ACCESS WHITEPAPER SERIES

NUESTRO OCÉANO Y LA COSTA

LATINO CONNECTIONS TO THE OCEAN AND COAST

PREPARED BY CIRSE GONZALEZ

Hispanic Access Foundation

Hispanic Access Foundation

TABLE OF CONTENTS

Cover photo taken by JP Zegarra

EXECUTIVE SUMMARY

AS THE OCEAN CHANGES, SO TOO DO ITS SHORES

The ocean sustains us – individuals, communities, the global society - physically, mentally, spiritually. It regulates our weather and climate, provides for every other breath we take, nourishes us and inspires us. Across seas, people, ideas and goods have traveled, connecting us with each other, with culture and with land. We find solace on its shores, seek pleasures on its waves, and will cure each other employing secrets from the deep.

Practically speaking, the ocean keeps us safe, fed, clothed and employed. Its coral reefs protect us from storms, as do the adjacent wetlands that filter our waters. There isn't a facet of our life that isn't touched by the ocean.

Yet, we continue to threaten this balance; and, perhaps unsurprisingly, the ocean responds, and it continues to threaten us.

We are changing our ocean. We are polluting it with plastic. We are melting its floating icecaps and provoking it ashore. We are elevating its temperature. Slowly, and steadily. In turn, coastal communities are ever more susceptible to the results: sea level rise, flooding, and coastal disasters. These same communities are experiencing significant growth in Latino populations, many of which are among the most vulnerable to coastal threats increasing in severity and frequency.

Combating these threats to the ocean and ourselves using the inherent social capital in these communities is, however, presently complicated by the fact that we know so little about the communities themselves, and that so little is done to involve them in related work.

WHAT WE (DON'T) KNOW

We know that the U.S. Latino connection to the ocean and coast is strong, historical and intimate. From indigenous settlement to the present day, the ocean has given and taken away, alternately providing food and flood, salary and storm. While vulnerable to nature and vulnerable to the man-made issues carried in its currents and waves, we know that Latinos value our ocean and coasts, and the resources they foster; and we know that Latinos are becoming increasingly concerned with the environment. Moreover, we know that Latinos acknowledge the myriad of reasons to steward our seas; a sentiment that is recognized as fervently in the headwaters as in the tidewaters.

We know that water, like language, binds Latinos nationwide – connecting inland communities to the shore, physically within watersheds; professionally, as with occupations like agriculture; and tangibly, through recreation and tourism.

We know that there are existing initiatives dedicated to exploring and fostering the Latino connection to the outdoors and natural resources, including those addressing broad environmental issues like climate change. We also know that there are organizations connecting underrepresented populations, namely coastal youth, to the ocean through science-based education initiatives.

And yet, while Latinos remain a consideration in these efforts, there exist very few endeavors, studies, programs or otherwise, that focus on understanding the Latino-specific connection to the ocean and coast, and/or implement this understanding in their approaches. In the same vein, these initiatives focus on limited sectors of the population, ignoring opportunities to connect with Latinos in industries like service and defense, which are closely linked to the resource - and where a significant portion of Latinos are employed.

THERE EXIST VERY FEW ENDEAVORS, STUDIES, PROGRAMS OR OTHERWISE, THAT FOCUS ON UNDERSTANDING THE LATINO-SPECIFIC CONNECTION TO THE OCEAN AND COAST...

Integrating a nuanced relationship between Latinos and their waters is paramount to successful Latino outreach efforts and first requires addressing significant gaps in our understanding. With this understanding, we can more effectively, for instance, combat barriers to access and address disempowering perceptions, as well as assess our approaches in engaging this target audience in planning processes. While the Latino population continues to grow along the coast, proportionately, their numbers aren't reflected in studies on coastal access; and it's not for lack of desire. Understanding their relationship to the coast can help us explain why.

Notably, we don't know what untapped potential lies in Latino stewardship, political engagement and/or exploration of our seas; we have barely begun to integrate and analyze Latino voices and perspective.

But we're learning. And we're recognizing that we have to do it together.

MOVING FORWARD

HAF recommends a strategy predicated on four pillars of growth: understanding, empowerment, engagement and advocacy, each with specific recommendations focused on Latino community:

Understanding

- **Recommendation 1:** Further research on Latino-specific attitudes, perceptions, values, motivations and resource use regarding the ocean and coast, especially as they relate to vulnerable communities (including climate migrants and temporary workers), is needed to determine: 1) what their relationship with the ocean/coast looks like physically, mentally, emotionally, socio-demographically (including identification of any barriers to entry); 2) how they perceive that relationship evolving (particularly with respect to climate change and increased stressors, as well as with any acculturation experienced as a part of immigration to the U.S.); and 3) how, as a society, we might best equip them for when they arrive.

- **Recommendation 2:** Identify and designate new heritage sites and protected areas that preserve the Latino past or reflect the Latino present, acknowledging its varied history and identity with respect to coastal resources for future generations.

Empowerment

- **Recommendation 3:** Incorporate culturally aware participatory approaches in coastal decision making and land use planning to empower Latino communities.

- **Recommendation 4:** Outreach and education efforts focused on the ocean and coast should target those whose service – in hospitality, defense, agriculture, etc. - has an impact on aquatic health.

- **Recommendation 5:** Support and strengthen pipelines for Latinos in ocean, coastal and educational careers – from academic to vocational - using immersive methods predicated on cultural understanding and leadership development, including methods that expand awareness of these opportunities.

- **Recommendation 6:** Support and connect existing groups though coalitions that leverage the inherent social capital in knowledge transfer, shared experience and influential actors.

Engagement

- **Recommendation 7:** Create Latino-specific outreach efforts and organizations to engage a diversity of Latino community members in ocean and coastal issues.

- **Recommendation 8:** Engage Latino communities in ocean and coastal issues through actionable practices including Hispanic Access Foundation's AVER (Ask, Vote, Educate and Reduce), Let's Sea Campaign.

Advocacy

- **Recommendation 9:** Support watershed-wide and ocean and coastal advocacy efforts that have direct impact on Latino communities, through coalitions of advocates with Latino diversity to promote equitable and innovative solutions.

This report provides the background on issues relevant to the Latino connection to the ocean and coast, and paves the way for more of the stories, culture, traditions and lived experiences that will help inform and tailor the most effective approaches and practices for the cultivation of resilient environments and communities.

Photo by Shanna Edberg

INTRODUCTION

Our ocean and coasts have been, are presently and will continue to be, a part of the Latino story. At their best, they've provided the means for exploration and discovery; the inspiration for art, literature and food;

"What first comes to mind are top musical hits 'Vamos a la Playa' and 'En el Mar, la Vida es Más Sabrosa'." Cecilia Art, Regional Manager; Los Angeles, California

a medium for the focus of faith and spirituality;

"Sometimes my dad explained to me how God created and put limits to the oceans. [It] was amazing [to] hear this story over and over. Any birthday in our family was celebrated in a trip to the ocean. All [of] this [made me] feel in contact with God, and helped me to become a pastor." Gabriel Araya; Senior Pastor; Rialto, California

and a source of relaxation and restoration.

"The depth of my connection is catalyzed within each cellular micrometer of my body, it is transformed with each breath I inhale, and with every sip of water I take. The chances I do get to be in the water are more than magic. It is a sense of connectivity and calm, a feeling of peaceful consciousness, respect, curiosity, and fear constantly moving you further from the problem you face into solutions you may be able to use."
David Riera; S.T.E.A.M Educator and Doctoral Student; Hialeah, FL

At their worst, they've brought disparity, disaster, death and disease, by separating the privileged from the poor;

"Many beaches in Los Angeles and Orange County are in extremely affluent neighborhoods, and while anyone can access these beaches, there is still intimidation and tension between the affluent communities and every one else. For example, a few years ago my friends and I got lost looking for a beach in Ranchos Palos Verdes in L.A. County, and when I asked a local for directions, he looked in my car (all of us are Latino) and he said, 'Yes, turn around and keep going north on Western.' I didn't realize until after that he was actually telling us to get out of the neighborhood."
Robert Lemus; Report Editor; Pico Rivera, California

and by way of flood and tsunami, hurricane or contaminant.

"Most Hispanics in Florida are from the Caribbean so they are very familiar with hurricanes. If one comes, we board up the windows and hunker down. Buy supplies and stuff. Flooding is a big issue. I can't get cafecito, croquetas and pastelitos when it floods! ...Hispanics typically have large families that live under one roof, so getting [a] substantial amount of hurricane supplies is important. When boarding up, we usually have to worry about parents that live here in Miami to get their homes boarded up." Luis Carrizo; Sales; Miami, FL

Each Latino has a unique story to tell of their relationship with our waters.

Photo courtesy of Ricardo Sondakh-Dorantes

REGIONAL STORIES

WEST COAST/PACIFIC

"Surfing is a pipe dream so I kept it only as a hobby. No one taught me how to surf because of cost. Everyone thought I was Hawaiian surfing and I realized surfing is a mainly white sport in Orange County. So I paid it forward years later and [now] I teach family, Latinx and friends to surf for free. I focus mainly on [people of color] and LGBTQIA within my community." Anonymous; Southern California

EAST COAST

"I live in an area that is prone to flooding during storms. This can make it difficult to get to and from campus. When it does flood, I often need to move my car to higher ground so that it does not get flooded." Claire Gorman; Graduate Student; Norfolk, VA

GULF COAST

"I grew up in South Texas right on the coast of the Gulf of Mexico. When I was very young I would play in the sand, water and waves at least weekly. As a child, I only used the coast for my own enjoyment. However as I've grown older, I fully appreciate it, as well as see the vulnerabilities that the South Texas coast has. I often go back to my parents' home on the coast and my role with the environment has changed. I often walk on the beach with my parents, but I can no longer just walk. Now I come back with a bag full of trash that I found on my walk." Chantelle Ruidant-Hansen; Park Ranger; San Antonio, Texas

GREAT LAKES

"[My] experiences have allowed me to teach inner city children about the importance and wonders of the Great Lakes ecosystems, and also advocating for controlling agricultural run-off, which has caused many harmful algal blooms in the lakes." Samuel Román; School Principal; Cleveland, OH

INLAND

"I live in a landlocked state, but I remember taking trips to the ocean growing up in Colombia. Recently, last year I was able to visit the ocean in two parts of the US. It's to me, a family spot." Andres Almanza; Henderson, NV

PUERTO RICO

"In Puerto Rico, due to the sea level rise, a lot of the local coast is going through erosion and businesses have had to close due to the floods and the erosion. Many businesses are now being affected more by tropical storms due to the lack of buffer/protection and distance from the water." Fabiola Torres; Los Angeles, California

HOMELAND EXPERIENCE:

"Pollution back in my hometown [Ensenada; Baja California, Mexico] is at an all time high so people cannot go into certain beaches anymore because they look gross. Also, many of the beach access points have been blocked by developers and homeowners in the area so people cannot even walk on the beach if they wanted to." Gabriela Meza; Office Assistant; Los Angeles, California

These diverse stories are part of a whole, a Latino whole. Stories that continue to evolve as Latinos develop new relationships with our seas, and as Latino identity continues to transform over generations and with the new perspectives brought by Latino immigrants. These stories need to be examined apart and together for the most comprehensive picture of the Latino relationship to the sea. Moreover, they need to be considered alongside the changing face of our sea – which continues to face threats that Latinos are both contributors to, and have the power to influence the direction of.

OVERVIEW: OCEAN & COAST, SHORE TO SUMMIT

The global ocean covers more than 70 percent of the Earth's surface. While we know that it's home to the world's largest mountain range and deepest canyon, more than 80 percent of what lies beneath the surface,[1] in 1.34 billion cubic kilometers of water[2], remains uncharted and unstudied. Living within these waters are an estimated 250,000 marine species known to science;[3] among them, the algae responsible for every other breath we take. As many as 91% of existing marine species are waiting to be discovered[4] from a rich variety of habitats, including coral reefs, deep-sea hydrothermal vents, kelp forests and sea ice.

Our weather and climate are influenced by the ocean, which distributes warmth and evaporates into rain. We harness energy from its waves, and tides, and even leverage the differences in salinity and temperature. We drill for oil and gas, and mine valuable minerals from the ocean floor; and we're increasingly recognizing the world beneath our waves as a new frontier for pharmaceuticals.[5-6] Approximately 94,171 ships carry trade internationally,[7] reaching shores with food and goods, ideas and culture. Among their cargo, part of the more than 170 million tonnes of seafood currently harvested;[8] 9.4 billion pounds in the U.S. at last count.[9]

4.2 million Latinos around the nation participate in fishing, averaging 22.2 outings a year, 4.2 more than the general fishing population, and 92.4 million days fishing; 11.7% of saltwater fishing participants, age 6+ are Latino[19]

Salt marshes, mangroves and seagrass beds bridge land and sea along coasts and in estuaries, where inland freshwater discovers saltwater. As with coral reefs, wetlands serve as vital nursery grounds for marine species (68 percent of the U.S. commercial fish catch and 80 percent of recreational catch[10]), while also acting as the kidneys of our ocean, filtering pollutants, sediments and nutrients as they make their way seaward. Wetlands also act as important players in carbon capture and storage, mitigating climate change, while at the same time stabilizing shorelines and decreasing wave energy, further protecting coastal habitats and communities from flooding and storm surges in the process.

Freshwater travels within a watershed, or drainage basin, through streams, rivers, lakes and groundwater toward a common outlet, like coasts and estuaries. Along the way, we harness water for drinking, energy and industries like agriculture, impacting its flow and water quality, and ultimately influencing coastal waters and the environment they sustain. Watersheds are thus home to the arteries and veins of the ocean; the activity that happens within them is inseparable from that which happens to, or on account of, the ocean or coast itself. While watersheds can vary in size and scale, the U.S. has catalogued 2,264 of them nationwide.[11] We all live in one.

32 percent of first-time boaters in 2016 were Latino, compared to 10 percent of active boaters, suggesting Latinos continue to emerge as a significant market[20]

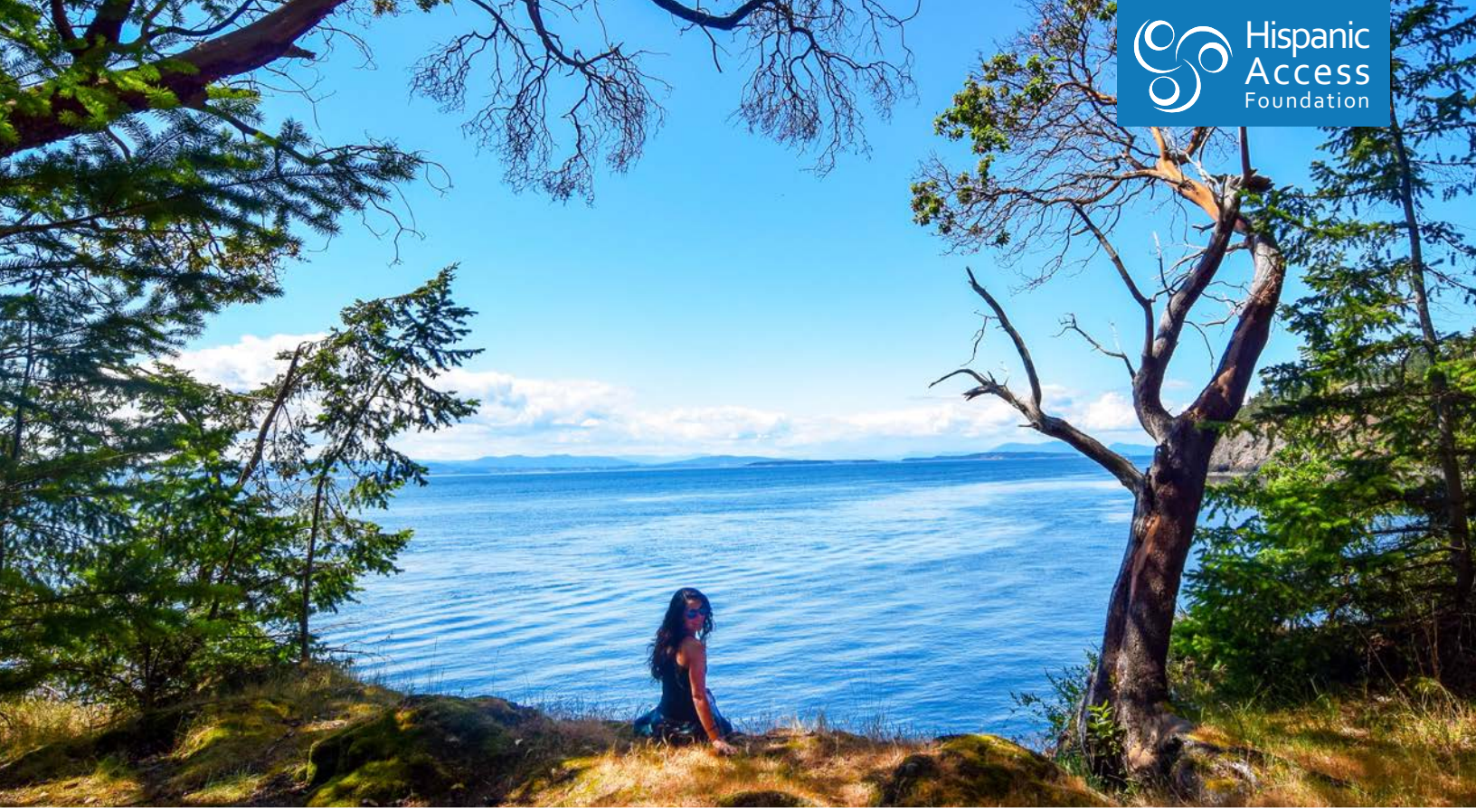
In the U.S. and its associated territories, 95,471 miles of shoreline[12] separate the land from sea and our Great Lakes, along which live 126,873,275 people, 23% of which are Latino.[13] The appeal of the coast is both practical and visceral, as it provides opportunities for employment and seascapes for recreation and repose.

