kelp will be farmed in the open ocean, so the legislation will likely vary a little bit, I think similar protocols to establish sterility will likely be found in sporeless and likely an even more stringent one because again, this sterile organism will be in the ocean. So, to ease the concerns of fertility reversion or gene flow between farmed and wild kelp, agency certification for sterility and monitoring will likely be necessary. Next slide, please.

Similarly, I think that ensuring the geographic origin of seed and broodstock is critical to ease the concerns of invasive species transfer and gene pool disruptions. Having local seed matters, and the concept of farming local naturalized species is very prevalent in most open ocean aquaculture facilities. So, looking at the locality regulations and reproductive seaweed legislation across the country, I found that in Maine, seaweed collected to then be farmed must be obtained from stock originating in Maine coastal waters. In Alaska, you can obtain seaweed only if it's 50 kilometers from the seaweed farm. And then in California, you can obtain seaweed seed by wild harvest of local waters with a wild broodstock collection permit. You can purchase seed from a registered California hatchery, or you can import seaweed seed with an importation permit subject to inspections and accompanied by health certifications. Can you please press enter twice? Thank you.

This sporeless project began with a wild harvest in California waters, which required a wild broodstock collection permit. And when you apply for that permit, you have to in detail describe the species to be collected and the waters it's going to be collected in, therefore demonstrating to the California Department of Fish and Wildlife that the seaweed to be farmed is not a prohibited species. It's either local, native, or naturalized, and it's not coming from across the planet potentially carrying foreign pathogens and parasites. However, of course, what is local depends on where you are on the locality, so locality restriction legislation will likely vary depending on the state in the future of sporeless regulation. Next slide.

To build the best case for sporeless, I did not want to solely rely on established kelp seeding laws. I wanted to draw parallels to other sterile organisms, one being triploid oysters, and learn how farmers get their hands on sterile seed for their facilities. So, locality regulations are even more stringent for the triploid oyster industry. For example, to grow triploid in Texas, an oyster transport chain of custody that lists the geographic origin and destination of the seed is required. To grow in the north of Texas, the broodstock must originate from northern Texas broodstock, whereas in the south completely different. It needs southern Texas broodstock.

Whereas in Alabama, the Alabama Marine Resource Division requires that broodstock either imported or wild harvested, originates from broodstock in the northern Gulf Coast of Mexico. In Florida, as another example, triploid oyster seed must originate from Florida waters of the Gulf Coast. Enter twice, please.

Because California is such a large state, the possibility of northern and southern locality restrictions may come into play when developing the framework for sporeless aquaculture. However, following California kelp seeding precedent, as long as the originating broodstock came from a wild harvest California hatchery or imported permitted seed, California farmers should be able to get their hands on this sterile seed and establish grow-out facilities. Next slide, please.

I believe that the permitting process for a farmer interested in growing sporeless kelp in California is greatly going to mimic the established permitting process for aquaculture facilities in the state. And this all begins with project design and meeting with the U.S. Army Corps of Engineers and NOAA coordinators. Then you have to consult with federal and state agencies. If planning on having an aquaculture facility in California waters, then you have to submit a bottom lease application. However, California has not granted any new bottom leases in the past 20 years, so any interested party will likely track the federal path.

And on that federal path, you'll need to submit permits under the Clean Water Act. You'll need to pass the NEPA process, which includes obtaining a consistency certification, a seed sourcing review, a navigation risk assessment, an Endangered Species Act consultation, and a lot more. At stage four, you must register with the California Department of Fish and Wildlife as a registered aquaculturist. And then, of course, there will be ongoing project operation requirements such as renewing permits, paying fees, abiding by importation regulations, et cetera. Please press enter twice. Thank you.

Just to be frank, this is just naming a few, so it definitely is a long and scary process, but the coordinators do help interested parties in getting through these stages that can oftentimes take a handful of years. Next slide, please.

As I mentioned earlier, this white paper is still a work in progress, and this was just a sneak peek, so I look forward to continuing my research and sharing my findings with you all. Please remain on the lookout for a potential publication near the end of this year on sporeless kelp aquaculture in California. And I also want to draw attention to the law center's quarterly legal newsletter, The SandBar, coming out around the end of this month in July, where you can find my article describing the current Southeast Alaska troll commercial fishing season case, discussing the tension between environmentalists attempting to protect endangered orcas and king salmon against local family-owned fisheries that are being told that they can't fish this year in 2023. Next slide, please.

