



RUTGERS  
**GREEN PRINT**

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## Upcoming Events

March

7

*Science Cafe: Larry Katz "Did humans domesticate animals or did animals domesticate humans?"*

🕒 10:00am

📍 IFNH Atrium

March

9

*Ecology Seminar: "Species extinctions under climate change: prediction, understanding, prevention" with H. Resit Akcakaya*

🕒 4:00pm

📍 Alampi Room, Dept of  
Marine & Coastal Sciences

March

23

*Ecology Seminar: "The spatial hydra effect: that which does not kill metapopulations makes them stronger" with Jeremy Fox*

🕒 4:00pm

📍 Alampi Room, Dept of  
Marine & Coastal Sciences

Dear Readers,

On January 20th, Donald Trump became our 45th President. On January 21st, we got to participate in the Women’s March in New York City, and look forward to taking part in many demonstrations in the future. Never has an American leader elicited so much passion, although our freedoms of expression are dividing our nation. From Washington D.C. to Sydney, we came together in cities around the world; united to resist but representing a myriad of causes. Attending the march was nothing short of empowering, as we stood together for equality and justice for all colors and creeds.

Whether it represents the scientific community, LGBTQ rights, refugees, Muslims, or any other group, we, the Green Print, have decided that we will not tolerate any kind of discrimination. Here at the Green Print, we hold the discrimination of science to be of a special concern – climate change has put us in an existential crisis. President Trump has only spent a few weeks in the office and already his actions have proven that he is a threat to the scientific community (see Ben’s article on page 7). Science has made stupendous advancements in the last century, and for us to take steps backwards at this point would be detrimental to everyone’s future.

The feelings elicited by the Women’s March were addictive, and Green Print looks forward to participating in the March for Science and the Climate March in April. It is by working together, and standing up for what we believe in, that we can be strong enough to make a difference.

Sincerely,  
Emily Hunziker and Ramya K  
Editors



Photos: Tereza Marshyrt & Emily Hunziker

## ICELAND: A GREEN JOURNEY

by Jessica Schoen

Photo: Jessica Schoen



I have always wanted to travel abroad but did not want to go for a whole semester. When I saw The GREEN Program offered eight day trips to Iceland, I was quickly intrigued. I applied over the summer for the January 2017 program and was quickly accepted. Boy, was I excited. I got the email at work and immediately called my mom at 9:00 AM. My mother is a stay-at-home mom and therefore was awoken to the sound of her loud ringtone. Poor soul. Once she woke up from the initial shock of the deafening phone, she was just as excited as I was. After this came the preparing. I started a GoFundMe to help with the cost; I didn't expect any money out of that because it was my responsibility to pay for the trip since I applied. I did manage to raise some money, however, and it helped me out dramatically. (Shout out to: Heather Sommerville & Megan Hessenthaler, Derek Kirkey, Jim Williams, Ruby Gere, Kammy Singh, Debbie Catapano, the Spitalniak's, Chet Van Wert, and my mommy and daddy.)

I searched the internet for the cheapest clothing I could buy and came across Sierra Trading Post. I purchased most of my stuff from there. Additionally, I looked in Sports Authority because they were going out of business. I thought I could just buy the cheap stuff since our temperature in NJ was pretty comparable with Iceland. I thought my cotton Parka would do me well in Iceland since it keeps me pretty warm here. In addition to all this, I figured it would be better for me to get contacts since it rains a bit in Iceland (rains? Cotton Parka? Put the two together). I thought about my glasses getting wet but not my jacket. Smart. \*eye roll\*... I purchased my plane ticket which turned out to be relatively 'cheap' in terms of plane ticket costs. It costed me \$175 more to go to Iceland than to come back though. Additionally, did you know the flight to Iceland is only five and a half hours? Well, now you do. Anyway...

The program I was accepted into was to study renewable energy and sustainability. I knew Iceland had a lot of geothermal heat but I did not realize the extent of their energy program. I expected to go there, learn a few things, and come back with some knowledge of Iceland. I thought I needed to learn the Icelandic language before so I had purchased a program of which I did not end up using. Waste. Of. Money.

Before entering the program in January, I thought I had learned all I needed to know about Iceland. It's cold, they use a lot of geothermal energy, and they speak Icelandic. Honestly though, I did not even know what the Icelandic flag looked like.



I figured this program would just give me something to put on my resume and it would just be an interview conversation starter. Which it is... but I did not realize how much I could learn in a week about a country that I had never been to.