"It's a source of comfort, a paycheck, a memory creator, a storyteller, and a space that I protect." Ashley Suarez-Burgos; Digital Storyteller; Miami, FL

In 2016, these coastal shoreline counties contributed 46% of the nation's total gross domestic product ($8.6 trillion) and 40% of the nation's total jobs (56.8 million).[14] Of the contributions to GDP, $304 billion were directly dependent on ocean and Great Lakes resources, as were 3.3 million of the total jobs.[15] Ocean-based tourism and recreation alone, contributed approximately $124 billion in GDP and 2.4 million jobs.[16] As of 2015, California, Florida and New York were among the five largest contributors to ocean-based tourism and recreation[17], 3 of the top 5 largest states with Latinos. More than 180 million Americans visit estuary and coastal waters each year for recreation and tourism.[18]

Present-day coastal jobs and pursuits are a reflection of a rich culture and history dictated by natural features and resources along the shore. Coasts have long inspired ideas, enabled trade and prompted claims to territory, while influencing cuisine and shaping traditions. A slew of coastal sites around the U.S. safeguard and honor our nation's history, cultural heritage and the natural resources for current and future generations. Evidence of the country's Spanish heritage exists among these sites, preserved for display and interpretation. Contemporary Latino culture also thrives at other sites, existing and emergent, fostering strong coastal communities and connection to place.

Caleb Henderson dives in Biscayne National Park off of the coast of Florida.

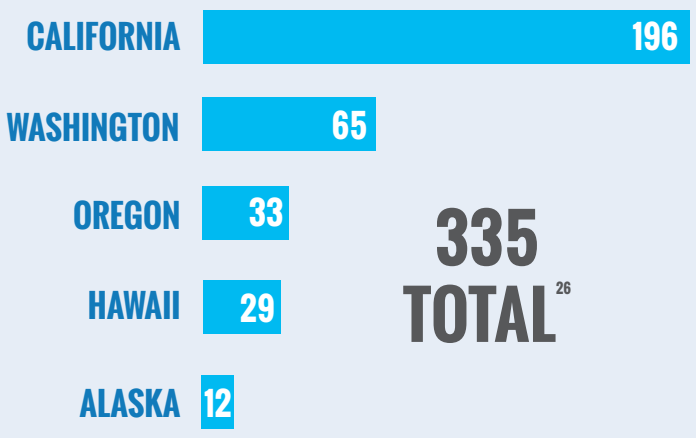


SHORE TO SHORE: OUR WATERS BY REGION

WEST COAST/PACIFIC

- Coastal shoreline length: 42,819 statute miles[21]
- Coastal shoreline population: 34,058,225[22]
- Coastal shoreline Latino population: 10,467,953 (30.7%)[23]
- Ocean employment: 899,000 (4%)[24]
- Ocean GDP: 79.3 billion (2.3%)[25]
- Example billion dollar flood and hurricane disasters this decade:[27]
    - California flooding event, February 2017, $1.6 billion
- Community perspectives:
    - Access to clean water is of concern in CA; polluted drinking waters is regarded by Latinos as a serious threat in lower income areas.[28]

FEDERALLY-RECOGNIZED MARINE PROTECTED AREAS

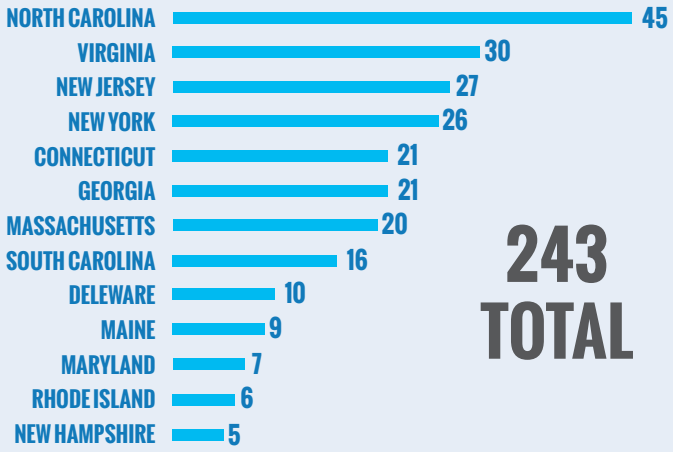


- In California, Latinos are, on average, more likely than other adults to regard the threat of global warming to the state as serious, to acknowledge that the effects of global warming have already begun, and to agree that the state should act as a leader on climate change.[29]
- In California, Latinos are, on average, more likely than other adults to see plastics and marine debris as a "big problem" along their local coast and view urban development as a "big problem" for wildlife habitats and endangered species.[30]
- Less than half of Latinos in California view overfishing as a big problem.[31]
- 62% of Latinos in California are in favor of wind and wave energy projects off the coast.[32]
- Latino residents comprised 38.2% of Californians in 2016, but only 1.7% of them (0.6% of Californians) lived within 1 kilometer of access to the coast.[33]
- The Californian Latino beachgoer is typically a millennial parent with children visiting the beach as part of a large group. Parking, restrooms, and trash cans, in addition to lifeguards on duty are important to them. Their beachgoing concerns are related to parking costs, overnight accommodations and the lack of public transportation options enabling their trips to the beach.[34]
- A 2017 study in Oregon illustrates that 49.7% of the Latino population participates in coastal activities.[35]

EAST COAST*

- Coastal shoreline length: 29,369 statute miles
- Coastal shoreline population: 55,858,368
- Coastal shoreline Latino population: 10,039,130 (18%),
- Ocean employment: 1,450,000 (3.1%)
- Ocean GDP: 101.2 billion (1.6%)
- Example billion dollar flood and hurricane disasters this decade:
  - Hurricane Dorian, September 2019, $1.6 billion
  - Hurricane Florence, September 2018, $24.5 billion
  - Hurricane Irma, September 2017, $52.5 billion
  - Hurricane Matthew, October 2016, $10.9 billion
  - South Carolina and East Coast flooding event, October 2015, $2.2 billion
  - Hurricane Sandy, October 2012, $74.1 billion
  - Hurricane Irene, August 2011, $15.8 billion
  - Northeast flooding event, March 2010, $2.2 billion
- Community perspectives:
  - In a study of Northern Virginians, a majority of Latino respondents felt that local garbage/ trash was the number one cause of water pollution.[36]
  - In a study of Northern Virginians, the majority of Latino respondents felt that water quality spending was "very important."[37]
  - In a study of Northern Virginians, a majority of Latino respondents felt that they were prevented from taking action to protect clean water because they did not know what to do and that online resources could help them take action.[38]

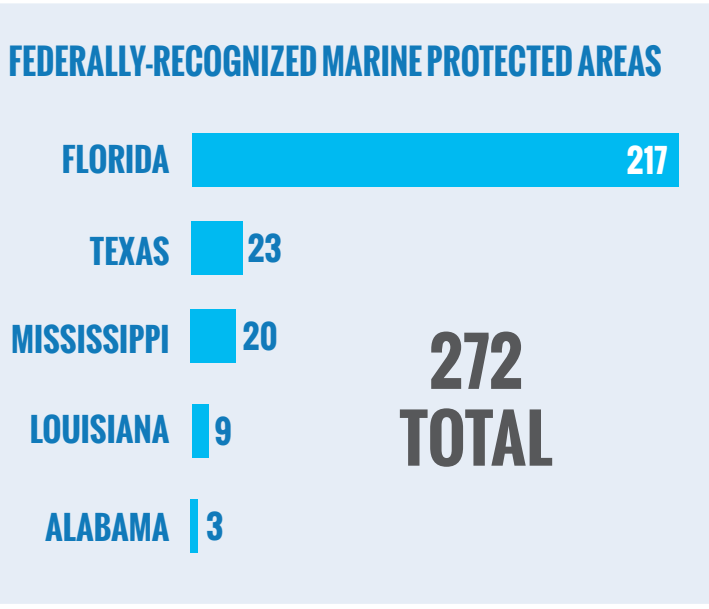
FEDERALLY-RECOGNIZED MARINE PROTECTED AREAS



*East Coast of Florida included, D.C. not included with exception of population estimates

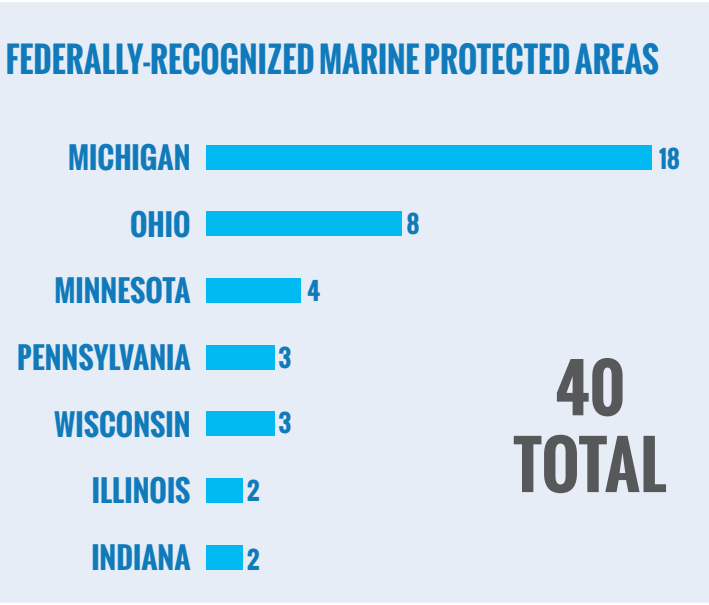
GULF COAST*

- Coastal shoreline length: 17,141 statute miles
- Coastal shoreline population: 16,056,516
- Coastal shoreline Latino population: 3,971,379 (24.7%)
- Ocean employment: 598,000 (2.9%)
- Ocean GDP: 104 billion (4.2%)
- Example billion dollar flood and hurricane disasters this decade:
    - Tropical Storm Imelda, September 2019, $5.1 billion
    - Hurricane Michael, October 2018, $25.5 billion
    - Hurricane Harvey, August 2017, $131.3 billion
    - Louisiana flooding event, August 2016, $10.9 billion
    - Houston flooding event, April 2016, $2.9 billion
    - Texas and Louisiana flooding event, March 2016, $2.5 billion
    - Hurricane Isaac, August 2012, $3.2 billion
- Community perspectives:
    - Texas Latino college student's attitudes regarding the environment are associated with demographic, political and cultural variables.[39]
    - Texan Latinos express high levels of concern about local pollution and are more concerned than other demographics with statewide pollution.[40]
    - Texan Latinos are likely to favor environmental initiatives entailing stronger regulations, new taxes or government spending.[41]



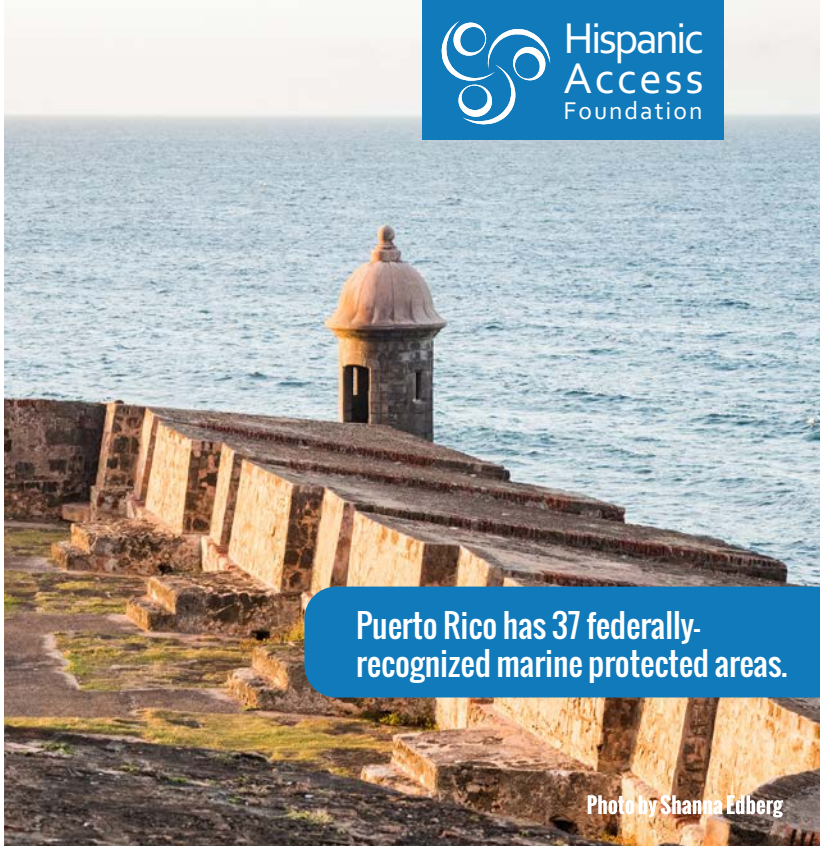
GREAT LAKES

- Coastal shoreline length: 4793 statute miles
- Coastal shoreline population: 18,527,964
- Coastal shoreline Latino population: 2,389,797 (12.9%)
- Ocean employment: 311,000 (1.2%)
- Ocean GDP: 19 billion (0.6%)
- Example billion dollar flood and hurricane disasters this decade:
    - Illinois flooding and severe weather event, April 2013, $1.2 billion
- Community perspectives:
    - A 2017 report found that Minnesotan Latinos engage in the following:[42]
        - 58% canoe, kayak or paddleboard once per season
        - 42% fish at least once per season
        - 80% never motorboat
        - 64% swim in a lake or river at least once per season
        - 75% have relaxed by the water at least once per season



Florida's Gulf coast and Gulf counties included

PUERTO RICO



- Coastal shoreline length: 700 statute miles
- Coastal shoreline population: 2,372,202
- Coastal shoreline Latino population: 2,341,773 (98.7%)
- Ocean employment: 155,655[43]
- Ocean GDP: BEA does not develop industry-level GDP data for U.S. territories.[44]
- Example billion dollar flood and hurricane disasters this decade:
    - Hurricane Maria, September 2017, $94.5 billion
- Community perspectives: In a study examining the human dimensions of communities adjacent to coral reefs, NOAA found:[45]
    - 83% of Puerto Ricans participate in beach recreation; 52% participate in swimming; 14% of Puerto Ricans participate in fishing
    - Puerto Rican residents consider TV (67%), newspapers (58%) and internet (55%) to be top sources of information on the environment
    - 86% residents agree that coral reefs protect Puerto Rico from erosion and natural disasters; 91% agree that healthy reefs attract tourists; 75% agree that coral reefs are important to their island's culture
    - 79% disagree with the statement that coral reefs are only important to fishermen, divers, and snorkelers
    - 81% are familiar with the threat of pollution to coral reefs; 78% with the threat of hurricanes and other natural disasters; 68% with the threat of coastal/urban development; and 65% with the threat of climate change
    - 69% of Puerto Ricans characterize the severity of threats to coral reefs as large or extreme
    - 85-90% of Puerto Ricans feel that the status of coastal environments has remained the same or worsened over time
    - 96% support increased surveillance and law enforcement; 96% support stricter control of pollution sources; 91% support per person limits for certain fish species; 94% support community participation in management; 80% support limited recreational use
    - 92% would support adding MPAs in Puerto Rico if evidence shows current ones are effective, though 89% agree that MPAs protect coral reefs and 90% agree that they increase the number of fish
    - 71% agree that MPAs increase tourism in Puerto Rico and 55% agree that they provide economic benefit
- Nearly one year after Hurricane Maria, Puerto Ricans were surveyed on their experience and the results indicated that:[46]
    - 73% evacuated their homes on account of Hurricane Maria
    - 12% had left Puerto Rico during their evacuation
    - 68% had close friends or family move away from Puerto Rico on account of the hurricane, 75% of which were planning on staying out of Puerto Rico permanently
    - 27% were currently planning or seriously considering moving away from the island
    - 66% felt that their homes were damaged as a result of the hurricane
    - 66% had a three month or longer power outage
    - 53% were worried about the quality of water in their home
    - 25% said their day-to-day lives were still disrupted
    - 81% had taken steps to prepare for future hurricanes, though 67% felt that Puerto Ricans were