Thank you all for listening, and thank you for everyone's help in guiding me throughout this summer. And a special thank you to Terra, Cathy, and Amalia and, of course, the law center and USC for this opportunity. And I am now going to pass it on to Matt Sheffield. Thank you.

Matt Sheffield:

Great work, Gabby. Hi everybody, I'm Matthew Sheffield, and I'll be talking today about the alphabet soup of emerging contaminant legislation. I'm a rising 3L at Indiana University's Maurer School of Law in Bloomington, and I have an undergraduate degree from the College of Charleston in marine biology. So the opportunity to work with the law center this summer on some of these topics has just been fascinating. I'm ready for the next slide.

Yeah, so this is a tentative little overview of what we'll be going over, what substances are emerging contaminants and what's the CEC project, how substances become pollutants as a matter of law, federal government action on PFOA/AS, state action, federal state action on other CECs, *Relents v. Department of Commerce*, and then a little bit of just some highlights and challenges from this summer.

To start out, the CEC project, the law center is working in conjunction with the South Carolina Sea Grant Consortium and the Marine Extension through Georgia Sea Grant on building a regional network to monitor the effects of climate change on contaminants of emerging concern, also known as CECs ... also way easier to say, so that's what they'll be for the rest of this conversation here ... in South Carolina, Georgia, and Florida. As climate change's effects continue to mount in this area in the Southeast, working with a variety of stakeholders to track the effects and what the ramifications, legal and otherwise, might be is extremely important, so this has been a multidisciplinary project synthesizing legal experts, researchers, public advocates, private advocates altogether to attempt to address this issue.

The scan is based on the substances listed in a 2022 EPA memo, advising how to implement the clean water and drinking water state revolving funds from the recently passed 2021 bipartisan infrastructure law, which we'll discuss that in a little bit. The legal scan itself, the legal scan was basically based on trying to understand these CECs and how they've been addressed in both the federal and state fashion. So, it led to a search of the existing laws and regulations that are in progress, and it also involved

learning and memorizing this extremely vast landscape of acronyms used to represent the different chemical substances and groups of CECs. That kind of alludes to the title a little bit there, but the areas of law that we investigated were federal law, agency rulemaking, and then state law.

Now, to discuss the process of pollutant regulation, this is probably a review for most of you, but it is a surprisingly ... It seems simple, but there's a lot more going on than meets the eye. So, regardless of known health effects, in order to regulate specific substances under the existing environmental laws, the entire notice and comment rulemaking process must be followed. Agencies are being forced to rely on existing legislation, which in many cases is decades old to attempt to address each of these new issues as they arise.

This starts with a notice of proposed rulemaking in the Federal Register. Usually, a rule is drafted by a certain agency attempting to regulate a substance, and that drafting process can take a little bit. Then there's a public comment and consideration period once that proposed rulemaking notice has been issued. This is where us, the members of the public and also private industry who will be affected by the regulation, can weigh in on the standards that are proposed and how they feel that they will be affected by them. So, the consideration aspect of this is that the agency must adequately consider each and every comment that is pertinent to the rulemaking process. And then finally, after that comment and consideration period, which is usually a few months, then there can be a publication and implementation of the final rule. This does seem simple on its face, but actually, the entire process can take ... Next slide, please ... Years. Years and years.

Between drafting the rule, receiving comments, responding to each comment and concern, also the seesawing effects of political change and the administration's shifting priorities, redrafting the rule, and finally approving the rule, the administrative process for addressing these issues can be cumbersome and lengthy. It is great that it incorporates the public's opinion, but it also adds a lot of extra steps that can lead to a less-than-nimble regulatory apparatus for dealing with these problems, particularly once we've learned that there may be negative effects from groups of substances but are a little bit befuddled as to why there's no federal action. Next slide, please.

First, this brings us to PFAS. This is kind of the flavor of the week, if you will, in emerging contaminant legislation right now. This is a vast family of widely used substances, perfluoroalkyl and polyfluoroalkyl substances, but we'll just call them PFAS from here on out, a group of substances that have been used in an immense variety of applications. You have non-stick cookware. If you have a waterproof jacket, firefighting foam in industrial and military settings, takeout containers, even your carpets all contain some substance likely that contains PFAS unless you see something on there that says they do not. But they've been widely used for greater than five decades now, so they are extremely prevalent in the environment, and their negative effects are only now becoming known.