Stay tuned for the next issue to continue my Icelandic trip...



## ENDANGERED SPECIES OF THE MONTH: WEST INDIAN MANATEE

by Jessica Schoen

The West Indian manatee (*Trichechus manatus*) is a large, aquatic mammal. Their range spans through the Caribbean basin which includes the coastal waters of the Gulf of Mexico and the Atlantic Ocean. There are two subspecies: the Antillean manatee and the Florida manatee. Nicknamed the “sea cow” because of its foraging habits, this manatee spends 5 to 8 hours a day eating 32 pounds of plants. When faced with hard-to-get plants, the manatee will use its flippers to dig them up. Manatees are an average of 10 feet long and weigh between 800 to 1,200 pounds. Manatees live in shallow water and can withstand large changes in salt content of water; however, they are limited to the tropics and subtropics because they have an extremely low metabolic rate and a lack of thick insulating body fat. They can remain underwater for as long as 12 minutes.

Manatees have no breeding season so they can mate at any time of the year. Females give birth to one or two calves every 2 to 5 years and they stay with mom for 2 years; however, babies can start eating plants right away. Manatees communicate with touch and with squeals and squeaks. A mother seal and her baby can recognize

each other through the vocalizations. They have sensitive tactile hairs covering their bodies that provide haptic (touch) feedback to the manatee. They have no natural predators and are not territorial.

The West Indian manatee is considered vulnerable and is on the Endangered Species list. There are approximately 13,000 manatees in total which is a significant increase over the past 25 years. The manatee was hunted for years for its meat and hide. It continues to be hunted illegally in Central and South America. Collisions with vessels are also a major concern for manatees. Red tide, which is a bloom of toxic red dinoflagellates, and cold waters cause health issues for the manatee and can lead to immunosuppression, disease, and death. Manatees will swim in waters near power plants to keep warm.

The manatee is of particular interest when it comes to the proposed wall that Donald Trump wants to build. The wall could extend along Texas’ coastal waterway which is the manatee’s habitat. Trump’s plan could disturb a multitude of endangered species – it is not just limited to the manatee.

The Save the Manatee Club is an organization started by Jimmy Buffet and former U.S. Senator Bob Graham. It was established in 1981 to protect endangered manatees and their aquatic habitat for future generations. Their website is [savethemanatee.org](http://savethemanatee.org). You can either donate or adopt a manatee for \$25.

# DEATH TO US ALL: A LOOK INTO THE FUTURE OF ENVIRONMENTAL REGU- LATION BASED ON TRUMP'S FIRST WEEK AS PRESIDENT

by Andrew Cumming

Less than a week after Donald Trump's inauguration as 45th president of the United States, the administrative team has already begun making some controversial changes. From repealing the Affordable Care Act to limiting the entry of muslims into the United States, Trump has signed executive orders that will undoubtedly affect many Americans in the near future. Of all changes that will impact the future, perhaps the most lethal will be Trump's changes regarding environmental issues.

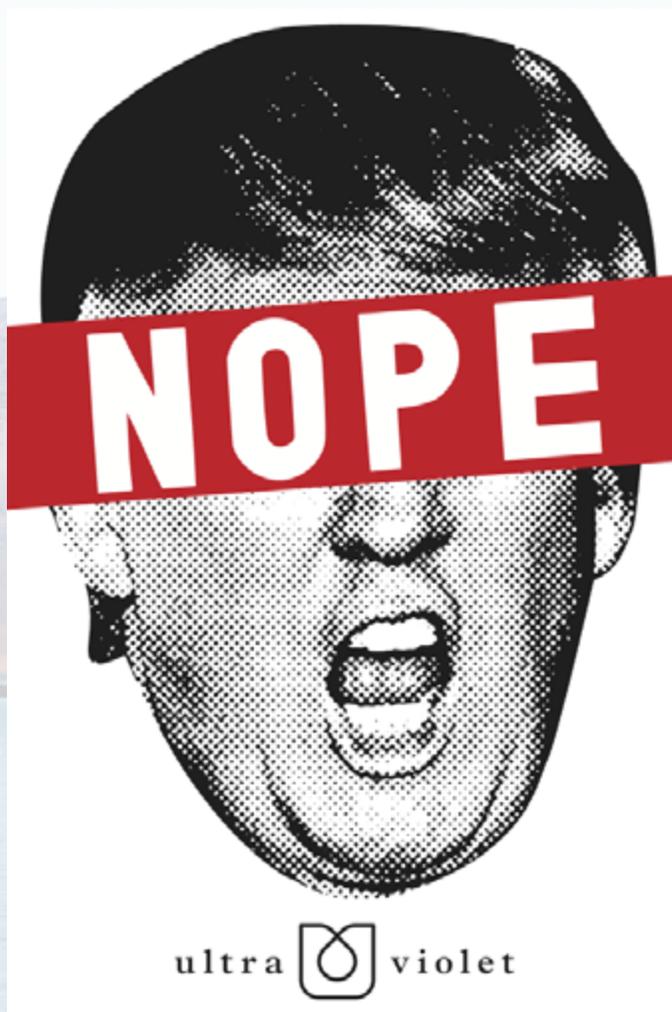
In his first week as President, Trump has already signed executive orders to revive the Dakota access and Keystone Oil pipelines. This is controversial for a number of reasons, most notably because of the potential environmental impact, as well as intense resistance to the pipelines from protesters. Additionally, Trump's team has asked the Environmental Protection Agency (EPA) to stop posting on social media. The Trump team has also claimed that they will personally review future scientific findings of EPA studies to determine their validity.