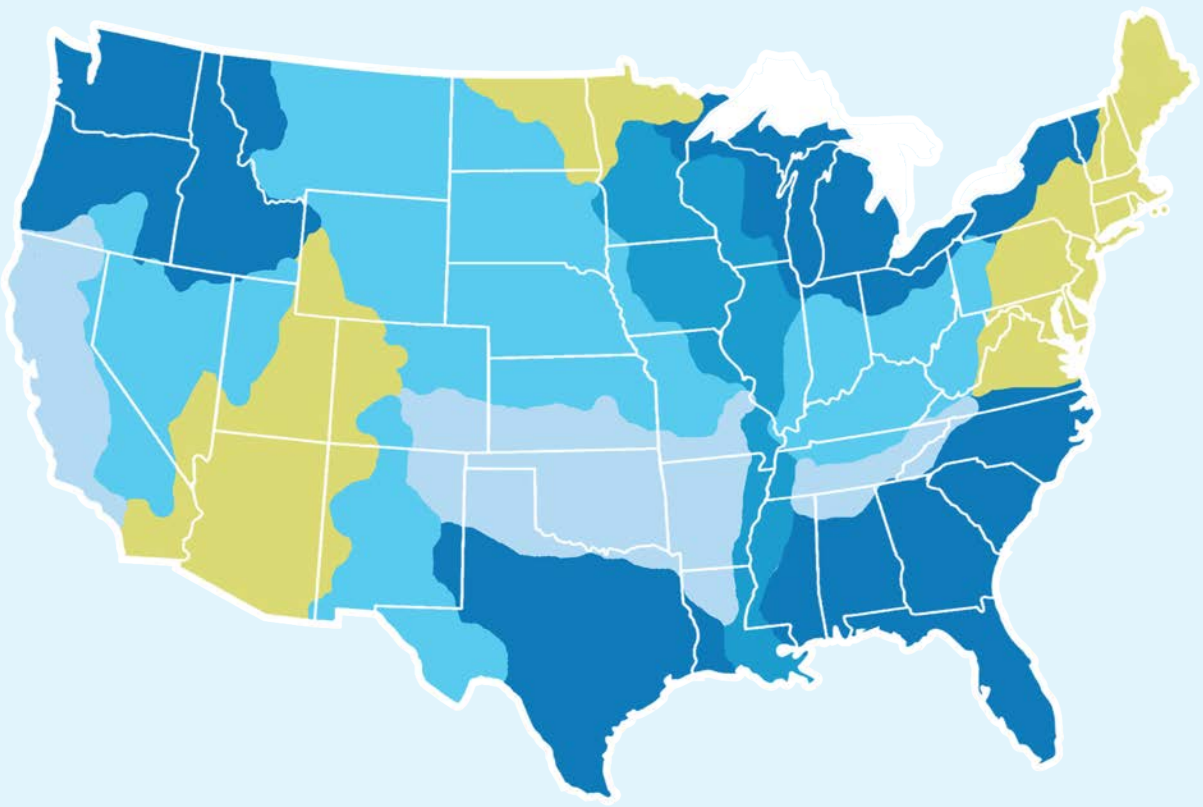
not prepared to deal with future hurricanes
- 74% did not have homeowner's or renter's insurance at time of hurricane
- 26% said that their general level of stress was worse as compared with before the hurricane
- 67% experienced financial stress post hurricane
- 32% dealt with adverse medical situations
- 74% said that their religious faith was very important in coping with the recovery from the hurricane

INLAND STATES

- Acres of wetland : 69,032,700 [47-48]
- In a 2020 survey of voters in eight western states (AZ, CO, ID, MO, NV, NM, UT, WY), Latinos indicated the following:[49]
    - 82% were in support a national goal protecting 30 percent of America's lands and oceans by 2030
    - 94% thought that the pollution of rivers, lakes and streams was a serious issue
    - 80% thought water supplies in the West were becoming less predictable every year
    - 69% considered themselves a conservationist
    - 82% said that issues involving clean water, clean air, wildlife and public lands were important in deciding whether to support an elected official
- Example billion dollar flood and hurricane disasters this decade:
    - Mississippi River, Midwest and Southern flooding event, July 2019, $6.3 billion
    - Arkansas River flooding event, June 2019, $3.1 billion
    - Missouri River and North Central flooding event, March 2019, $10.9 billion
    - Missouri and Arkansas flooding and central severe weather event, May 2017, $1.8 billion
    - Texas and Oklahoma flooding and severe weather event, May 2015, $2.8 billion
    - Colorado flooding event, September 2013, $1.7 billion
    - Missouri River Flooding, May-June 2011, $2.3 billion
    - Mississippi River Flooding, April-May 2011, $3.5 billion

EVERYONE LIVES IN A WATERSHED

No matter where you live, you live in a watershed, and one way or another the water finds its way to a coast.



Hispanic Access Foundation

THREATS TO OUR OCEAN, COASTS & US

Time and technology have aided and abetted ocean and coastal resource extraction and coastal development. While allowing civilization to progress, the bounty of our seas and the lure of their shores, have also instigated excessive extraction and destruction, neither sustainable nor resilient. While, in some respects, contemporary society has departed from historical trends with positive improvements, more work remains to be done.

As recent as the 1990's, commercial **fisheries** saw significant decreases in fish stocks, necessitating legislative action to rebuild. Forty-seven fisheries have been rebuilt since 2000, albeit with varying success; at time of press, 68 stocks (14.8% of those assessed) maintain unsustainable catch rates and/or population sizes.[50]

Harvest practices and gear used to produce the catch have negatively impacted, and often destroyed, aquatic habitat and species compositions in ecosystems, resulting in reduced biodiversity and production.

Meanwhile, **offshore oil and gas** activities, including exploration, installation and decommission of related infrastructure, production, and transport, damage seafloor communities, impact marine mammal behavior,[51] and in the event of accidental resource release, have the potential to impact communities throughout the water column and onshore.[52] Alongside **ocean mining**, these extractive industries endanger deep sea organisms,

many of which are undescribed, and have slow growth rates and indeterminate recovery times.[53] Notably, NOAA provided incident response to an average of 187 events annually, namely oil spills, between 2016 and 2019.[54]

On shore, **coastal development** contributes to aquatic habitat loss and destruction, erosion that results in sedimentation, polluting runoff, and increased flood risk. Coastal wetlands habitats in the U.S., for example, totaled 41.1 million acres in 2009, and were being lost at a rate of 80,160 acres/year.[55] Associated with the removal and destruction of habitat, is that of natural protection from coastal storms and surge, increasing the susceptibility of populations to natural disaster and inclement weather events. Nearshore habitats, including dunes, mangroves, coral and oyster reefs, and salt marshes, are recognized as natural barriers to wave energy, decreasing flooding and storm surge along coasts. In fact, the leading driver of flood risk to coastal populations by 2030 has been identified as coastal development.[56]

Meanwhile, **runoff**, including that from nonpoint (i.e. various diffuse) sources like agricultural and domestic fertilizers, cause hypoxic dead zones resulting in mass fish mortality, and can provoke harmful algal blooms (HABs), which threaten human and aquatic health. Further impacting water quality, is the addition of **marine debris** – including plastic, and the increasingly infamous byproduct, microplastics. Between 20 million and 1.8 billion pieces of plastic are estimated to lie along the coastline of the U.S. [57] As microplastics, they are inevitably bound to make their way into the stomach of the human seafood consumer.[58]

While distant from the shore, rivers and streams carry the consequences of inland practices to sea, suffering the repercussions of those practices along the way. Dams have made freshwater streams inaccessible to anadromous species like salmon, inhibiting their reproductive success. Reduced and redirected freshwater flows have degraded aquatic habitat alongside logging and urbanization. Moreover, the contiguous U.S. once contained 221 million acres of wetlands – both inland and coastal; 62.7% of the remaining 110.1 million acres of wetlands in the contiguous U.S. are found inland.

Meanwhile, agricultural, extractive industry and urban runoff – from construction, pet waste and septic systems - contribute to the nutrient and contaminant loading of rivers and streams, further provoking, for instance, HABs. Incidentally, microplastics are also a freshwater contaminant, and have been described in concentrations similar to that of saltwater.[59-60]

Of the more than 91,000 dams located across the U.S., 15,500 (1 in 6) are considered to be "high hazard, meaning their failure would likely result in loss of life and severe economic implications.[65]

Independently influencing land and sea while also exacerbating the impacts of the coastal and inland practices mentioned above, is **climate change**. On land, changes in temperature and rainfall, the majority of which starts in the ocean,[61] facilitated at times by old and failing infrastructure,[62] contribute to disasters like floods. Floodwater, like stormwater, can carry increased nitrogen, phosphorus, sediment, chemical contaminants and/or pathogens downstream, contributing to poor water quality along coasts, with implications for human and aquatic health.[63-64]

At sea, **increasing ocean temperatures** and **acidification** are dramatically affecting aquatic species, their distribution, and the ecology of whole ecosystems. Coral bleaching and species migration, for instance, are symptoms of warming waters, as is increased spread and risk[66] of aquatic disease[67-68] and harmful algal blooms.[69-70] Climate change exacerbates the negative impacts to land, sea and people, resulting from the practices and stressors described above. For instance, aquatic species become more vulnerable to

pesticides as waters warm. Moreover, climate change will likely expand the size and scope of impacts[71] as it proceeds and conditions worsen.

Warming water contributes to **sea level rise** as it expands and increasingly facilitates the melting of polar ice caps.[72] Resulting land loss from erosion, wetland loss from inundation, and repetitive tidal flooding (also known as high tide or recurrent flooding) disturb, if not endanger, human activity by damaging and destroying infrastructure, agriculture and property, imperiling groundwater, and in the most extreme circumstances, coercing coastal communities to retreat. Estimates indicate that since the 1960s, recurrent flooding has increased 300-925% around the U.S. coast, and that by 2050, most coastal communities will experience 30 days of recurrent flooding a year.[73]

Making matters worse, climate change is spurring an increase in **inclement weather** and **natural disasters**, endangering the lives and livelihoods of coastal residents in the form of, for example, storm surge and hurricanes, and inland residents in the form of freezes and wildfires, among other events. From 1980-2019, billion-dollar weather and climate events averaged 6.6 per year; from 2015-2019, that number increased to 13.8 events.[74] According to NOAA, 2019 was "the fifth consecutive year (2015-2019) in which 10 or more billion-dollar weather and climate disaster events have impacted the United States."[75]

Notably, Latinos have been recorded as agreeing with statements linking frequency and severity of coastal storms to climate change, and coastal flooding to sea level rise, in addition to the role of humans in coastal ecosystems.[76]

In 2018 Hurrican Florence left much of North Carolina's coast dealing with flooding. NOAA's Climate Prediction Center expects the 2020 Atlantic hurricane season to be above average and flooding continues to be a problem. Since the 1960s, recurrent flooding has increased 300-925% around the U.S. coast.

IMPACT ON LATINO COMMUNITIES

Independently and collectively, the threats to maritime environments and communities have both indirect and direct impacts on Latinos who disproportionately face social, economic and health consequences.

QUALITY OF LIFE AND SAFETY

The majority of Latinos are living in the states with the highest coastal populations; four of the top five states with the largest Latino populations (CA, FL, NY, TX),[77] are also in the top five states of people living in coastal counties.[78] Incidentally, these same states have been characterized as being among the most susceptible to coastal hazards,[79-80] and growing increasingly so as the population of vulnerable communities, Latinos among them, increases over time.[81]

Poverty and economic instability, poor health conditions, and reduced access to social and political resources contribute to Latino population

23% OF COASTAL RESIDENTS ARE LATINO, 6% OF COASTAL RESIDENTS LIVE IN SPANISH LANGUAGE HOUSEHOLDS.[85]

vulnerability,[82-83] attributes that put them among the approximately 40% of coastal county residents that fall into an "elevated coastal hazard risk category" and that define the communities whose vulnerabilities will be impacted by climate change.[84]

Latinos have been described as being less prepared for, less equipped to deal with, and therefore more vulnerable than the general population to flooding and coastal disasters, like tropical storms and hurricanes.[86-91] In addition, they have been described as less inclined to leverage disaster mitigation messaging.[92] Inundated roads and public disruptions in transport and emergency services, damaged infrastructure and reduced property values, as well as compromised water quality, are endured by Latinos with limited capacity to resolve their situation through mitigation, adaptation or relocation. Complicating the lack of resources that support resilient Latino communities along shores is the lack of will to abandon place, a sentiment that reflects close connections to heritage, family and coastal culture.

78% OF LATINOS SAY THEY HAVE DIRECTLY EXPERIENCED THE EFFECTS OF CLIMATE CHANGE.[93]

Further contributing to increased susceptibility of coastal hazards, is the loss of estuarine wetlands, 14% of which occurred in Florida and California from 1996 to 2010.[94]

Inland populations are not immune to these coastal impacts. For example, coastal out-migration due to sea-level rise displacement will impact inland communities receiving coastal migrants, many of these receiving counties may be unable to accommodate climate migrants.[95-97] Moreover, residents of inland counties may not have the resources to compete with the financial resources of climate migrants new to their area, leading, in effect, to climate gentrification.[98] Notably, between October 2017 and February 2018, nearly 400,000 Puerto Ricans traveled to mainland U.S. in the wake of Hurricane Maria.[99] While coastal counties were on the receiving end of travelers, inland counties, including some in Florida, California and Texas, also received significant numbers of Puerto Rican visitors.[100]

Climate immigrants, be they from coasts, or areas inland experiencing climate adversities like droughts, are increasingly seeking an improved quality of life. Alternately termed climate refugees and victims, many of them may come from Latin-American countries[101] and have the potential to shape the new face of Latinos in the U.S.

LIVELIHOODS

Altered, damaged and destroyed habitat is associated with the loss of fisheries, commercial and recreational, as well as commerce, including recreation and tourism opportunities – both inland and along the coast. Studies on marine debris alone have indicated that increases would result in substantially less visitation to coastal areas, generating less revenue, and resulting in significant job loss.[102] Accompanying these losses, and those losses resulting from additional threats, are Latino livelihoods. In places like Texas, the national hot spot for marine debris,[103] the implications are severe.

California, Florida, New York and Texas, four of the top five states with the greatest Latino population, together account

The U.S. Bureau of Labor Statistics estimates that the number of Hispanics to enter the labor force will increase by 7.4 million from 2018 to 2028. This growth represents the most of any demographic (age, sex or race) group, 83% of the total growth of the labor force in this decade. By 2028, 20.9 percent of the total labor force is projected to be Hispanic.[109-110]

for about half the employment and gross domestic product in the U.S. ocean and Great Lakes economy.[104] California, the state with the most Latinos, is the largest employer in the nation's ocean economy, accounting for 17.2 percent, while Texas, the state with the second most Latinos, was the largest contributor in terms of gross domestic product, accounting for 24.0 percent of the goods and services.[105] Moreover, California and Florida, the state with the third largest population of Latinos, are the two major contributors to the U.S. ocean and Great Lakes economy tourism and recreation sector, accounting for more than one-third of its total employment in GDP in 2016.[106]

With respect to the Latino population, while data is disaggregated and scarce, it's reasonable to infer that Latinos play a significant role in the ocean and coastal economy. For instance, while demographics of the coastal leisure and hospitality industry are not explicitly available, nationwide, the leisure and hospitality industry is 24% Hispanic/Latino.[107] Meanwhile, nearly one third of workers in the U.S. construction industry (30.4%) are Hispanic/Latino;[108] as marine construction is concentrated in California, Florida and Texas, we can surmise that Latinos are taking a large part in this ocean and Great Lakes economic sector.