The first part of the address, the scan led us to the bipartisan infrastructure law, one of the government's first efforts to address PFAS contamination nationwide. They earmarked five billion for distribution to the states through the revolving state funds to reduce public exposure, deal with discharge through wastewater, and address nonpoint sources of PFAS pollution. So, the administrative regulations in progress for PFAS are ... They're on the way. Well, we'll discuss where they are now.

First, we're going to talk about the Federal Safe Drinking Water Act. This sets concentration limits for substances in publicly-owned treatment works, but it does not apply to private wells, and it is often critically underfunded and can lead to some issues, especially in smaller or traditionally underserved communities. The EPA has proposed drinking water standards for PFAS compounds in drinking water nationwide, and this rule is in the comment consideration phase. I can tell you the standard is extremely exacting, and that has drawn ire from both sides, those that are part of the administration involving distribution of drinking water and those that are in charge of drinking the water, so us in the public.

They say that either the standard is too high, or some say that it's too low. But that said, it is in the parts per trillion, which is ... To help you conceptualize that, a part per trillion would be a drop of water in an Olympic size swimming pool. That's how much of a problem they've been found to have with these compounds in the human body. They are extremely detrimental, so this standard is very high.

The next set of laws that is attempting to address PFAS contamination, which will have equally far-reaching effects is CERCLA or the Comprehensive Environmental Response Compensation and Liability Act. Its purpose is to assist in the cleanup of abandoned hazardous waste sites, accidents, spills, and other emergency releases of pollutants and contaminants into the environment. When a lot of us think of CERCLA or Superfund, we think of sites like those that are pictured here, but in reality, contamination, especially Superfund contamination, can be a lot more difficult to spot. And that is kind of the purpose of this law. It leads to sampling and then eventually liability and cleanup on the part of the contaminating party so that that liability can transfer to both the current property owner and the previous property owner.

It's one of the most litigated environmental laws, and as the negative effects of PFAS continue to come out, there are many companies who are, as I'm sure you may have heard in the news, settling or in the process of trying to settle disputes against them for contamination because the detrimental effects of PFAS weren't known or at least widely known for quite some time, so their discharge in areas was widespread and led to a lot of contamination, which may end up leading to the creation of more Superfund sites, specifically because of PFAS contamination, which could detrimentally damage communities that essentially, have large swaths of their area that may not be able to be developed or redeveloped or used for anything.

This rulemaking is in the common consideration phase as well for PFOA, PFOS, and their salts and related compounds as hazardous substances. Once something is listed as a hazardous substance in this way, discharge is mandated to be disclosed, and this would be a massive step in turning the faucet off of PFAS discharge into the environment.

State action on PFAS. Typically the way that the environmental laws work, many states use what the federal government sets as their standards as the floor. So, states often lag a little bit behind, which further delays the regulatory process. But that said, there are actions that have been taken by South Carolina, Georgia, and Florida. As you can see that South Carolina House Ways and Means Committee has already created a \$10 million fund to test for and address contamination in small and large wells. That's one of the preeminent ways that people get their drinking water through wells in South Carolina, so addressing contamination there is extremely important.

In Georgia, there's been legislation passed which prohibits the use of PFAS outside of an emergency firefighting context. But that said, the emergency firefighting uses still continue, and that definitely will be important in years to come to determine how much additional detrimental effects that has on the environment, particularly those who are in close proximity. Finally, Florida has made a policy priority to be a nationwide leader on their PFAS response, and they have a surprisingly comprehensive PFAS dynamic plan, which if you're interested in seeing what that would look like, I would recommend you to check out their website. It has quite a few interesting response levels and sets thresholds for if there's no federal action to set their own state standards by certain dates.

Moving on to how the scan address additional contaminants. The federal and state response outside of PFAS, as I said earlier, PFAS has kind of been the flavor of the week when it's come to contaminant regulation, so there hasn't been quite as much action on these other compounds, which made the scan itself a little bit more difficult. Some agencies had taken the position that regulatory frameworks are robust enough to address certain CECs as a group, whereas other types of CECs want to be addressed on a per substance basis, so at the molecular structure level.

