

University of Texas Rio Grande Valley

ScholarWorks @ UTRGV

---

Political Science Faculty Publications and  
Presentations

College of Liberal Arts

---

4-5-2024

## A Power Elite Alliance and Local Environmental Policy: Elon Musk in Cameron County

Michelle Keck

*The University of Texas Rio Grande Valley*, [michelle.keck@utrgv.edu](mailto:michelle.keck@utrgv.edu)

Guadalupe Correa-Cabrera

*George Mason University*

Follow this and additional works at: [https://scholarworks.utrgv.edu/pol\\_fac](https://scholarworks.utrgv.edu/pol_fac)



Part of the [Political Science Commons](#)

---

### Recommended Citation

Michelle Keck, Guadalupe Correa-Cabrera; A Power Elite Alliance and Local Environmental Policy: Elon Musk in Cameron County. *Case Studies in the Environment* 5 April 2024; 8 (1): 2317715. <https://doi.org/10.1525/cse.2024.2317715>

This Article is brought to you for free and open access by the College of Liberal Arts at ScholarWorks @ UTRGV. It has been accepted for inclusion in Political Science Faculty Publications and Presentations by an authorized administrator of ScholarWorks @ UTRGV. For more information, please contact [justin.white@utrgv.edu](mailto:justin.white@utrgv.edu), [william.flores01@utrgv.edu](mailto:william.flores01@utrgv.edu).

# A Power Elite Alliance and Local Environmental Policy: Elon Musk in Cameron County

MICHELLE KECK<sup>1</sup> AND GUADALUPE CORREA-CABRERA<sup>2</sup>

<sup>1</sup> Department of Political Science, The University of Texas Rio Grande Valley, Brownsville, TX, USA

<sup>2</sup> Schar School of Policy and Government, George Mason University, Arlington, VA, USA

Email: michelle.keck@utrgv.edu

**ABSTRACT** The present work analyzes several aspects related to the environmental impacts that Elon Musk's company Space Exploration Technologies (SpaceX) has had on Cameron County, Texas. Utilizing prior studies, we will focus on how the power elite impact policy at the federal, state, and local levels, specifically regarding SpaceX's arrival to Cameron County as well as environmental policy concerning the activities at the SpaceX Starbase facility, located on Boca Chica Beach, Texas. The present analysis uses data from semi-structured interviews with key stakeholders including government officials, developers, environmentalists, and other activists in order to understand the connections between the global and local power elites. A survey of Cameron County residents will also be used to determine their experience with environmental effects resulting from SpaceX activities.

**KEYWORDS** SpaceX, power elite, environment

## INTRODUCTION

We assess the impact that Elon Musk's company Space Exploration Technologies (SpaceX) has had on Cameron County, Texas. Utilizing Domhoff (1967, 2014), Molotch (1976), Logan and Molotch (1987), Molotch and Logan (1996), and Gendron and Domhoff (2009), we focus on how the power elite impact policy at the federal, state, and local levels, specifically regarding SpaceX's arrival in Cameron County as well as environmental policy concerning the activities at the SpaceX Starbase facility located on Boca Chica Beach, Texas. We use data from semi-structured interviews with key stakeholders including government officials, developers, and environmentalists, as well as press accounts in order to understand the connections between the global and local power elite. We examine how corporations and the well-off and well-connected were able to dominate the policy process putting SpaceX's corporate interests ahead of public interests causing negative environmental consequences in Cameron County. A survey of Cameron County residents is also used to determine their experiences with environmental effects resulting from SpaceX activities.

## POWER ELITE THEORY

Domhoff (1967), building on the work of Mills (1956) and his work on the power elite, outlines his class dominance theory arguing that power is highly concentrated in the United States and that the state is controlled by a dominant social class that utilizes the state to achieve its objectives. Those at the apex of the power structure are the wealthiest Americans, who make up a small 0.5% of the population but hold immense power. The top 0.5% include owners and managers of several thousand large corporations, banks, and real estate companies that Domhoff (2014) argues are the most powerful group in the United States, and they shape government policy through a network of for-profit and nonprofit organizations.

Domhoff (2014) focuses on how a nationwide corporate community including large corporations, banks, and stockbrokers on Wall Street, military contractors, accounting firms, and law firms, in conjunction with power elites, defined as foundations, think tanks, and policy-discussion groups in the policy planning network, provide the organizational basis for an institutionalized leadership group for the corporate rich, through lobbying,

opinion shaping, candidate selection, and the policy formulation process. These actors work to promote and protect the corporate-conservative alliance over the labor-liberal alliance on issues including, “wages and profits, the rate and progressivity of taxation, the usefulness of labor unions, and the degree to which business should be regulated by government” (Domhoff, 2014, p. xvi). Domhoff (2014) argues that the corporate community and the power elite build upon their powerbases which include structural power, status power, expert power, as a source of policy recommendations, and their success in the electoral arena to dominate the federal, state, and local governments on the issues they care about.