HEALTH AND WELL-BEING

Each threat to ocean and coastal ecosystems, whether independent or in concert with others, affects the health and well-being of human populations.[111-112] Biodiversity, a linchpin of ecosystem integrity, disproportionately affects the poor when compromised.[113] Flooding events have been associated with drownings, waterborne illnesses, and contaminant (microbial, chemical) exposure. Toxins and pathogens associated with harmful algal blooms, as well as chemical and human contaminants, have direct, negative implications for the actual and perceived ability[114] to recreate in coastal waters and enjoy coastal fare.

Beach and fishery advisories and closures, or lack thereof, have been demonstrated to disproportionately impact Latino communities from coast to coast. For example, Latino community members were among the most susceptible to health issues following visits to polluted beaches remaining open for recreation in New York City.[115] Studies from California,[116] the Great Lakes,[117] and North Carolina,[118] have demonstrated that Latino anglers and consumers are less likely than non-Latinos to be aware of fishery advisories or consider long-term effects of related consumption to be relevant; among them, anglers accessing fisheries to cope with food insecurity issues.[119] Exposure to contaminants aside, reduced access to these outdoor areas limits opportunities for exercise and recreation and may even present obstacles to doctor-prescribed outdoor recreation.[120]

REDUCED ACCESS TO THESE OUTDOOR AREAS LIMITS OPPORTUNITIES FOR EXERCISE AND RECREATION...

Inland, agricultural workers sacrifice their health on the job while contributing to the nutrient and chemical loading of air, rivers and streams. Latinos, who represent 51% of U.S. agricultural workers,[121] are among those who experience routine and compromising exposure to a breadth of pesticides and herbicides.[122] Notably, only 57% of crop workers in the most recent National Agricultural Workers Survey reported they received training or instruction in pesticide best practices; 83% of those surveyed were Latino, 35% U.S. born.[123]

The physical impacts are but one element of overall health influenced by ocean and coastal threats. Emotional and psychological impacts have been demonstrated to result from perceived and lived experience. Climate change has been characterized as catastrophic;[124] depression, anxiety, PTSD and substance abuse have been demonstrably connected with flooding and coastal disaster experiences.[125]

LATINO COMMUNITY RESPONSE

For all the negative impacts to Latinos, there is recognition of, and reverence for, all the positive benefits, or ecosystem services, that ocean and coastal communities enjoy. That's why, in response to threats, and in spite of them, Latino individuals and communities around the nation are slowly mobilizing to protect ocean and coastal resources, and engender and foster an appreciation for them. In turn, they are inspiring stewardship and cultural connections that instill pride.

The last study to highlight the nationwide Latino connection to the ocean and coasts took place in 1999.[126] Manifesting as a national telephone survey for The OCEAN Project, it explored the public's connections, values, attitudes, and knowledge relating to the ocean. Their findings on Latinos were as follows:

- Relative to other demographics, Latinos were most likely to find the ocean very important for their emotional well-being.
- 37% of Latinos had no opinion on the health of coastal waters and ocean beaches; 30% rated this health as "fair."
- 26%, 29% and 28% of Latinos characterized damage being done to the deep ocean, coastal waters and ocean beaches, respectively, as an extremely serious problem.

- Latinos were 73% in agreement that health of the ocean is essential to human survival.
- 79% of Latino respondents disagreed with the premise that ocean is so large, it is unlikely that humans will cause lasting damage to them.
- 61% of Latino respondents disagreed with the premise that personal actions do not impact ocean health.
- Protecting the environmental quality of the ocean was extremely important to 33% of Latino respondents.

THE PROGRESS WE'VE MADE*

Organizations with a focus on connecting Latinos to their waters.

Association of Naval Service Officers[127]

A 501(c)(3) nonprofit dedicated to the recruitment, retention and promotion of Hispanics and Latinos across all ranks of the United States Sea Services. The Sea Services are comprised of the U.S. Navy, U.S. Marine Corps (USMC), U.S. Coast Guard (USCG) and the U.S. Merchant Marine.

Azul

Founded in 2011 to bring Latinxs perspectives and participation to ocean conservation, Azul leverages strategies and communication techniques that are culturally relevant to engage communities in protecting coastal resources and marine life.

Centro de Restauración Ecológica y Conservación Costera Vida Marina

Founded in 2007, this group based out of University of Puerto Rico, Aguadilla focuses on the management, conservation and restoration of coastal ecosystems in northeast Puerto Rico while providing hands-on experiences for students and educating local communities.

Latinx Surf Club Courage Camps

Founded in 2017 by three Latinas with roots in East Los Angeles, the Latinx Surf Club leverages social media (@couragecamps) to promote free surf lessons for the willing in a comfortable and empowering environment. Courage camps target "children and the children-at-heart" from underrepresented communities, and barrios like East LA, Sanata Ana and National City, California.

Latino Conservation Week

An initiative of Hispanic Access Foundation, Latino Conservation Week was created in 2014 to support the Latino community's efforts at getting into the outdoors and participating in activities on public lands and in public waters toward the protection of our natural resources. Events involving the ocean and coast, as well as their connected, inland waterways, have included clean-ups, fishing trips (Vamos a Pescar), whale watching tours, paddling and rafting trips, as well as baptisms.

River Network

Since 1988, River Network has worked to empower communities to protect and restore rivers and waters. The organization believes in access to affordable, clean water and healthy rivers and encourages diversity in the environmental movement, evidence of which is found in their best practices for water groups engaging Latino communities.

*This list is not comprehensive of Latino organizations

THE WORK AHEAD: RECOMMENDATIONS

Latinos recognize that there is a lot of work to be done with respect to the ocean, coasts and their relation to them – given the urgency and integrity of now, and the relationship of future generations. Hispanic Access Foundation sees a strategic way forward focused on four, interrelated pillars of growth: **understanding, empowerment, engagement and advocacy** for related legislation and regulation.

UNDERSTANDING

A deeper understanding of the human dimensions of ocean and coastal issues is essential, including socio-economic demographics, attitudes and perceptions, and cultural heritage, especially as they relate to environmental change. This understanding would help effectively communicate best practices, inspiring stewardship among Latinos, while keeping pace with evolving resource usage and a changing climate, all of which could diminish the impact of ocean and coastal-related threats to Latinos. [128-129]

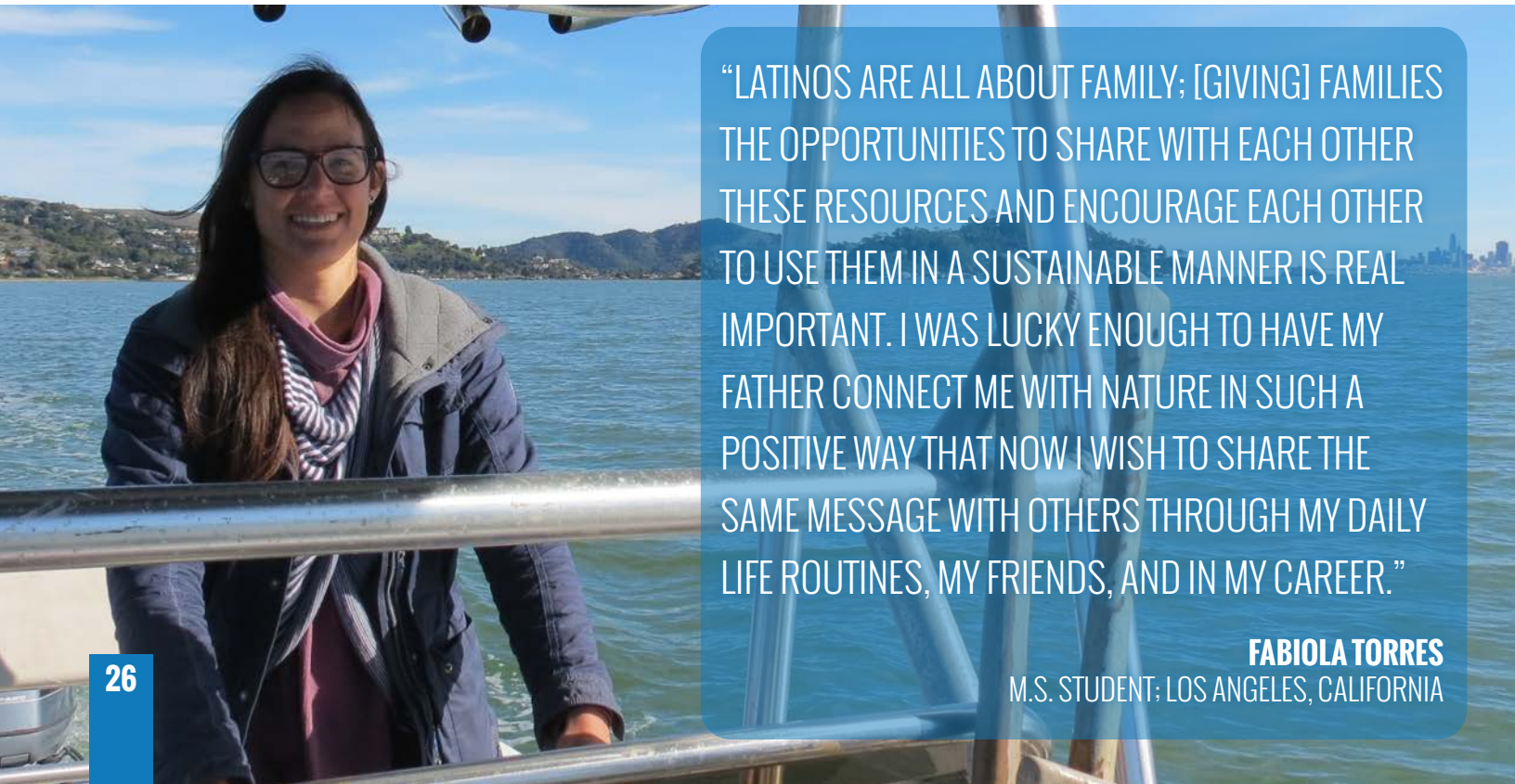
LATINOS ARE BECOMING INCREASINGLY CONCERNED WITH THE ENVIRONMENT.

This understanding transcends the awareness and sensitivity surrounding language. While language, for example, plays an important part in communicating hazard and health advisories,[130] it has not always been identified as a barrier to coastal efforts; preparedness outreach, for instance, has been influenced by cultural factors even when language has not been of issue.[131] Moreover, U.S. Latinos are speaking English proficiently in greater numbers; in 2017, 70% of Latinos ages 5 and older spoke English proficiently, up from 59% in 2000.[132] Consideration for the ways in which information is accessed has been described as a more effective approach to outreach efforts.[133-136]

Understanding is more holistic, and incorporates recognition of culture, including cultural norms,[137-138] values[139] and heritage.[140] Religious norms[141] and family values , for example, are an important part of Latino culture, the implications of which should certainly be explored as a part of any effort involving a Latino audience, including those pertaining to hazard mitigation. Even while communities with higher percentages of Latinos have been depicted as less resilient,[142] an inherent, though at times nuanced, cultural resilience in Latino communities, born, for example, out of familial and community support, can not be overlooked.[143-145] Effective communication with Latino communities will acknowledge, incorporate and leverage this integrated understanding, and not rely on language alone.[146]

Understanding also incorporates the attitudes and perceptions, or mental models, framed by lived experiences. It is the direct incorporation of these lived Latino experiences that creates the most powerful and resonant messaging.[147] Latinos, for example, have been implementing many of the practices that are currently seen as sustainable long before they became best practices.[148] Understanding this history positions information brokers in a place of mutual respect and appreciation, poising them for effective communications, rather than a place of uni-directional prescription. Leveraging this history and demonstrating its current relevance instills pride and empowers action. In the same vein, understanding attitudes and perceptions on the environment and their respective cultural roots, is essential to the creation and maintenance of environmental policies.[149]

Our present understanding of Latinos and their relationship with the ocean and coast stems from disparate sources, mainly focused on a general connection to the environment and outdoor recreation, supplemented by those that explore the Latino connection to the inland environment and outdoors. These



"LATINOS ARE ALL ABOUT FAMILY; [GIVING] FAMILIES THE OPPORTUNITIES TO SHARE WITH EACH OTHER THESE RESOURCES AND ENCOURAGE EACH OTHER TO USE THEM IN A SUSTAINABLE MANNER IS REAL IMPORTANT. I WAS LUCKY ENOUGH TO HAVE MY FATHER CONNECT ME WITH NATURE IN SUCH A POSITIVE WAY THAT NOW I WISH TO SHARE THE SAME MESSAGE WITH OTHERS THROUGH MY DAILY LIFE ROUTINES, MY FRIENDS, AND IN MY CAREER."

FABIOLA TORRES
M.S. STUDENT; LOS ANGELES, CALIFORNIA

studies indicate, for example, that sociodemographics correlate with Latino environmental concern,[150] or that Latinos are becoming increasingly concerned with the environment,[151] especially with respect to local issues. However, Latino populations are not always a focus of these studies, but one of several demographics examined; coastal Latino populations even less so. Moreover, the environmental issues addressed are rarely specific to the ocean and coast. Thus, studies analyzing the Latino dimension of ocean and coastal issues, especially those beyond environmental concerns, are in short supply.

RECOMMENDATION 1

Further research on Latino-specific attitudes, perceptions, values, motivations and resource use regarding the ocean and coast, especially as they relate to vulnerable communities (including climate migrants and temporary workers), is needed to determine: 1) what their relationship with the ocean and coast looks like physically, mentally, emotionally, socio-demographically (including identification of any barriers to entry); 2) how they perceive that relationship evolving (particularly with respect to climate change and increased stressors, as well as with any acculturation experienced as a part of immigration to the U.S.); and 3) how, as a society, we might best equip them for when they arrive.

As coastal cultures continue to evolve, impacted by a changing climate and influenced by a dynamic demographic, our homage to history should acknowledge our varied relationships with the sea. Allow the past to be reflected in an ever evolving present by acknowledging that understanding incorporates recognition of cultural heritage, and that this recognition can be manifested through the designation and awareness of emerging heritage sites and protected areas.

RECOMMENDATION 2

Identify and designate new heritage sites and protected areas that preserve the Latino past or reflect the Latino present, acknowledging its varied history and identity with respect to coastal resources for future generations.

EMPOWERMENT

Even while vulnerable Latino communities, who are growing in population along coasts with a stake in environmental decisions, endure the impacts from adverse coastal events, dialogue with them on common agendas is limited;[152-153] an oversight adversely impacting program implementation and outreach efforts. This lack of communication further contributes to disempowerment felt among coastal residents[154] and Latinos for a variety of compounding reasons.

Empowerment through community-based and participatory approaches[155-156] can help alleviate some of the disempowerment experienced by communities. Notably, effective empowerment is rooted in understanding; when these approaches are rooted in cultural understanding, their potential as effective climate change adaptation pathways is highlighted.[157]

RECOMMENDATION 3

Incorporate culturally aware participatory approaches in coastal decision-making and land use planning to empower Latino communities.