An example of that is the FDA and nanomaterials. Nanomaterials are widespread in their use, and they range in the way that they're manufactured from things like microbeads and microplastics to specific healthcare apparatuses that end up in the water supply. They feel confident that they can address nanomaterials as a group despite their disparate function. But that said, the Biden administration has announced that two billion will be allocated from the bipartisan infrastructure law to address substances from this contaminant candidate list, especially in historically marginalized communities, so that's a positive step in addressing it in that direction.

On the state side, due to the myriad of CECs, and as I said, the traditional regulatory process, states are often looking to the federal government for a lead on how to regulate these things because extra regulation on the part of the state could lead to loss of business involvement in their state if they're too far or too strict. Typically states wait for the government, and this lack of action on the government's part has led to a minimal response or difficult-to-discern responses in our legal scan.

But there have been some specific compounds that have started to be addressed. A good example of that is Florida is attempting to address some of the compounds involved in harmful algal blooms or HABs. Specific municipalities have also attempted to take action on compounds, but, as I said before, the state doesn't want to appear to be anti-business, so these attempts have typically been preempted by state law. A municipality may attempt to prohibit the use of particular compounds. A good example is Key West attempted to prohibit use of sunscreen that contains certain brominated compounds that have been shown to have detrimental health and environmental effects, but they were immediately preempted by state law. And preemption just means the state steps in and says, "We have the sovereign power here and are going to prohibit you from passing this law."

Moving on, another task that I was involved in this summer was writing for The SandBar, which was a great experience, and the case that I got into was the Relentless Incorporated versus Department of Commerce. What this case involved was a group of herring fishers who hoped to defeat a rule propagated by the Northeast Regional Fishery Management Council, which is under the Department of Commerce, basically requiring them to pay for a fishery observer or at-sea monitor onboard their vessel during some trips. They said that this regulation was arbitrary and capricious violative of Magnuson-Stevens, which is the overarching act which regulates fishing and offshore aquaculture, in some instances, standards outside of what was permitted by the Magnuson-Stevens Act and not entitled to Chevron deference.

Chevron deference is massively important to judiciary principle, which is based on a case involving the Chevron Corporation, hence the name. Essentially, Chevron deference dictates that when an agency is interpreting their own regulations or their own organic act, they are owed deference by the judiciary in what they are allowed to do. The fishers are saying that in this instance, that no deference should be issued because what they're doing is illegal, but they were denied on all counts by the First Circuit.

This is interesting, however, because there is another case that has a very similar fact pattern out of the D.C. Circuit, Loper Bright Industries versus Raimondo, and has been granted cert before the Supreme Court on the issue of Chevron deference, hoping to overturn the principle and the rule altogether. This court has shown tendencies to have its own proclivity and its own opinions about precedent, so it'll be interesting to see if Chevron deference is upheld, and obviously, in that instance, it would have a detrimental effect on the ruling in this case.

Just some highlights and challenges of working with the Sea Grant Law Center this summer. Overall, it's been an incredible experience, but some things that I've learned are, it's surprisingly difficult to research legislation across states on wide groups of pollutants. As I said, many legislation and regulation utilize substance-specific regulation, which means that if you're searching for something like a brominated flame retardant, it's very difficult to search for that on a whole. You might be able to search for a specific

type, but there are many barriers to and the legal search engines aren't always well-calibrated to do specific searches in that way.

A national database of regulations would be definitely helpful and especially for states to build their own suites of regulations in this way, especially as we learn more about the detrimental effects of emerging contaminants. And it would definitely help to better understand how we are addressing this nationwide as well.

Presenting on legal topics can be difficult when needing to convey specific information to a wide audience, so I hope that I've done an okay job of that today. I know there's been a lot of big words and a lot of highly-specific information that's also somewhat general, so I hope that hasn't been too much of a drag for all of you listening. Presenting to the advisory committee as part of the Emerging Contaminants Project and helping to facilitate the group discussion there was invaluable for my own experience and just being a part of something that's definitely addressing a problem that needs to be addressed. So, it was really, really cool to be able to work with different leaders from different states and hear their opinions and thoughts on what needs to be done next.

The vast amount of chemicals in use in this country makes comprehensive legislation and coverage difficult for regulatory agencies, especially state regulators who rely on the federal floor. But the major highlight has been being able to involve myself on a deeper level in law surrounding marine and coastal issues, so really enjoyed this opportunity and the opportunity to speak with you all today. Thank you so much for your time and thank you to my supervisors and everybody else for everything you've helped me with this summer. Looking forward to rounding things out well. And now, I will turn my mic off and pass things off to Tiara for our final presentation.