These actions indicate to me a direct disregard for science, the EPA, and the people of the United States. We no longer have time to dismiss climate change, because it is already having real impacts on our world. Recent studies released last September have indicated that carbon dioxide levels in the atmosphere have permanently risen above the 400 ppm threshold. If our government doesn't start taking immediate actions, there is no doubt we will suffer.

I am worried about our country, about the persecution millions of American's may face in Trump's America. I am worried about people's health, happiness, and stability. I am most worried about the effects of climate change, and I believe Trump's America could very well bring death to us all.



Photo: forbes.com



Sticker by weareultraviolet.org

## OUR COUNTRY UNDER A SCOTT PRUITT/TRUMP RUN EPA

by Ben Purzak

I hope no one is planning on breathing these next four years. If you do, you might want to increase your insurance premium. Some of you may be asking, “what does the EPA have to do with my insurance?” Let’s just say without the Environmental Protection Agency’s work, there’s a higher chance for you to have asthma and lung cancer. That’s right! The EPA has more of an effect on your health than you can imagine. Former EPA Scientist Tracey Woodruff, in her interview with Robert Siegel of NPR, replied to a question about the EPA’s role with, “I think very few people think of EPA as an agency that’s directly related to health. Not having [the] EPA at the table in terms of talking about the science related to environment and health would be a big loss. And I think their contributions cannot be overestimated enough”.

From their establishment in 1970, the EPA has saved our lungs and health through limiting the amount of chemicals released in our environment. The EPA has eliminated lead in paint and gasoline, banned DDT from pesticides, improved water treatment for drinking water, banned CFCs emitted from aerosols and appliances, banned dumping sewage sludge into oceans, and the list goes on. The point is that without the EPA cracking down on chemicals and pollution our lives would be shorter and unhealthy.

The irony in it all is that the GOP wants to take away the Affordable Care Act when also inhibiting the powers of the EPA. This is going to be a time when people are going to need healthcare to combat the toxins that are going to be unchecked in our air and water. They want to ‘Make America Great Again’, but also ‘Make America *Dirty* Again’. I don’t think a lot of GOP lawmakers and congressmen realize the importance of the EPA. They view the regulations as just an attack on the economy when in reality, regulations protect citizens from the pollution of doing business.

What makes all of this scarier is the lack of knowledge we have on Scott Pruitt. According to ThinkProgress, “The Oklahoma Attorney General’s office has more than 3,000 pieces of correspondence between fossil fuel companies and Scott Pruitt’s office since 2013.” The thing is, no one has seen these pieces of correspondence. During his hearing with members of the Senate Environment and Public Works committee, he dodged questions about his ties with fossil fuel companies. According to Nick Surgey, director of research for the Center for Media and Democracy, “he [Pruitt] has it within his power to provide this information... If he decided that it was important to

provide this information, he could instruct his staff to do so.” His office is still responding to earlier open records requests. Who knows when or if we will get this crucial piece of information. We don’t know yet if he will be the EPA head, but this lack of information and sketchy dealings with fossil fuel interests does not bode well for the future of our planet and our beautiful country.

Scott Pruitt does not have a good track record with the EPA and has sued the agency a number of times in the past. Based on his congressional hearing we can infer that he has no knowledge of the EPA and its responsibilities. “He has no knowledge of how much lead is safe for children to consume; and he does not believe that pollution is affecting ocean acidification—he even denies knowledge that it is happening.” This is not the man we want leading an agency that plays such a crucial part in our health and safety.