Organizations connecting underrepresented students to the ocean and coasts

Merito Foundation - committed to protecting the ocean by facilitating education, conservation and scientific research opportunities to multicultural youth and their communities

Morgan State University's Patuxent Environmental and Aquatic Research Laboratory (PEARL) – offered a research experience in the ocean and coastal sciences to underrepresented minority groups

NOAA's Office of National Marine Sanctuaries – providing education and stewardship to diverse audiences

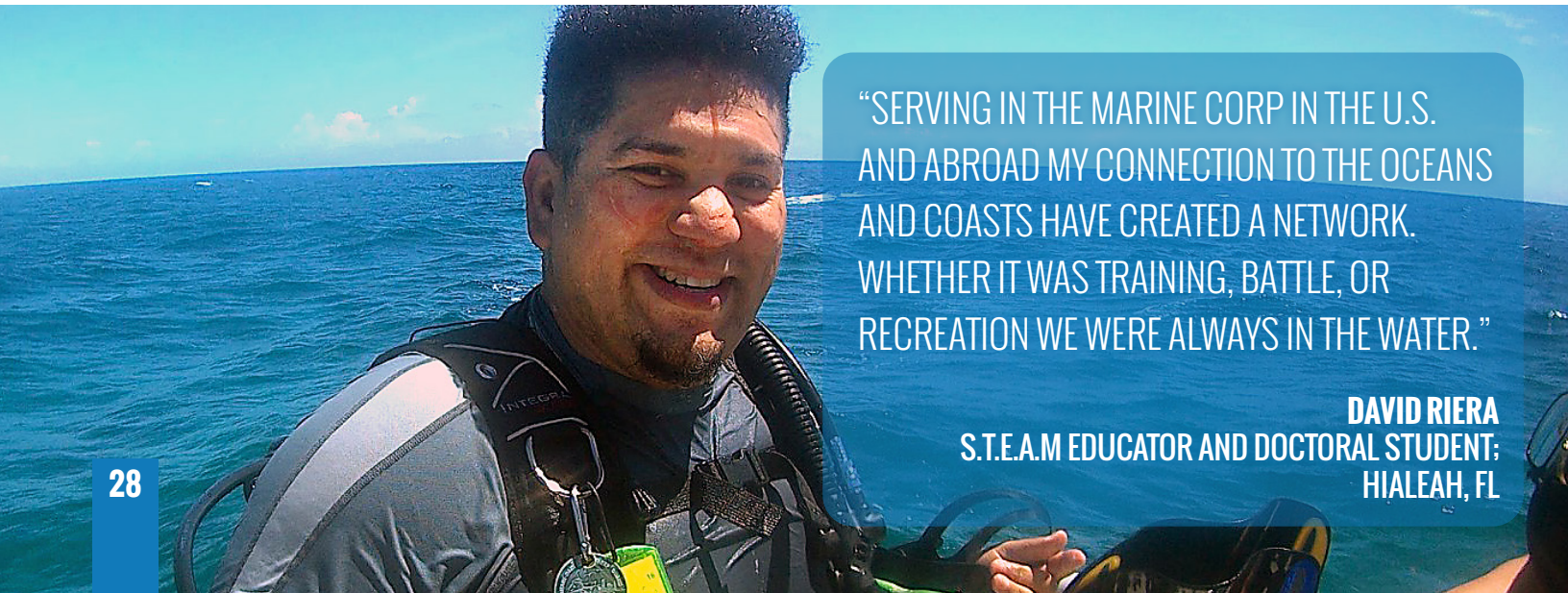
Oregon State University's Research Experience for Undergraduates at Hatfield Marine Center – encouraging students from underrepresented groups, community colleges and institutions with limited research opportunities[158]

Empowerment through education at all ages and levels is part of a positive feedback loop that helps cultivate and sustain resilient Latino communities.

From informal information delivery via basic interpretation and outreach materials tailored to educate community members on specific topics, to formal, K-12 education and graduate/professional studies in science and management, education plays an important role in empowering Latino individuals and communities.

While existing ocean/coastal education efforts focus on urban and underrepresented populations, particularly youth and those along the coast, the most comprehensive efforts will incorporate Latino-specific programming, engage inland populations, and include those workers whose positions have connections, however direct, with the resource.

Latino service workers, comprising 25% of service occupations in the U.S., are in food preparation and serving (27%), as well as building and grounds cleaning and maintenance (38.2%).[159] Among these service workers are, for example, the housekeeping staff attending to hotel rooms with beachfront views, waiters and bartenders working at restaurants on boardwalks and piers, and groundskeepers attending to shoreline property landscapes. These service workers are being called on, among other responsibilities, to utilize cleaning chemicals and pesticides in their daily routines; to rely on water sources for the washing and watering of the resources in their care; and to present and inspire food selections. In other



"SERVING IN THE MARINE CORP IN THE U.S. AND ABROAD MY CONNECTION TO THE OCEANS AND COASTS HAVE CREATED A NETWORK. WHETHER IT WAS TRAINING, BATTLE, OR RECREATION WE WERE ALWAYS IN THE WATER."

DAVID RIERA
S.T.E.A.M EDUCATOR AND DOCTORAL STUDENT;
HIALEAH, FL

words, individuals with indirect, but significant, impacts on ocean and coastal resources through unique and intimate connections, which may, as with agricultural workers, also impact their health.[160-166]

Defense workers serving on our seas and in ports along our coasts, some of which are charged with enforcing regulations that safeguard our resources, may be similarly positioned, and Latinos represent no small number among them. Latinos, for example, comprise 15.1% of active duty members in the Navy, and 15.9% of members in the Navy Reserve;[167] 15.1% of active enlisted members in the Coast Guard, and 11.5% of members in the Coast Guard Reserve;[168] and 20.7% of active duty members in the Marine Corps, and 21.8% of active duty members in the Marine Corps Reserve.[169]

Empowering these individuals through education and awareness efforts that connect their work to the resource has the potential to foster ocean and coastal stewardship in professional capacities previously unacknowledged, while benefiting occupational safety and health.[170] In the same vein, inland Latinos, connected to the ocean and coast as tourists, agricultural workers and resource users (e.g recreational anglers), should be considered as target audiences of related education.

RECOMMENDATION 4

Outreach and education efforts focused on the ocean and coast should target those whose service – in defense, hospitality, agriculture, etc. - has an impact on aquatic health.

Watershed education focused on the inland connection to ocean and coast; education on ecosystem services and the need for stewardship and protection; education on the impacts of pesticide exposure and mitigation options; education on best practices for responsible recreation, lawn care and seafood consumption; education on ocean water pollution and marine debris; education on floodplains and insurance provision. Coastal managers and educators do not lack for topics, just representation in their audience. Recognition and identification of barriers to entry is necessary to ensure that information and educational opportunities are not only accessible to all, but empowering the most vulnerable.

> "I AM PUERTO RICAN AND THE MAJORITY OF MY EXTENDED FAMILY LIVES ON THE ISLAND. I WAS NOT BORN THERE, BUT HAVE VISITED OFTEN SINCE MY YOUTH. WATER SPORTS, BEACH RECREATION, BIRDING, FOOD AND HURRICANES - ALL EXPERIENCES TIED TO THE OCEAN OR COASTS... ON THE MAINLAND US I HAVE A NATURAL ATTRACTION TO WATER, COASTS AND RIVERS."
>
> **ANONYMOUS**
> ENVIRONMENTAL COMPLIANCE; LINCOLN, NE

Notably, in 2019, Latino workers held 9.5% of positions in life, physical and social science occupations.[171-172] These numbers, in part, reflect a modest increase in underrepresented minorities, including Latinos, enrolling in ocean sciences programs, though this has not traditionally translated to conferred PhDs or careers in the field, as academic institutions continue struggling with retainment.[173-175] Recruiting and retaining underrepresented students has specifically been recognized as critical to maintaining the integrity of marine science disciplines and should thus be pursued, with consideration for approaches that have

"WHILE IN GRAD SCHOOL, I HAD A SEA GRANT KNAUSS MARINE POLICY FELLOWSHIP, WHICH ALLOWED ME TO WORK AS A LEGISLATIVE ASSISTANT FOR A CONGRESSMAN IN DC, MANAGING HIS COASTAL PORTFOLIO. THIS WAS ALSO A TURNING POINT FOR ME IN MY CAREER PLANS BECAUSE IT SHOWED ME THAT I COULD APPLY MY SCIENTIFIC TRAINING TO INFORM SOCIETAL CONVERSATIONS ABOUT OCEAN ISSUES."

SUNSHINE MENEZES
CLINICAL ASSOCIATE PROFESSOR OF ENVIRONMENTAL COMMUNICATION; WEST KINGSTON, RI

demonstrated success,[176] as well as related recommendations.[177] As diversity-equity-inclusion efforts have revealed, the same may be said for any discipline, including those disciplines pertaining to inland studies with connections to the ocean and coast.

The most effective attempts at recruiting and retaining students across all these disciplines will begin with an increased understanding of the barriers, cultural heritage, and lived experience that factor into student decisions to pursue related studies and careers. Conversely, these attempts should also provide students the opportunity to understand the field - through immersive and experiential approaches.[178]

"My family was severely impacted by the financial crisis so when I left for college, I was very much on my own. I went to school full-time for my undergraduate degree and worked 30+ hours a week. Because of this, it was difficult to participate in the activities relating to marine biology that other students were able to do. Things like getting certified to scuba, working at non-paid internships, and taking classes that involved multi-week field trips were activities that I could not afford to participate in. I could not afford to pay for scuba training or to take off work. Another big obstacle is that science is generally a male dominated field. The Venezuelan side of my family comes from a very conservative and machismo culture and although I grew up in the states, there are aspects of it that trickled down to me. For example, the stereotype that women are not as proficient in math as men - this made loving science a challenge for me. I am still learning how this impacted me personally but I've found that I often see myself as less capable than my male counterparts. I often assume that he knows more than I do. I've found that I have to work twice as hard to overcome this mental block." Claire Gorman; Graduate Student; Norfolk, VA

"I used to study oceanography in high school back in Ensenada [Baja California, Mexico], but when I moved to the US and got to college, I switched my major because it was harder here... there is no support (academic or financial) and the jobs don't pay as well or are as accessible." Gabriela Meza; Office Assistant; Los Angeles, California

"One of my fondest memories was as a HAF fellow with USFWS National Wildlife Refuge System. Ashleyann (a fellow) and I took a trip to Cape May NWR with our communications team. It was beyond cool to volunteer with the community there to experience horseshoe crabs mating and being able to tag them for citizen science." Ashley Suarez-Burgos; Digital Storyteller; Miami, FL

RECOMMENDATION 5

Support and strengthen pipelines for Latinos in ocean and coastal and educational careers - from academic to vocational - using immersive methods predicated on cultural understanding and leadership development, including methods that expand awareness of these opportunities.

Trusted agents and champions of communities and issues, mentors and role models, as well as relevant and relatable stories help drive empowerment. Each can be cultivated through education, empowering programs, dialogues and participatory processes,[179] though they can also be identified through common social networks.[180-181] Connecting existing groups and leveraging social capital,[182-183] in knowledge transfer[184] and through shared experience,[185] has the potential to empower Latino community networks as a whole.

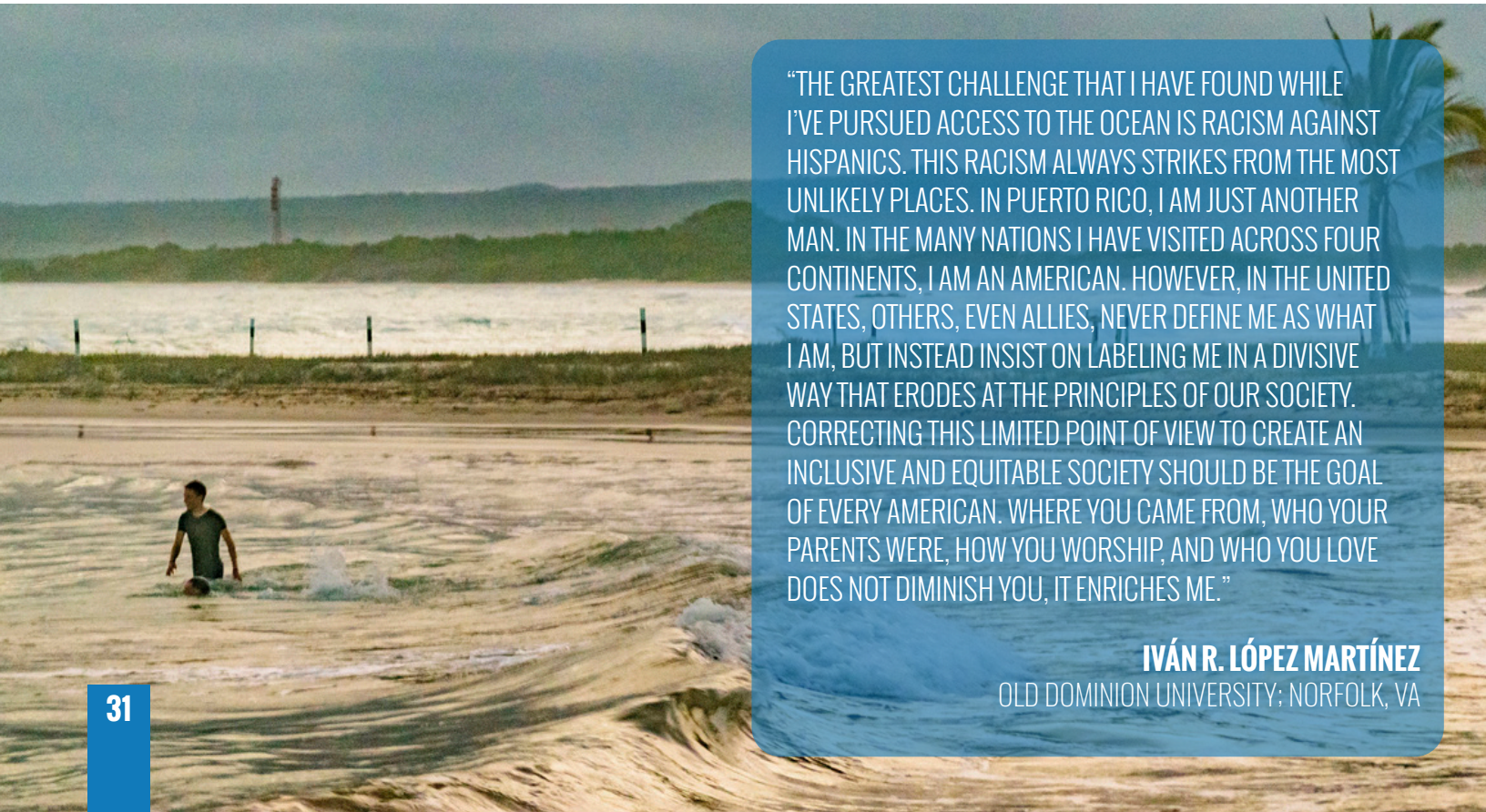
RECOMMENDATION 6

Support and connect existing groups though coalitions that leverage the inherent social capital in knowledge transfer, shared experience and influential actors.

ENGAGEMENT

Once an understanding has been employed to empower Latino communities, effective efforts to engage them in ocean and coastal issues can be developed.

There exist very few organizations dedicated specifically to the Latino community and ocean and coast connection (see: The Progress We've Made). Where education efforts engaging Latinos exist, Latinos are typically a subset of a broader target audience reaching a variety of demographics; meanwhile, the topic areas are namely science-based. Outreach approaches are subsequently diffuse and less focused on a nuanced understanding of Latinos and their connection to the ocean and coast. Yet, this focus is paramount to the success of outreach efforts engaging Latinos, especially as the Latino perspective on issues related to the ocean and coast may be unique.



"THE GREATEST CHALLENGE THAT I HAVE FOUND WHILE I'VE PURSUED ACCESS TO THE OCEAN IS RACISM AGAINST HISPANICS. THIS RACISM ALWAYS STRIKES FROM THE MOST UNLIKELY PLACES. IN PUERTO RICO, I AM JUST ANOTHER MAN. IN THE MANY NATIONS I HAVE VISITED ACROSS FOUR CONTINENTS, I AM AN AMERICAN. HOWEVER, IN THE UNITED STATES, OTHERS, EVEN ALLIES, NEVER DEFINE ME AS WHAT I AM, BUT INSTEAD INSIST ON LABELING ME IN A DIVISIVE WAY THAT ERODES AT THE PRINCIPLES OF OUR SOCIETY. CORRECTING THIS LIMITED POINT OF VIEW TO CREATE AN INCLUSIVE AND EQUITABLE SOCIETY SHOULD BE THE GOAL OF EVERY AMERICAN. WHERE YOU CAME FROM, WHO YOUR PARENTS WERE, HOW YOU WORSHIP, AND WHO YOU LOVE DOES NOT DIMINISH YOU, IT ENRICHES ME."

IVÁN R. LÓPEZ MARTÍNEZ
OLD DOMINION UNIVERSITY; NORFOLK, VA

For example, we know that both physical and instinctive barriers prevent Latinos from accessing shoreline spaces. Socioeconomic barriers, including time, money and language, in addition to distance, may separate the Latino community from their coasts, given limited public access to coastal spaces, a reliance on public transportation to those spaces, time constraints dictated by obligations at work and to family, little disposable income, and/or a lack of language-accessible programmatic information.[186-191] Intuitive barriers, like perceived pollution[192-194] and discrimination,[195] are challenging to overcome, especially as these perceptions may be fueled by narratives from immigrants' homelands, cultural identity and tradition,[196] as well as lived experience.

> "Well I had limited money and/or time to surf so I got jobs with more flexibility to be able to surf more or travel to oceans. Lots of entitled, racist people out in the water in Orange County and paid parking lots I could not afford. Not sure if I have always overcome entitled racists people yet, haha. I don't let them overpower/bully me especially in the ocean. The ocean belongs to everyone and no one." Anonymous, Southern California

Similarly, fear of the unknown, fear for safety - in and out of the water, and fear of immigration enforcement, prevent Latinos from accessing their ocean and coastal resources[197-198] and could require comprehensive approaches to dismantle, if not time. Acculturation and assimilation to American culture, for instance, have been linked with an increased propensity of coastal resource use[199] and outdoor recreation;[200] at the same time, studies have indicated that the least assimilated Latinos may have a greater appreciation for nature and the recreational services it provides.[201] Effectively engaging Latinos means recognizing these varied perceptions and overcoming barriers to entry, addressing them head-on in relatable and comfortable arenas predicated on an understanding of the Latino experience. These environments can be created and fostered through the participation of Latino peer groups[202] using approaches to engagement that mitigate socioeconomic constraints.