Domhoff (2014) argues that one method of influence utilized by the power elite at the federal and state levels is the special-interest process in which the power elite, corporations, and specific business sectors formulate policy proposals and attempt to implement them by lobbying legislatures and executive agencies. Lobbying involves frequent personal contact with elected officials and the provision of information and financial support the lobbyists have to offer to encourage support favorable to their clients. Lobbyists from corporations, law firms, and trade associations, working through the special interest process, play a vital role in shaping federal and state government policies on narrow issues of concern to specific corporations and business sectors.

The power elite also has considerable influence at local levels of government. The general public’s lack of interest in local politics, which is backed by data indicating turnout in local elections is significantly lower than that state and national elections (Wood, 2002), creates opportunities for the elite and business interests to prevail in local policy decisions. Peterson (1981) argues that since citizen involvement in local politics is nominal, underprivileged groups are relegated to formal political processes, while more economically prosperous groups have informal access to decision-makers. As a result, local leaders are more motivated to promote policies in the economic interests of their cities rather than redistributive policies, which are typically counter to the economic interests of the city.

The elite theory of local politics contends that community power is disproportionately distributed toward the wealthy few, and local policy formation is controlled by a relatively small number of very powerful individuals or groups whose dominant interest is business (Domhoff,

2007; Hunter, 1953). Growth coalition theory contends that local power structures are coalitions of land-based and associated businesses, which are focused on making local land more profitable. According to Gendron and Domhoff (2009, p. 7), at the core of local power structures are a set of real estate owners whose goal is to increase the value of land by enticing businesses, government agencies, educational institutions, residents, and tourists to the region. Growth coalitions fashion themselves as a responsible citizens and present profitable endeavors to the general public as economic growth opportunities, in particular job creation (Gendron & Domhoff, 2009). They also emphasize the need to pursue “value-free development,” which involves utilizing the land to its best and highest use even if it is at the expense of existing neighborhoods (Logan & Molotch, 1987).

The growth machine concept further refines local elite theory and contends that the combination of land developers, commercial interests, local government, and entrepreneurial coalitions play a decisive role in shaping local governance and policy priorities (Logan & Molotch, 1987; Molotch, 1976; Molotch & Logan, 1996). Members of the growth coalitions are able to dominate most city governments and turn cities into growth machines. Over time, pro-growth real estate owners and their allies, including public utilities, mortgage bankers, retailers, and newspaper publishers, begin to attract a set of staunch opponents, who are most often neighborhood members and environmentalists who push back against policies and projects supported by the growth coalition (Gendron & Domhoff, 2009). Often assisting these groups are feminists and liberals who have chosen to advocate at the local level for lower-income residents or for social justice issues (Domhoff, 2014).

We seek to build upon this literature by examining the influence that SpaceX and the power elite have at the federal, state, and local levels to achieve favorable outcomes for the company and capital at the expense of the environment and the residents of Cameron County.

## METHODOLOGY

In order to assess SpaceX’s impact on Cameron County, we utilize a number of methods including semi-structured interviews; a survey of Cameron County residents; national, regional, and local newspapers; and online publications to examine how the elite and different levels of government worked together to bring SpaceX to

Cameron County in order to understand the connections between the power elite.

For the semi-structured interviews, we created a list of 10 questions (see Appendix 1) and in December 2022 held in-person and Zoom interviews with eight key Cameron County stakeholders including city commissioners from Brownsville, Texas, the largest city in the region, real estate developers, local journalists, and environmentalists in order to gain insight on activities and changes in the county related to SpaceX's arrival to the region.

To determine the impact that the arrival of SpaceX has had on the residents of Cameron County, we received funding through a grant sponsored by the University of Texas Rio Grande Valley with matching funds from George Mason University to commission a survey. The survey was conducted by The Center for Survey Research and Policy Analysis at the University of Texas Rio Grande Valley with a total of 665 Cameron County, Texas, residents surveyed by phone in Spring 2023. Respondents were asked 32 questions (see Appendix 2) concerning issues including environmental damage, gentrification, and corruption in order to gauge their experience and opinions about SpaceX's role and activities in the region. Questions in the survey highlighted in this study include those concerning the direct impact that citizens living near the launchpad have faced, citizens' experiences with road closures restricting access to popular public recreation sites including Boca Chica Beach, Boca Chica Beach State Park, and Boca Chica Wildlife Refuge, and citizens' perceptions of the environmental impacts SpaceX has had on the region.