### Passion Puddle Playlist

By Tyler Lepucki

1. Wave Racer - World Record ft. Lido
2. Watch Me - banvox
3. Ur On My Mind - DVBBBS
4. Burnt Rice - Aiobahn
5. Alone (Original Mix) - marshmello
6. Deep Down Low - Valentino Kahn
7. Fuck Me - Knash
8. IDFC - Blackbear (acoustic)
9. Hey Ma - Knash
10. XO - The Eden Project

## People with a Purpose

Connor LaMontagne

He doesn't know quite how to work this  
He feels alright, but looks around and knows that things are sinking  
He asks for love, but they say "Let's not get political"  
Even though that's what they've all been thinking

She thinks there's no one who can fix it  
We must be through, let's give it up and get on with our living  
What can we do? We're rodents in a cage, not influential  
But clever rats can chew through power wires

They hear him say that he's disgusted  
Yeah he fights for life – he yells for change while we're all busy sleeping  
He leaves the room and calls them fools for failing to deliver  
Leaving them worse off than when they came in

She gathers people with a purpose  
She's glowing warm, with love that no hard heart could wrestle from her  
She doesn't know if things will ever end up how they were  
But why should they when they can be much better?

## HALF THE PLANET

by Ian Montgomery

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**Half Earth** is a proposed solution to the potential mass extinctions of millions of animal and plant species. The idea calls for half of all land on the planet being reserved and protected solely for animals and plants with the other half being used by people. Private entities plan on accomplishing this by purchasing large tracts of land, rewilding them with native plants and animals, and connecting them with large chains of uninterrupted corridors. The corridors would either run north-south to let species travel north as the climate warms, or west-east for animals to travel east as rains occur less often.

M.C. Davis, a wealthy businessman who later in life became interested in conservation, planned on resurrecting a portion of the original 90-million-acre longleaf pine forest in the American Southeast. He has been working on this goal through an initial 51,000-acre purchase of dilapidated farms and forests in Florida and by digging up pulpwood pines to be replaced with longleaf pines. He is restoring his Nokuse (pronounced no-GO-see) plantation by planting eight million seedlings and by using controlled fires to release seed pods for further growth. Davis has observed bears successfully reintroduce themselves, and he plans to rewild red-cockaded woodpeckers, bison, gopher tortoises, and many other species.

In New England, due to the higher population, land is broken up into smaller tracts with more landowners. This makes it difficult to manage, as thousands of individuals need to be contacted to protect the biodiversity on their properties. By arranging easements and deals instead of outright purchases, they can have financial savings. Traditionally, the tracts were managed by small local groups called land trusts, but they are now merged into larger associations called regional conservation partnerships (RCPs) to take on bigger projects. Another notable area in New England is built on an old reservoir from the 1930s that is now protected by three separate RCPs, with the largest having a goal of protecting up to a million acres in the area. This preserve, the Norcross Wildlife Sanctuary, on the border of Massachusetts and Connecticut, was founded by Arthur Norcross, another wealthy businessman, with his initial purchase of 8,000 acres aimed at protecting plant diversity.

In Montana, The Flying D Ranch established by Ted Turner, is an over 110,000-acres ranch that protects elk and bison species that welcomes other species such as mule deer, grizzlies, cougars, moose, pronghorn antelope, cutthroat trout, and even wolverines. The ranch even sustains itself through the sale of bison burgers

and infrequent organized hunts of bull elk. This is only a snippet of Turner's two-million-acre land holdings in the US and Argentina, with many similar ongoing projects. As explicitly stated by Turner, "no country will ever have the money to buy up all the unprotected pieces," but these "wild working landscapes" can make a profit for both the owners and the planet.

In order to influence more of these types of projects, people need to be made aware of the successes from Nokuse, New England, Flying D, and many other projects. Land trusts need to merge into regional conservation partnerships and they, too, need to merge for greater power in negotiating better prices and having larger impacts. Private nonprofits that already own significant tracts of land will have to work together to connect their holdings, and ranches will have to work harder in bringing America's native species back to the furthest corners of the country.