RECOMMENDATION 7

Create Latino-specific outreach efforts and organizations to engage a diversity of Latino community members in ocean and coastal issues.

Only in gaining access to ocean and coastal resources through these forums can Latinos be on the receiving end of the indirect, accompanying benefits that access brings:

> "Our parents worked so hard to carry the weight of surviving in this country- that having access to lessons in courage, strength, presence. etc. is not something they sit us down at night and coach us on. Other non-Latino or privileged families do have those opportunities. The ocean is one way to help our communities access those lessons that are critical to beyond survival in this country." Giselle Carrillo; Marketing, Educator and Courage Camps Co-Founder; Pico Rivera, California

> "It is so important for Latinos to understand the ocean belongs to us too. Physical and mental wellness is for all ethnicities." Mayra Ramos; College student; Oceanside, California

Hispanic Access Foundation recognizes **four key calls to action (AVER - Ask, Vote, Educate and Reduce)** to engage Latino communities nationwide, irrespective of age or profession, in the maritime issues that impact them the most. These calls to action recognize that not all options are immediately accessible to all individuals or communities, but that everyone has the power to engage with each on some level.

"[LATINOS CAN GET ENGAGED IN OCEAN/ COASTAL ISSUES THROUGH] MEMBERSHIP IN ACADEMIC, CIVIC AND PROFESSIONAL ORGANIZATIONS THAT ADVOCATE AND INSTRUCT THE PUBLIC IN THE ISSUES AFFECTING OUR OCEANS, LAKES AND RIVERS, AND HOW THOSE IMPACT OUR QUALITY OF LIFE."

SAMUEL ROMÁN
SCHOOL PRINCIPAL; CLEVELAND, OH

Ask

Encourages Latinos to not take anything for granted and get inquisitive and curious. Questioning everything from the system and circumstances that they find themselves in, to seafood sources and retail purchases. This call to action inspires conscious consumption and pursuit of knowledge, and recognizes that environmental and social benefits go hand in hand. It equates decisions made in favor of the environment, with decisions in favor of the many people directly attached to an issue who have little choice in the matter and even less responsibility for it (think: agricultural workers). Healthy and sustainable (sea)food choices and responsible recreation practices (e.g. not stepping on corals, wearing reef-friendly sunscreen) are positive outcomes resulting from this call to action, and increasingly important for a variety of reasons, including the recognition of a burgeoning Latino travel market, which spends $73 billion in leisure travel annually.[203]

Vote

Recognizes the power of the Latino dollar and ballot, encouraging people to "vote" for conscious choices with their money, and ocean/coastal advocates in elections, while keeping them accountable in office. Notably, Latinos have $1.5 trillion in buying power,[204] and their incomes are increasing; from 2000-2017, the number of U.S. Latinos earning $75k or more doubled compared to non-Hispanics.[205] This burgeoning market has made them a target of industries from tourism[206] and outdoor recreation,[207] to real estate.[208] Moreover, a record 32 million Latinos are projected to be eligible to vote in 2020, the largest non-white ethnic voting bloc.[209] Estimates indicate that 70% of Latinos nationwide think that global warming should be at least a high priority for the president and Congress,[210] while 72% are likely to support policies and candidates that seek to protect the environment.[211] Furthermore, Latinos nationwide consider reducing pesticide use in farming (71%), protection of the nation's wildlife (79%), and a strengthened Clean Water Act (90%) important topics for the president and Congress to address.[212]

Educate

Encourages peer-to-peer knowledge transfer through shared experience and empowerment, as well as engagement in voluntary and advocacy efforts.

Reduce

Reframes the "reduce, reuse recycle" narrative to a narrative emphasizing reduction. Discourages the disposable, a lifestyle and luxury that has wreaked havoc on the environment and human health.

RECOMMENDATION 8

Engage Latino communities in ocean and coastal issues through actionable practices including Hispanic Access Foundation's AVER (Ask, Vote, Educate and Reduce), Let's Sea Campaign.

"I think most people just do not know how they can help or be engaged with ocean/coastal issues. It would be great if there is a website people to visit where they can learn about the ocean and coastal near their area. I think creating a social media campaign showing people how they can help can be useful, especially if they see that helping does not mean sacrificing a lot of time or money. Every little bit helps if everyone pitches in." **Jeanette Sanchez; Teacher; Brooklyn, NY**

ADVOCACY

Understanding, empowerment and engagement are complemented by advocacy – a part of the education call-to-action for Latino communities, but also applicable to those acting on behalf of Latino communities. Hispanic Access Foundation recognizes the importance of advocacy at varying levels of government – from local to national. With respect to ocean and coastal environments, HAF is dedicated to supporting advocacy efforts with the following foci:

Protection and preservation:
of natural and cultural coastal resources, including protected areas, and regulations on development and extractive practices

Access:
to safe and clean shores, for physical, mental and spiritual well-being; as well as access to information through effective means

Improved water quality:
from headwaters to tidewaters, as a result of, and in concert with, healthy watersheds

Education:
to encourage the development of pipelines directing Latinos to the workforce

Workforce:
to protect those working in the ocean economy, those impacting this economy in their upstream work, and their families

Research:
to develop further insight on the connections of Latino communities to their ocean and coastal environment

Effective advocacy efforts toward these ends will incorporate, if not necessitate, the Latino voice, which brings with it an identity and perspective to help promote novel solutions. Incidentally, perceptions of environmental risk may predispose Latinos to political engagement.[213]

RECOMMENDATION 9

Support watershed-wide and ocean and coastal advocacy efforts that have direct impact on Latino communities, through coalitions of advocates with Latino diversity to promote equitable and innovative solutions.

Select national legislation and related policies*

Antiquities Act (1906) – Presidential authority through this act can provide federal protection for cultural and natural resources on lands and in waters. Notably, 5 marine national monuments have been designated using this authority; of these, 4 are included in the 2019 ANTIQUITIES Act legislation introduced by Rep. Debrah Haaland (NM-1) and Sen. Tom Udall (NM). Their inclusion would offer enhanced protection and additional resources to ensure their full potential as public assets is met.

Clean Water Act (1972) – Water pollution nationwide is regulated through this act, which is intended to maintain and restore the chemical, physical and biological integrity of our waters. This act governs point and nonpoint pollution, helping fund wastewater treatment. It also defines federal protection of wetlands and streams, which is necessary to ensure the health of downstream waters, though recent rollbacks have weakened pollution controls and protections.

Coastal Zone Management Act (1972) – This legislation provides for federal and state cooperation in the management of the nation's coastal resources through the National Coastal Zone Management Program (CZMP) and the National Estuarine Research Reserve System (NERRS). With the exception of Alaska, all 35 coastal states participate in the CZMP. NERRS represents a network of 29 sites across the country that protect 1.3 million acres. Notably, education and community outreach are key tenets of their mission.

Endangered Species Act (1973) – Designed to protect and imperiled species, this act provides for the conservation of the ecosystems on which these species depend. NOAA's National Marine Fisheries Service lists endangered and threatened marine species, while the U.S. Fish and Wildlife Service lists freshwater species; both designate critical habitat through this act and provide grants to states for species conservation.

Magnuson-Stevens Act (1976) – This act governs our nation's marine fisheries. Through the prevention of overfishing and the restoration of overfished stocks, it ensures a sustainable supply of seafood and protects related socioeconomic benefits. Notably, eight regional fisheries management councils govern regional stocks; commercial and recreational fishing, environment, academia and government interests are reflected in council membership and through participatory processes.

National Park Service Organic Act (1916) – Established to manage and conserve natural and cultural assets for the enjoyment of current and future generations, this act provides the National Park Service broad discretion in its management of public lands and waters. The system currently includes five National Parks and five National Seashores, in addition to at least 190 sites that commemorate Latino heritage.

National Marine Sanctuaries Act (1972) – This act governs a system of federal protected areas, currently comprised of 14 sanctuaries and two monuments that together protect more than 600,000 square miles of mixed-use marine and Great Lakes waters. Education and outreach are key components of the sites' missions, as are participatory processes, manifested through Sanctuary Advisory Councils. Notably, the act provides the authorization for designation of additional sites with cultural and ecological significance, a process which relies on community-based input. Current efforts to expand the system are focused on a nomination process, offering communities the opportunity to safeguard their aquatic treasures.

*at time of publication

Select national proposals* related to ocean protections

S.Res.372: A resolution expressing the sense of the Senate that the Federal Government should establish a national goal of conserving at least 30 percent of the land and ocean of the United States by 2030 – Introduced by Sen. Tom Udall (NM). Drafted to conserve 30% of U.S. land and ocean by 2030, through measures including science-based conservation and carbon sequestration, and with consideration for environmental justice. This "30 by 30" initiative has also been expressed in some state-level proposals and at the international level.

HR 1456: Shark Fin Sales Elimination Act of 2017 – Introduced by Rep. Edward Royce (CA-39). Drafted to prohibit the sale of shark fins, with exemptions for cultural and educational purposes.

H.R. 6738: Coral Reef Conservation Reauthorization Act of 2020 – Introduced by Rep. Ed. Case (HI-1). Drafted to reauthorize and amend the Coral Reef Conservation Act of 2000, revised legislation would strengthen the federal response to coral reef emergencies, such as bleaching, vessel groundings, harmful algal blooms and disease outbreaks.

**at time of publication*

"GROWING UP MONEY WAS NEVER USED FOR ANYTHING BESIDES OUR NECESSITIES. MY MOM, NEVERTHELESS, ALWAYS SEARCHED FOR WAYS MY SIBLINGS AND I COULD CREATE HAPPY MEMORIES. SHE WOULD ALWAYS TAKE US TO THE BEACH. WE WALKED ALONG THE COAST DURING COLD WINTER DAYS AND WENT SWIMMING IN THE HOT SUMMER. THE OCEAN WAS OUR 'DISNEYLAND'."

MAYRA RAMOS
COLLEGE STUDENT; OCEANSIDE, CALIFORNIA

Photo by Shanna Edberg

CONCLUSION

Diversity on shore reflects the diversity in our waters – and has just as many unknowns. The human dimension of the ocean and coast is as expansive and varied as it is intricate; each of us has our own unique relationship with, and connection to, the sea. Latinos, but one element of this human dimension, are they themselves diverse. To say that a single demographic shares the same values, norms, cultural identity, perceptions, attitudes or practices with respect to these resources, is to overlook the diversity in ancestry and homeland narratives, the lived experiences and stories, and the professional and personal relationships that define their collective connection to the sea.

And yet, Latinos are collectively connected to the sea. They have shared lived experiences, concerns, opportunities and challenges – aspects of their lives that broadly define a Latino relationship with the sea. The issue is, we know so little of what these shared elements are or how they vary; and we know less about those distinguishing elements, or acknowledge the nuances. In fact, we seemingly know as much about what lies beneath the surface of our ocean as we do about this sector of our population that is playing an increasingly larger part of our ocean story, and contributing to its evolving history, from coast to coast.

What we do know is that Latinos continue to demonstrate a concern for the environment; polls and studies that do exist are unequivocal in this respect. It is our job now, to transform that concern into opportunity and leverage this interest into action.

WHAT WE DO KNOW IS THAT LATINOS CONTINUE TO DEMONSTRATE A CONCERN FOR THE ENVIRONMENT... IT IS OUR JOB NOW, TO TRANSFORM THAT CONCERN INTO OPPORTUNITY, AND LEVERAGE THIS INTEREST INTO ACTION.

The hidden potential of the Latino influence on ocean and coastal issues is just beginning to be tapped, and the timing is ripe to capitalize on the momentum that is being generated, especially that within the growing number of programs that engage Latinos. Leveraging increasing environmental concern, a growing recognition of the impact of individual actions on our seas, and a recognition of the Latino voice's importance in resource dialogues, can further the cultivation of resilient and equitable communities. Doing so, will be most effective when accompanied by strategies focused on understanding, empowerment, engagement and advocacy. Given the present realities of climate change facing Latino communities, the urgency of these actions is clear; with the integrity of Latino lives at stake, timing is pivotal.

APPENDIX A: LATINO VOICES

"The sea has been a part of my life from the beginning of my awareness of a larger world around me. Growing up in a coastal city in Puerto Rico, an awareness of the ocean was like being aware of the sky, or plants. It was something that was always all around you. My love of the sea was influenced by the way my grandfather, granduncle, father and uncle viewed it. Each had a different positive perspective. The sea was a good place where we would gather as a family to relax, where children would play, and where we would harvest the ingredients for delicious dishes. It was a place full of mysteries where life seemed to be more complicated than on land, whether at the water's edge, or among coral reefs. New wonders were always waiting from me around the next rock, behind the next mangrove, in the next tide pool and around the next reef face." **Iván R. López Martínez; Old Dominion University; Norfolk, VA**

Photo by Fabiola Torres
Project Permit # DRNA 2017-EPE-023

"I grew up on an island, spear fishing, rod fishing, and snorkeling with my father. Because of the experiences my father exposed me to as a child, I gained high interest in activities related to the ocean. ... I was lucky enough to have my father connect me with nature in such a positive way that now I wish to share the same message with others through my daily life routines, my friends, and in my career." **Fabiola Torres; M.S. Student; Los Angeles, California**

"I grew up in Michigan, where Lake Michigan was my freshwater ocean. Our extended family lived in Miami, FL, so going to the real ocean was also always part of my life. I was so inspired by my affinity to the ocean that I chose to pursue a graduate degree in oceanography." **Sunshine Menezes; Clinical associate professor of environmental communication; West Kingston, RI**

"I am a surfer, so I am highly connected to the beach/ocean. When I was younger, I would go to the beach with my mother and grandmother. My uncle was also a surfer, so the beach was an important aspect of my childhood. As an adult, I spend many days going to the beach either to surf or walk my dog along the boardwalk. I would argue I have a strong connection to the ocean/coast." **Cassie Comley; Costa Mesa, California**

"I grew up in Miami, FL. The ocean is no more than 15 mins away in most directions. At one point, it was even in my own back yard. On the weekends my family and I would go to the beach or find a bridge to fish off of and somehow, everyone knew someone that owned a boat. This connection grew cross country when I began

my career of professional salmon fishing in the the Olympic Peninsula. How crazy that [this] ever connecting body of water [is] so vast and different throughout the world." **Ashley Suarez-Burgos; Digital Storyteller; Miami, FL**

"I've been a lover of the ocean since I was a little girl. I did not grow up near the beach but our family frequented the National Aquarium in Baltimore, which is where I first learned about marine fauna and developed a passion for conservation. When I turned 15 I was gifted a trip to visit my tía and her family in the Dominican Republic. This was my first visit to the island as an 'adult'. I remember snorkeling and just being astounded and excited by how much I could see. The water was crystal clear and there were many colorful fishes - it was an amazing experience. I currently live near the beach and go as often as I can. Now that I live on the coast, I don't think I could leave it." **Claire Gorman; Graduate Student; Norfolk, VA**

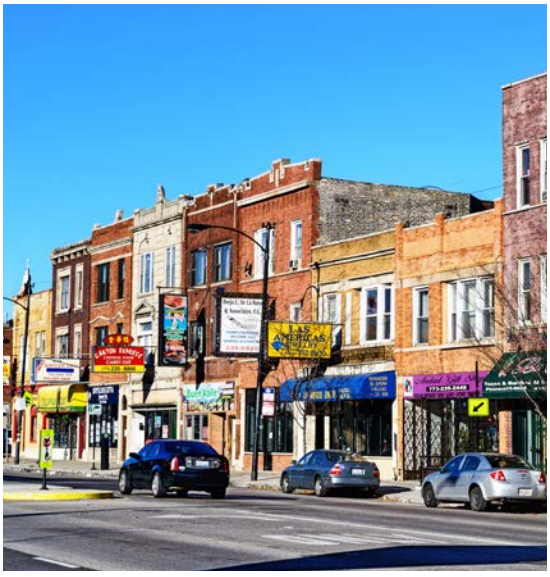

Photo by Aquanauts Adaptive Aquatics

"My affinity for the water has always been present, but I can say that I attribute deep connectivity to our oceans, tributaries, and wetlands to my godparents, Guido and Gladys Marti, who would always take me to the beach. My godfather, Guido, a legendary boat craftsman, showed me a lot about life and the world beyond the shores; swimming with nothing but pool goggles and a swimming cap to the reefs, gathering up crabs and other shelled critters to proudly display in an impromptu beach show and tell. My godparents taught me and pushed me to brave all horizons over land and sea. As I got older in highschool, I grew a rebellious blue streak, taking three public buses to get to the beach when I felt overwhelmed. On one such occasion, it was National Skip Day and a bunch of friends tagged along. Once we got to the water, I decided to act like my godfather and head for the reef. One of my friends decided to follow me. I made it to a sand shoal and noticed a bunch of Portugeuse Man O'Wars, aka Blue Bottles, floating in. I jumped to swim toward shore. As I looked back, I noticed my friend a few feet behind me, still going towards the shoal. I swam as fast as I could to pull him forward and push him toward shore without explanation. As I made it out of the water he understood why as my arms were covered in tentacles and blue venom. A lifeguard treated it with vinegar and once the adrenaline wore off, my arms were numb and swollen the entire bus ride home until the next day. I swear I can still see dots on my left arm absent pigment where the venom burned my skin." **David Riera; S.T.E.A.M. Educator and Doctoral Student; Hialeah, Florida**

"I grew up fishing and going to the beach almost every weekend. The smell of the ocean breeze and the salty taste was always spiritually up lifting." **Jason Carmona; Community Relations; Miramar, Florida**

APPENDIX B: HERITAGE ON EVERY COAST

HUMBOLDT PARK'S PASEO BORICUA, ILLINOIS



In 1995, Chicago Latino leaders led the installation of a public art project as a testament to the neighborhood residents' roots. Located at both ends of a strip along Division Street, locally known as Paseo Boricua, two 45 ton Puerto Rican flags, 59 feet tall, now welcome visitors to one of Chicago's most vibrant Latino neighborhoods. Approximately four miles from the shores of Lake Michigan, visitors are instantly immersed in a multisensory Latino experience, hearing Latino music on every corner, smelling and tasting traditional cuisine, witnessing countless murals and installations paying tribute to Puerto Rican icons and heritage, and, if timed right, seeing the area adorned in celebration of Puerto Rican holidays. Notably, the areas around Paseo Boricua may have received a significant portion of the 1,736 evacuees that left Puerto Rico for Chicago in the wake of Hurricane Maria, the Category 5 hurricane that made landfall on Puerto Rico in September of 2017. Incidentally, a year later, on October 31, 2018, Chicago's City Council adopted a resolution officially designating Paseo Boricua area as Puerto Rico Town.