Tiara Parkins:

Thank you, Matt. Hi, everyone, I'm Tiara Parkins, and I'm a senior at the University of Mississippi. This summer I had the opportunity to work as a communications intern for the Sea Grant Law Center.

You're probably wondering what is a CEI. The CEI is a pretty much community-engaged intern, and the Sea Grant Community-Engaged internship is designed for students from underrepresented and indigenous communities with the goal of broadening participation in marine and coastal professions. During my time as a CEI, I had the opportunity to attend professional development webinars, and one of the ones that really stuck with me was the Knauss Mentorship, where I had the opportunity to meet with two other mentors. They were previously working in the Sea Grant, and they are currently Knauss Fellows. They gave me pretty much some insight on their current job and their current roles working with the government and the EPA, and they just offered me any assistance and advice that I felt like would be needed for post-grad opportunities in grad school and just career advice.

The next one was inclusive communication that just pretty much touched on being inclusive in the workspace and making sure that everyone felt comfortable and things are communicated effectively. The last one was focusing on brand identity and building your brand. It talked about who you were as a person, pretty much the impact that you have when you were in the room, and your overall brand.

Again, I worked as a communications intern, but that was for the law center. So during my time at the law center, I did various amounts of things such as blog posts where I created a blog post with the other law fellows, and it was just pretty much just an array of questions that I created for them. I did press releases for the law center, and they had a template for that as well as for SipSafe. Sip Safe, I created communication media for them as well. They're a clean water initiative where they test the water at childcare facilities for lead and just promoting, again, a clean water initiative for them.

I also did a lot of content creation that was posted on our social media accounts like LinkedIn, Twitter, and so forth. Here you can see the content calendar where it pretty much just has everything that I created so far for that month, the times it would be posted, the type of content that it was, the post types, and the social media platforms. I would say it definitely helped me out a lot. And you can see here where it's like World Reef Awareness Day, Black Birders Week, Environment Day, lots of events that I had the opportunity to learn about that I didn't know about before starting my internship.

Here are the content posts that I made. Okay, so Black Birders Week is a week-long series of events that were curated for Black nature enthusiasts previously in a space where Black people weren't feeling like they were included or wasn't inclusive. That space wasn't made for us, and so that's how Black Birders Week came about. And I had a decent amount of time to research what it was about, so I really enjoyed that.

The World Ocean Day post that I made, obviously just showcasing World Oceans Day, and Environment Day was just a fun post I thought to be included on social media asking what Environment Day mood you were in. There are a lot of other content posts that weren't able to be included, but I did those as well.

In my previous presentation, I made a proposal for the Sea Grant Law Center to start an Instagram account, and I included the benefits of starting an Instagram account, which would pretty much expand their reach, increase their engagement, being able to meet with other people and talk about pretty much the community-building and educating people and bringing awareness to environmental issues. There's also the strategic plan that I included as well that you could see. So, I feel like again, it would just be a good idea to increase their engagement with a younger audience and bring awareness, and it would be a good thing to do because I think there was a need for one. So, I decided that they could implement it.

Lastly, it's pretty much just like the Instagram content posts. It's just a visual of what they'd be posting once the Instagram account was started. Something about joining the mailing list, obviously, you've heard about The SandBar, and that would pretty much be sending them marketing emails about The SandBar and any publications that they will make.

That wraps up my overview of my eight-week internship that I've had this summer, so that completes it. I just want to give a special thank you to Terra and Stephanie and everyone that I've worked with over the summer and yeah.

Terra Bowling:

All right, thank you so much to everyone for joining us today. Thank you to Sam, Gabby, Matt, and Tiara for your presentations. We've really enjoyed having them on our team this summer. They've been wonderful assets for our program. We have a few minutes for questions. I don't know if there are any in chat, Stephanie or Cathy?

Stephanie Otts:

Yeah, Terra, we're just getting a lot of thanks in the chat. No questions, but you might just want to give it a minute. But thanks everyone for being here and for joining us today.

Terra Bowling:

Yeah, and just want to mention again, this was the fourth in our webinar series. We'll be having another webinar in August, so stay tuned for announcements about that on our social media pages and our website. We'll be posting the recording of this webinar on our website as soon as we have that available, so that's it.

This transcript was exported on Jul 20, 2023 - view latest version [here](#).