While someone could make a 1,000 acre stretch of land beautiful with a high effort, that same effort could be better spent on hundreds of thousands, if not, millions of acres. The quantity is more important than the quality because if one piece is not in balance, the scales can be tipped in an unintentional direction. It's much easier to manage problems when more land is involved as there is a higher need to concurrently reforest land, even if it looks ugly for a while, in order to maximize productivity in the quickest amount of time. However, nonprofits and private organizations alone will not be able to drastically make an impact as the United States encompasses approximately 2.8 billion acres. Taxes on rural and suburban areas will have to be raised continually until the majority of those areas are emptied of people and eminent domain would likely need to be used in greater volume than all previous instances combined. If taken seriously, this could be one of the costliest projects in human history, but one of the most important.

## WHAT ABOUT THE N.J. GAS TAX?

by Joshua Morales

New Jersey's roadways are pretty bad. If you've driven at all in the wonderful Garden State, you understand this completely. Fixing N.J.'s countless substandard roads would take obscene amounts of money – money that just isn't around. The N.J. state government decided to do what every single government has done since the dawn of civilization: tax the people. Taxes are nothing new for the people of N.J. – it is one of the most expensive states to live in the country.

The people of New Jersey understand that it is costly to live in this state, so they asked about all the other taxes that they pay. The government's reply was simply that the Transportation Trust Fund (TTF) was all out of funds. To fund the TTF, the state politicians came up with a bill that would impose a gas tax on the people in exchange for a decrease in the sales tax and the elimination of the estate tax. To make sure that the money from the gas tax is not spent frivolously, there is a sort of lockbox created. Portions of the money raised from the gas tax will go into the lockbox; money which will be specifically dedicated to fixing New Jersey's roadways.

To the state government, the idea of having the citizens of New Jersey forking over more money, in exchange for better roadways was a no-brainer. However, for the people of NJ who actually knew about the tax, it was also a no-brainer to oppose it. The idea for the lockbox probably came very easily for the state government, but it was not as easy for the state to get the public's support. The gas tax faced heavy opposition, as the people of New Jersey fought tooth and nail, but alas, they still came up short.

With Chris Christie's signature, the gas tax was imminent. On November 1, 2016, the first wave of the gas tax was implemented, but there was still more to come. People who drive often felt the effects immediately, as did businesses. In fact, Uber had to raise its prices due to the increased price of gasoline. The people of New Jersey lost the battle, but at least they were going to get better roadways. As the great Dwight Schrute always says, "false."

For many N.J. residents, the presidential election was probably the only important question on the ballot, but there were two other questions that needed to be considered. Question number one asked if casinos should be built in Northern NJ. Considering how well Atlantic City is doing at the moment, New Jerseyans decided to take a pass on that one. The lockbox that was spoken about earlier, came into question for number two:

*"Do you approve amending the Constitution to dedicate all revenue from the State motor fuels tax and petroleum products gross receipts tax to the Transportation Trust Fund?"*

*This amendment would provide that an additional three cents of the current motor fuels tax on diesel fuel, which is not dedicated for transportation purposes, be dedicated to the Transportation Trust Fund. In doing so, the entire State tax on diesel fuel would be used for transportation purposes. The entire State tax on gasoline is currently dedicated to the Transportation Trust Fund and used for transportation purposes."*

The quote above is the first portion of the actual question number two that was on the ballot. In layman's terms, the question asked the people of New Jersey if all of the money from the gas tax, should go the Transportation Trust Fund. If people chose not to research the questions beforehand, this question seems as if it will actually be beneficial. Unfortunately, that was not the case. Behind all the legal talk, the question was actually asking if the people of N.J. gave permission to the state legislatures to borrow money. Money that could go towards fixing the roadways of New Jersey, but it did not have to. As question number two was successfully passed, the politicians of Trenton had all the money they needed to do whatever they felt like.

In a state where the governor is supposedly a conservative Republican who prefers limited government, New Jersey ended up with one of the most regressive taxes in its history. This tax has already and will continue to affect every person in the state. Families that are living paycheck to paycheck, will see their expenses increase. Business owner's expenses will rise, which will inevitably raise the prices for their goods and services. The gas tax will continue to have adverse effects on the people of New Jersey.

While a great majority of the state was opposed to the gas tax, maybe it will also bring about some good. With increased gas prices, less people will feel the need to drive. Instead, these people can take public transportation or maybe walk, which would effectively reduce their carbon footprint.

In today's world, this news is ancient. Most people probably did not even notice any change in gas prices. If you are one of those people, just get a little bit informed about what is going on in your state. Nonetheless, there is almost nothing that can be done for this, but a similar situation may present itself in the future and people must be informed to fight against it.

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### Death to Us All: A Look Into the Future of Environmental Regulation Based on Trump's First Week as President

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