DRY TORTUGAS NATIONAL PARK, FLORIDA

Named for the large turtle population that Juan Ponce de Leon encountered on discovery of the islands in 1513, the Dry Tortugas National Park lies 70 miles west of Key West. Following his departure from Puerto Rico, where he served as governor, Ponce de Leon led the first official expedition to Florida, successfully navigating the Florida current and shallow reef waters. The combination of geography and current made these islands a strategic location for Spanish explorers to Florida's Gulf Coast, as well as a heavily trafficked area for treasure fleets carrying goods to/from New World, even while conditions were precarious. Unsuccessful ships, such as the first documented wreck, the *Nuestra Señora del Rosario*, remain part of the Dry Tortugas legacy. The Dry Tortugas National Park is comprised of seven saltwater reef islands, which serve as nesting grounds for loggerhead, hawksbill and green turtles. Public access is restricted, though designated areas exist for snorkeling and diving, as well as camping, swimming, paddlesports, boating and fishing, and wildlife viewing.

JOSE MARTI RIVERFRONT PARK, FLORIDA

Named for the Cuban poet, philosopher and political theorist (among other occupations), José Julián Martí Pérez, Jose Marti Riverfront Park aptly sits along the bank of the Miami River in Miami, Florida, an area often referred to as East Little Havana. Born in Havana in 1853, José Martí was often described as the "Apostle of Cuban Independence" for his relentless push to gain independence from Spain. Speaking openly about a Cuban revolution against the Spanish government, he would cite the unique identity and culture of Cuba as justification for self-governance. In 1895, José Martí drafted the uprising orders and declared the purposes of the Cuban revolution from the Dominican Republic. Soon after, he returned to Cuba and died in action during the Battle of Dos Rios. Today, Jose Marti Park is a public resource, honoring an important legacy while serving a diverse community of Latinos; among them, Cuban exiles who began settling in the area in significant numbers following Fidel Castro's rise to power.

INLAND: COLORADO RIVER

The Colorado River, once a torrent of water that used to flow freely to the sea, carved the Grand Canyon; it now trickles. A transnational resource, the river traversed inland states from its headwaters in the Rocky Mountains, to the coastal states of Mexico, connecting Wyoming and Colorado to waters in the Gulf of California. Crossing the once rushing waters of the Colorado was difficult, though feasible at Yuma Crossing – a feat first discovered by Native Americans, and later by Spanish explorers. Led by Hernando de Alarcon and Melchior Diaz in 1540, Spanish explorers ventured up the Colorado River from the Sea of Cortez, discovering thriving communities near the crossing, and naming the area Yuma after the smoke ("humo" in Spanish) of the Native American cooking fires that filled the valley. Yuma Crossing would welcome additional Spanish explorers and missionaries, including Juan Bautista de Anza. In 1774, Anza helped establish Yuma Crossing as an important transportation and communication conduit that connected Mexico to Northern California during the Spanish colonial period. Over time, the waters of the Colorado River would be dammed and diverted to provide for urban development and agriculture at the expense of riparian and wetland habitats. Compounded by drought, and growing development needs, the current fate of the river and those who depend on it is precarious. Located along seven miles of the Lower Colorado River, the Yuma Crossing Natural Heritage Area reminds visitors of a natural and cultural history rooted in healthy river waters.

Visitors to the heritage area can experience its past, present and potential at a state historic park that tells the story of the Lower Colorado's transformation; along 110 acres of riverfront park designed for outdoor recreation and leisure; and among nearly 400 acres of restored wetlands that hint at the benefits of an established network of restored habitat along the Colorado corridor.

CUMBERLAND ISLAND NATIONAL SEASHORE, GEORGIA

In 1569, Spanish soldiers occupied then San Pedro Island, known for its sassafras tree production. Franciscan priest Baltazar Lopéz, arrived on island in 1587 to establish a mission with the goals of converting the local Tacatacuru tribe to Catholicism and resulting in the forced adoption of Spanish culture. The Tacatacuru defended the island against attack from the Guale Indians in 1597, though the first mission buildings were destroyed in the process. The mission was rebuilt beginning in 1603, and ultimately followed by a second mission in 1675. Following years of fear and mistrust exacerbated by British and American Indian tribes, the island's Spanish colonists and converted tribal members were ultimately forced to flee. While British and French pirates destroyed the island's missions in 1684 and forced the residents to abandon the missions, Spain did not relinquish the claim to the island, which they tried to recapture from James Oglethorpe, British colonizer, in 1742. Failing, Spain fought England for ownership until the Treaty of Paris was signed, and Spain ceded Spanish Florida to England. Today, Cumberland Island National Seashore provides access to ocean and estuary, and protects maritime forests, beaches and marshes. It can be enjoyed year-round by camping, fishing, biking, paddling, boating, hunting, hiking and swimming enthusiasts.

BOSTON'S LATIN QUARTER, MASSACHUSETTS

Located approximately four miles from the shore in the Hyde/Jackson Square neighborhood, Boston's Latin Quarter boasts 60 years of Latino immigrant history and influence in the area. Designated in 2018 by the Massachusetts Cultural Council as an official Massachusetts Cultural District, Latino culture, namely Caribbean, is evident at every turn: from Latino specialty shops and restaurants offering cultural cuisine, to public art displays illustrative of a vibrant culture, to the iconic homes of some of Boston's most prominent Latino organizations. As part of its mission to preserve cultural identity in a changing neighborhood, the Latino Quarter hosts a suite of events and festivals, fostering Latino community among locals and visitors alike.

SAN JUAN ISLAND NATIONAL HISTORIC PARK, WASHINGTON

Competition between Spain and England over access to land and trade with First Nations came to a head during the Nootka Crisis of 1789. Precipitated by Esteban Jose Martinez's seizure of British ships, the effort to occupy the west coast of Vancouver Island was ultimately peaceful resolved through a series of three conventions, the last of which was settled in 1794. In the interim following the crisis, Spain sent Francisco de Eliza y Reventa on a diplomatic mission to engage American Indians and chart the island region through the Georgia and Juan de Fuca straits; San Juan Island is among those in the region that Eliza y Reventa documented and named. San Juan Island National Historical Park boasts nearly seven miles of saltwater shoreline along which one will find tidepools, seaside bluffs and saltwater marshes. Visitors can enjoy hiking, wildlife viewing, boating and paddlesports.

WRANGELL-ST. ELIAS NATIONAL PARK AND PRESERVE, ALASKA

Beginning in 1774 with Juan Josef Pérez Hernández's first official, though unsuccessful, Spanish voyage from Mexico, Spain sent explorers to Alaska to strengthen and defend its claim to the land against Russian and British activities, and search for a Northwest Passage. The last of the explorers to visit Alaska under the Spanish flag were Alessandro Malaspina and Jose de Bustamente y Guerra. Anchoring their ships in Yakutat Bay, the southern border of Wrangell-St. Elias National Park, these Spanish explorers devoted a month in 1791 to detailed documentation of the area's natural and cultural features. Their studies included measurements of the height of Mt. St. Elias, and exploration of one of the world's largest glaciers, later named for the explorer, Malaspina Glacier. Tasked, in part, to investigate a Northwest Passage, the explorers' disenchantment with one seemingly promising route is embodied by the waterway's current name: Disenchantment Bay. In addition to their documentation of natural resources, expedition scholars also conducted ethnographic studies of the Tlingit people. Today, Wrangell-St. Elias National Park and Preserve is a UNESCO World Heritage Site and the largest of America's National Parks. The park is open year-round, though receives most visitors early June through mid-September for hiking, backpacking and mountaineering, as well as fishing, hunting and boating, wildlife viewing and some motorized sports.

ASSATEAGUE ISLAND NATIONAL SEASHORE, MARYLAND & VIRGINIA

Off the coast of the Assateague Island National Seashore, the remains of two Spanish ships lie on the ocean floor. In 1750, Spanish Royal Navy ship *La Galga*, was in route to Spain from Cuba, accompanying merchant ships, when a hurricane hit. When the ship beached, nearly 200 passengers and crew swam to the Assateague Island shore. A similar fate befell a second ship bound for Spain in 1802. Sailing from Veracruz, Mexico, the *Juno* was first damaged by a storm that forced it to anchor in Puerto Rico for 10 months. On departure from Puerto Rico, 400 passengers in tow, the ship encountered a second storm, and took on water. Before it sank, an American ship, *Favorite*, attempted to rescue *Juno* passengers with little success; seven were saved. The ownership of both wrecks and their artifacts was contested by Spain in the 1990's, resulting in a ruling favoring Spanish ownership and access. The artifacts remain on loan to the U.S., and can be seen at the national seashore's visitor center. In addition to these artifacts, visitors to Assateague National Seashore can hike, bike, paddle, horseback ride, camp, swim and fish, while enjoying the park's beaches and salt marshes, as well as its iconic horses, fabled to be descendants of Spanish horses that survived the *La Galga* wreck.

PADRE ISLAND NATIONAL SEASHORE, TEXAS

Cartographer Alonso Alvarez de Pineda made the first documented reference to Padre Island in 1519, known then as Isla Blanca, though the first confirmed arrival of Spaniards on the island was in 1554, when three ships wrecked in a nearby storm. The wrecks of the *Santa Maria, Espiritu Santo* and *San Esteban* ultimately had 31 survivors, following subsequent attacks by native peoples. Those that survived, had left the island in an attempt to assemble a salvage operation from nearby Vera Cruz; the successful salvage operation recuperated 29,000 pounds of silver and 22,000 pesos from the wrecks. Several Spanish expeditions to document the territory followed, though the first settlement on Padre Island wasn't until the 19th century, when the Franciscan Padre Nicolas Balli, and his nephew Juan José Balli, were granted the Santa Cruz de Buena Vista ranch by the Spanish. Today, Padre Island National Seashore remains the longest, undeveloped stretch of barrier island in the word. Kemp's ridley sea turtle and 380 bird species can be found along the 70 miles of coastline, dunes and tidal flats. Visitors can enjoy hiking, camping, wildlife viewing, boating, fishing, swimming and windsurfing.

APPENDIX C: AVER, HAF'S LET'S SEA CAMPAIGN

ASK

Question everything. Are you able to take part in environmental processes? Do you have access to clean ocean and coastal resources? Is there a way to get involved with ocean and coastal issues? Find out where things came from, why someone's supplying them, how they got there, who raised/made them, etc. Ask yourself whether you are choosing the best alternative. Think about where it's coming from and how it got there. Did it travel a long distance across to reach you? Is it coming from a business that maintains best practices with respect to agricultural worker health or sustainable seafood? What kind of materials is it made out of? Reusable/sustainable/natural? Don't forget to ask yourself some questions too: do I need this? Can I do with less? Is there an accessible alternative?

VOTE

Use your dollar to vote – to vote for the products, the brands, the companies, that are conscious of their impact on the environment and its dependent communities. Choosing between organic and conventional is not just about what goes into your body, it's also about what goes into the earth, the rivers and oceans; and what complicates the health of the farmworkers - and their families - that harvested the food. Recognize that the biggest differences and changes can be made by the people who are making differences and changes at bigger levels – i.e. lawmakers. Conscience consumption not only applies to stuff, but it applies to the people you vote into office. Vote for your local officials, plus state and federal representatives. All of these people have the power to make significant changes for or against the environment. And once they're in office, keep them accountable! Watch how they're voting, and call-in on issues where they need to be called out.

EDUCATE

Now that you're in the know, share what you know with others. Half the battle involves increasing awareness. Even if they know about an issue, many people don't know what they can do or how they can help. Empower them by reminding them of what's in their power! And for those in power, remind them of what they are there to protect! Not sure how? Check out your local organizations for opportunities to volunteer and put what you know into practice through action and the sharing of information! Are you part of a church that you can influence? Are you able to recommend changes in your workplace? If you have children, can you advocate to add conservation topics to their curriculums? There are so many opportunities to spread the word!

REDUCE

Comes before reuse and recycle for a reason! Reduce everything. Before making a purchase, think about whether you really need it, and if you need to buy it new. There are always options for purchasing used clothes, appliances, furnishings, etc. – and doing more with less. Every time you do make a purchase, make it very intentional. Think also about quantity and packaging. Does your lawn need that much fertilizer? Do you need the individually wrapped xyz? Can you buy it in bulk and do away with the boxes or layers of plastic? Consider its lifespan too – is this something you'll be able to keep around for a while? To reuse in different ways once its primary function has been fulfilled? Do away with the disposable; it's typically a matter of convenience, not of necessity. Outside of purchasing, there are other ways to reduce – by refusing. Those plastic bags that come for free at the grocery stores, those plastic straws that are always in cups at restaurants, the 50 napkins they give you at fast food places, those disposable water bottles… there are reusable alternatives if we feel like we really need them (everything from tote bags, to pocket straws) – and ways we can always ask for less/refuse excess. If you're purchasing less and reusing more, you're going to be reducing what ends up in the trash. Now combine that with composting, and you have a recipe for success! Composting not only reduces what ends up in the landfill, but restores vital energy, nutrients, etc. back to the earth that would otherwise just end up in some resource sink. Recycling should always be the last option. And here, it's really important to know what your city can recycle. Putting things into the recycling that can't be recycled will "contaminate" it; in fact, very little of what we recycle is actually fit for reuse because so much extraneous material ends up getting in the way. Learn what you are able to recycle in your city and spread that word!

START WITH WHAT YOU CAN

Now, all this being said, the way our modern economy is structured, we've made it so difficult to access local, responsibly sourced and crafted things – usually the more local, organic, fair trade, responsibly sourced they are, the more expensive they will be. So, do what you can. You're not always going to be able to afford the pants made out of recycled plastic bottles, but maybe you're able to purchase organic bed sheets, and cut those old bed sheets to make rags for the house that replace those disposable paper towels. And maybe you aren't able to purchase organic clementines, but you pick the ones from California or Florida vs. the ones from Morocco and support local agricultural workers in the process. Spending less time and money is a preferred alternative, and in many situations, a necessity. But where you have an option, consider the toll your choice will take on the environment, and opt for a lesser one!

ENDNOTES

[1] https://oceanservice.noaa.gov/facts/exploration.html
[2] https://oceanservice.noaa.gov/facts/oceanwater.html
[3] http://www.coml.org/highlights-2010/
[4] https://doi.org/10.1371/journal.pbio.1001127
[5] https://oceanexplorer.noaa.gov/facts/medicinesfromsea.html
[6] https://doi.org/10.4103/0975-7406.171700
[7] https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf
[8] http://www.fao.org/3/I9540EN/i9540en.pdf
[9] https://www.fisheries.noaa.gov/feature-story/fisheries-united-states-2018
[10] https://www.fisheries.noaa.gov/national/habitat-conservation/estuary-habitat
[11] https://water.usgs.gov/GIS/huc.html
[12] https://oceanservice.noaa.gov/facts/shorelength.html
[13] https://www.census.gov/data/developers/data-sets/acs-5year.2016.html
[14] https://coast.noaa.gov/data/digitalcoast/pdf/socioecon-pocket-guide.pdf
[15] ibid
[16] https://coast.noaa.gov/states/fast-facts/tourism-and-recreation.html
[17] ibid
[18] http://large.stanford.edu/courses/2019/ph241/clark2/docs/noaa-99.pdf#page=70
[19] https://outdoorindustry.org/wp-content/uploads/2015/03/2018-Special-Report-on-Fishing_FINAL.pdf
[20] https://www.nmma.org/press/article/21457
[21] https://coast.noaa.gov/data/docs/states/shorelines.pdf
[22] Developed using 2012-2016 5-year ACS estimates for coastal shoreline counties as defined by NOAA
[23] ibid
[24] https://coast.noaa.gov/data/digitalcoast/pdf/econ-report-regional-state.pdf
[25] ibid
[26] Information from staff, received 2/21/20; see: https://marineprotectedareas.noaa.gov/
[27] https://www.ncdc.noaa.gov/billions/events
[28] https://www.ppic.org/publication/ppic-statewide-survey-californians-and-the-environment-july-2019/
[29] ibid
[30] n28
[31] n28
[32] n28
[33] https://law.stanford.edu/wp-content/uploads/2017/11/reineman.pdf
[34] https://www.ioes.ucla.edu/wp-content/uploads/UCLA-Coastal-Access-Policy-Report.pdf
[35] https://www.oregon.gov/oprd/PRP/Documents/SCORP-2017-Survey-Latino-Asian-Resident.pdf
[36] https://www.deq.virginia.gov/Portals/0/DEQ/CoastalZoneManagement/FundsInitiativesProjects/task46-16.pdf
[37] ibid
[38] n36
[39] https://www.jstor.org/stable/4496191
[40] https://www.jstor.org/stable/41658849
[41] ibid
[42] https://files.dnr.state.mn.us/aboutdnr/reports/recreation/2017_minnesota_outdoor_activities_survey_findings_report.pdf
[43] https://coast.noaa.gov/data/digitalcoast/pdf/econ-report-summary-puerto-rico-english.pdf
[44] ibid
[45] https://www.coris.noaa.gov/monitoring/data_summary_report_2018/NCRMP_Data_Summary_2018.pdf
[46] https://www.documentcloud.org/documents/4872895-Washington-Post-Kaiser-Family-Foundation-Puerto.html#document/
[47] https://www.fws.gov/wetlands/documents/Status-and-Trends-of-Wetlands-in-the-Conterminous-United-States-2004-to-2009.pdf
[48] https://www.fws.gov/wetlands/documents/Status-and-Trends-of-Wetlands-In-the-Coastal-Watersheds-of-the-Conterminous-US-2004-to-2009.pdf
[49] https://www.coloradocollege.edu/other/stateoftherockies/conservationinthewest/2020/2020-conservation-in-the-west-poll-data/2020_SotR_StateFactSheets_LATINOS.pdf
[50] https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates#2019-quarterly-updates
[51] https://doi.org/10.3389/fenvs.2016.00058
[52] https://environmentamerica.org/reports/ame/offshore-drilling-onshore-damage
[53] https://doi.org/10.3389/fmars.2017.00418
[54] https://incidentnews.noaa.gov/
[55] n48
[56] https://www.wri.org/news/2020/04/release-new-data-shows-millions-people-trillions-property-risk-flooding-infrastructure
[57] https://marinedebris.noaa.gov/sites/default/files/publications-files/An_analysis_of_marine_debris_in_the_US_SUMMARY_508.pdf
[58] https://doi.org/10.1002/ieam.1909
[59] https://doi.org/10.1016/j.watres.2017.12.056
[60] https://doi.org/10.1016/j.watres.2015.02.012
[61] https://oceanexplorer.noaa.gov/facts/climate.html
[62] https://www.nationalgeographic.com/science/2020/05/problem-america-neglected-too-long-deteriorating-dams/
[63] https://doi.org/10.1641/0006-3568(2002)052[0999:IARFMH]2.0.CO;2
[64] https://doi.org/10.1002/(SICI)1099-1646(199803/04)14:2<161::AID-RRR495>3.0.CO;2-J
[65] n62
[66] https://doi.org/10.1016/j.ijpara.2010.04.015
[67] http://doi.org/10.1098/rspb.2019.1718
[68] https://www.annualreviews.org/doi/full/10.1146/annurev-marine-010213-135029
[69] https://www.epa.gov/nutrientpollution/climate-change-and-harmful-algal-blooms
[70] https://doi.org/10.1111/j.1529-8817.2010.00815.x
[71] n51
[72] https://doi.org/10.1073/pnas.1812883116
[73] https://coast.noaa.gov/states/fast-facts/recurrent-tidal-flooding.html
[74] https://www.ncdc.noaa.gov/billions/
[75] ibid
[76] https://www.tandfonline.com/doi/abs/10.1080/15287394.2017.1297275?journalCode=uteh20
[77] http://cervantesobservatorio.fas.harvard.edu/sites/default/files/hispanic_map_2017en.pdf
[78] https://coast.noaa.gov/states/fast-facts/economics-and-demographics.html
[79] https://doi-org.proxy.wm.edu/10.1007/s11111-011-0136-2
[80] https://www.ncdc.noaa.gov/billions/
[81] n79
[82] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4997461/
[83] https://www.vibrantcitieslab.com/wordpress/wp-content/uploads/2019/09/Framing-the-Challenge-of-Urban-Flooding.pdf
[84] https://nca2018.globalchange.gov/
[85] 6% figure from 2010-2014 5-year ACS estimates on Hispanics in coastal shoreline counties as defined by NOAA
[86] https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-7717.00111
[87] https://digitalcommons.library.tmc.edu/cgi/viewcontent.cgi?article=1403&context=jfs
[88] n76
[89] n79
[90] https://tamug-ir.tdl.org/bitstream/handle/1969.3/29130/sea-level-rise.pdf?sequence=1

ENDNOTES

[91] An examination of hurricane vulnerability of the U.S. northeast and mid-Atlantic region. S. Prasad. Florida Atlantic University. ProQuest Dissertations Publishing. 2013. 3571436.
[92] n86-n88
[93] https://earthjustice.org/sites/default/files/files/National%20Release%20Polling%20Memo%20Formatted.pdf
[94] https://doi.org/10.3389/fmars.2019.00511
[95] https://doi.org/10.1371/journal.pone.0227436
[96] https://www.nature.com/articles/nclimate3271
[97] n79
[98] https://doi.org/10.1088/1748-9326/aabb32
[99] https://www.citylab.com/environment/2018/05/watch-puerto-ricos-hurricane-migration-via-mobile-phone-data/559889/
[100] ibid
[101] https://openknowledge.worldbank.org/handle/10986/29461
[102] https://marinedebris.noaa.gov/sites/default/files/2019.07.Econ_.Impacts.Marine.Debris.complete.wFN_30Aug2019_508.pdf
[103] n57
[104] n24
[105] ibid
[106] https://coast.noaa.gov/data/digitalcoast/pdf/econ-report.pdf
[107] https://www.bls.gov/cps/cpsaat18.htm
[108] ibid
[109] https://www.bls.gov/careeroutlook/2019/data-on-display/hispanics.htm
[110] https://www.bls.gov/opub/ted/2019/hispanic-share-of-the-labor-force-projected-to-be-20-point-9-percent-by-2028.htm
[111] https://doi.org/10.1111/1477-8947.12047
[112] https://doi.org/10.1186/1476-069X-7-S2-S6
[113] https://doi.org/10.1371/journal.pbio.0040277
[114] https://doi.org/10.1016/S0025-326X(01)00131-X
[115] https://dx.doi.org/10.2105%2Fajph.69.7.690
[116] ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/273_seafood_consumption.pdf
[117] https://www.jstor.org/stable/3655378
[118] https://journals.sagepub.com/doi/10.1177/1524839910380156
[119] https://scholar.oxy.edu/cgi/viewcontent.cgi?article=1026&context=scas
[120] n36, see Appendix E
[121] https://www.ers.usda.gov/topics/farm-economy/farm-labor/#demographic
[122] https://www.ucsusa.org/sites/default/files/2019-12/farmworkers-at-risk-report-2019-web.pdf
[123] https://wdr.doleta.gov/research/FullText_Documents/ETAOP_2019-01_NAWS_Research_Report_13.pdf
[124] https://doi-org.proxy.wm.edu/10.1007/s11027-011-9340-8
[125] n112
[126] https://theoceanproject.org/wp-content/uploads/2017/08/Communicating-About-Oceans_Results-of-National-Survey-1999.pdf
[127] Note that this organization does not necessarily engage in resource conservation and education, but given the collective branches' impact on ocean health and marine life, they represent potential for engagement.
[128] n79
[129] n76
[130] n87
[131] n90
[132] https://www.pewresearch.org/fact-tank/2019/10/14/facts-for-national-hispanic-heritage-month/
[133] n90
[134] https://doi.org/10.1016/j.amepre.2009.07.022
[135] https://journals.sagepub.com/doi/pdf/10.1177/0739986305284012
[136] https://doi.org/10.1080/00222216.2004.11950030
[137] https://doi.org/10.1016/S0048-9697(99)00048-0
[138] n90
[139] n124
[140] Cultural Heritage and Climate Change Adaptation Pathways. E. Van Dolah. University of Maryland, College Park. ProQuest Dissertations Publishing. 2018. 10824808.
[141] n124
[142] https://doi.org/10.1016/j.gloenvcha.2014.08.005
[143] https://doi.org/10.1606%2F1044-3894.4003
[144] https://psycnet.apa.org/doi/10.1007/978-1-4614-3917-2_13
[145] https://www.redalyc.org/pdf/284/28425426005.pdf
[146] http://www.lamadretierra.org
[147] https://heartwiredforchange.com/ocean/
[148] https://www.motherjones.com/environment/2020/02/latinos-are-super-green-when-will-environmental-groups-realize/
[149] https://doi-org.proxy.wm.edu/10.1016/j.envres.2005.12.009
[150] n39
[151] https://journals-sagepub-com.proxy.wm.edu/doi/pdf/10.1177/106591290505800306
[152] https://doi.org/10.1080/08920759209362158
[153] n147
[154] n124
[155] e.g. https://doi.org/10.2105/AJPH.2017.304053
[156] https://doi.org/10.1177/0956247810396055
[157] n140
[158] see also: https://agu.confex.com/agu/osm20/meetingapp.cgi/Paper/657467
[159] https://www.bls.gov/cps/cpsaat11.htm
[160] https://doi-org.proxy.wm.edu/10.1007/s10903-015-0224-y
[161] https://doi.org/10.1177/003335490712200515
[162] https://www.jstor.org/stable/23567935
[163] https://www.osha.gov/SLTC/landscaping/hazards.html#pesticideschemicals
[164] https://doi.org/10.1080/19338244.2017.1339011
[165] https://doi.org/10.1080/09615768.2019.1645436
[166] https://doi.org/10.1002/ajim.20942
[167] https://download.militaryonesource.mil/12038/MOS/Reports/2017-demographics-report.pdf
[168] https://prhome.defense.gov/Portals/52/Documents/MRA_Docs/MPP/AP/poprep/2017/Appendix%20E%20-%20(U.S.%20Coast%20Guard).pdf ; full report here: https://www.cna.org/pop-rep/2017/index.html
[169] n167
[170] https://www.jstor.org/stable/25682172
[171] https://www.bls.gov/cps/cpsaat18.htm
[172] n106
[173] https://tos.org/oceanography/assets/docs/29-1_cook2.pdf
[174] https://doi.org/10.5408/1089-9995-51.5.474
[175] https://www.americanscientist.org/article/how-to-recruit-and-retain-underrepresented-minorities
[176] n174
[177] Social Capital and Underrepresented Minority Graduate Students at the University of Washington School of Marine and Environmental Affairs. B.P. Tracey. University of Washington. ProQuest Dissertations Publishing. 2019. 13811182.
[178] https://doi.org/10.1002/ece3.6300
[179] https://search-proquest-com.proxy.wm.edu/docview/1721344603?rfr_id=info%3Axri%2Fsid%3Aprimo
[180] https://doi.org/10.1002/cncr.22356
[181] https://doi.org/10.1111/j.1548-1433.2009.01133.x
[182] n179

ENDNOTES

[183] Social capital and Latino achievement. C. Olivo. The Claremont Graduate University. ProQuest Dissertations Publishing. 2009. 3361817.
[184] n156
[185] https://cdn.naaee.org/sites/default/files/ee_en_espanol_plc_ebook.pdf
[186] https://doi.org/10.1080/19398441.2010.517038
[187] https://etda.libraries.psu.edu/files/final_submissions/2998
[188] n136
[189] n34
[190] n33
[191] http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/6009/StanfordFreetheBeach.pdf?sequence=1&isAllowed=y
[192] n114
[193] n136
[194] n187
[195] n186
[196] n187
[197] https://doi.org/10.2217%2FWHE.13.9
[198] n186
[199] n136
[200] https://doi.org/10.1080/00222216.1993.11969906
[201] https://doi.org/10.1080/00222216.1998.11949818
[202] n187
[203] https://ntaonline.com/app/uploads/2019/10/Overview-of-the-Hispanic-Travel-Market.pdf
[204] https://www.emarketer.com/content/1-5-trillion-spending-power-of-us-hispanics-has-a-caveat
[205] n203
[206] ibid
[207] https://outdoorindustry.org/wp-content/uploads/2016/08/ConsumerVue-Forecasting_final_2.pdf
[208] https://www.nawrb.com/hispanic-buying-power/
[209] https://www.pewsocialtrends.org/essay/an-early-look-at-the-2020-electorate/
[210] https://climatecommunication.yale.edu/wp-content/uploads/2017/09/Climate-Change-Latino-mind-May-2017.pdf
[211] n93
[212] https://earthjustice.org/features/poll-latino-opinion
[213] https://doi.org/10.3389/fcomm.2018.00058

ABOUT THE AUTHOR

CIRSE GONZALEZ

Cirse Gonzalez is the Coastal Training Program Coordinator at the Chesapeake Bay National Estuarine Research Reserve in Virginia. In this capacity, she works with coastal decision makers to foster science-based and community-supported resource management and socio-ecological system resilience. Cirse is animate about empowering and cultivating resource stewards through access, education and engagement in participatory processes. Cirse is experienced in communications and outreach, natural resource management, responsible recreation and marine ecology from her work and research with a variety of agencies and organizations, including the U.S. Federal Recreation Council, where she served as Executive Director, and NOAA's Office of National Marine Sanctuaries. While navigating her career, Cirse has lived and worked in geographies from Glacier Bay National Park in Alaska, to Fiji's outer islands, as well as at five different U.S. marine laboratories. Cirse has a B.S. in Biology from Duke University and a Master of Marine Affairs from the University of Washington.

ACKNOWLEDGEMENTS

With deep appreciation for the demographic data mined by Gabe Sataloff in NOAA's Office for Coastal Management, and our survey respondents - who lent their experiences in an effort to provide an enhanced look at the Latino connection to the ocean and coast.

ABOUT HAF

Hispanic Access Foundation is a 501(c)(3) non-profit organization that connects Latinos with partners and opportunities improving lives and creating an equitable society. Our vision is that all Hispanics throughout the U.S. enjoy good physical health, a healthy natural environment, a quality education, economic success and civic engagement in their communities with the sum improving the future of America. For more information, visit www.hispanicaccess.org.

HAF was actively involved in elevating the Latino community's voice around the Browns Canyon, San Gabriel Mountains, Boulder-White Clouds, Sand to Snow, Mojave Trails, and Castle Mountains National Monument efforts. Additionally, HAF has launched the initiatives Por la Creacion Faith Based Alliance, which unites Latino faith leaders around the protection of God's creation and creating tomorrow's environmental stewards, and Latino Conservation Week, which includes dozens of conservation and outdoor-related events across the country.

Hispanic Access Foundation

1030 15TH ST NW, SUITE B/1 #150
WASHINGTON, DC 20005
(202) 640-4342

WWW.HISPANICACCESS.ORG