In order to examine the factors that led SpaceX to choose the Cameron County launch site and actions taken by local, state, and federal entities and officials, we relied on press accounts. Local publications utilized include *The Brownsville Herald*, *The Valley Morning Star*, and *KRGV.com*. For state-level coverage, we used articles from *The Texas Tribune*, *Texas Public Radio*, *Texas Standard*, and *San Antonio Express News*. National outlets referenced include *The New York Times*, *The Washington Post*, *The Wall Street Journal*, and *CNN*.

## SPACEX AND THE U.S. GOVERNMENT

Elon Musk, currently the world's richest man with an estimated worth of US\$227.9 billion (Forbes, 2023), founded SpaceX in 2002 to create affordable space commercial flight and to establish a colony on Mars. SpaceX

manufactures spacecraft, rocket engines, and launches spacecraft.<sup>1</sup> SpaceX rockets carry astronauts and cargo into space for NASA, place satellites into orbit for itself and commercial customers, and takes part in national security missions for the U.S. government.

As a space access company, SpaceX was in a favorable position to take advantage of the opportunities that the lack of a shuttle program, which flew its final mission in 2011, provided to the commercial space program. The looming end of the shuttle program resulted in a renewed effort for NASA and the private space sector to work together causing a decentralization in space policy, known as the "new space" approach, which emphasizes public-private partnerships with the government providing funds to supplement investment by private companies who in turn are allowed to design, produce, and own the products (Weinzierl, 2018).

In this new commercial space race, Elon Musk had a clear advantage in a key government agency that would greatly assist the company. In 2002, shortly before the founding of SpaceX, Elon Musk and Michael Griffith who were the president and Chief Operating Officer of In-Q-Tel, a venture capital company created and funded by the Central Intelligence Agency, traveled together to Russia in Musk's failed attempt to purchase intercontinental ballistic missiles to jump-start his company (Seedhouse, 2022). Musk and Griffith remained in touch and their relationship continued with Griffith serving as a consultant of SpaceX in 2002 (Friedman, 2003). On April 15, 2005, Griffith was appointed as NASA administrator and 5 days later Griffith and Musk met at NASA headquarters (MacLeod, 2022).

In 2006, SpaceX was awarded its first NASA contract for US\$396 million through the Commercial Orbital Transportation Services (COTS), a federal seed money program devised and funded by Griffith to provide cargo delivery to the International Space Station (MacLeod, 2022). In 2008, Administrator Griffith would award SpaceX an additional US\$1.6 billion contract for cargo service, a contract that Musk asserts saved the company which was on the verge of bankruptcy at the time, "I would like to start off by saying what a tremendous honor it has been to work with NASA. And to acknowledge the fact that we could not have started SpaceX, nor could we have reached this point without the help of

1. It is also a satellite company; its Starlink system provides satellite-based internet service.

NASA” (Seedhouse, 2022, p. 20). SpaceX’s relationship with NASA has continued to grow; in 2022 it became NASA’s second largest vendor at US\$2.04 billion surpassing Boeing to become the first “new space” corporation to surpass the traditional “old space” companies and is NASA’s largest for-profit, nonacademic vendor (Berger, 2022). NASA is reliant on SpaceX as it is currently the only U.S. company that can transport American astronauts to the International Space Station. Recent reporting by *The Wall Street Journal* indicates that SpaceX has a “de facto” monopoly on rocket launches providing 66% of flights from American launch sites in 2022 and has already launched 88% of all U.S. launches in the first 6 months of 2023, a trend that is expected to continue in the foreseeable future as the company has no viable domestic competition (Maidenberg, 2023).

In addition to his personal connection to a key federal bureaucracy official, SpaceX also relies heavily on the special interest process in order to influence lawmakers and agencies on legislation and regulation that serves the company’s interests and to compete for government contracts. SpaceX’s influence machine in Washington, DC, has grown; in 2003 the company hired one lobbyist and spent US\$36,000 lobbying the Department of Defense, in 2022 the company hired 44 lobbyists, spent US\$2.7 million, and lobbied 16 federal agencies (Open Secrets, 2023). From 2003 to the first quarter of 2023, SpaceX has spent over US\$24.9 million dollars on federal lobbying efforts (Open Secrets, 2023). The Federal Aviation Administration (FAA), which is responsible for protecting the public with respect to commercial space launches, including licensing and permitting launches, has long been a target of SpaceX’s lobbying efforts. SpaceX first lobbied the FAA in 2005; in 2007 it resumed its lobbying of the FAA and has continued to lobby the agency every year since (Open Secrets, 2023).

The FAA was a critical agency to SpaceX, particularly regarding its proposed spaceport on Boca Chica Beach in Cameron County. On September 22, 2014, SpaceX broke ground on a new spaceport facility at Boca Chica. The groundbreaking followed the successful completion of an Environmental Impact Statement (EIS) in coordination with the Federal Aviation Administration’s Office of Commercial Space Transportation (FAA-AST), and the commitment of millions of dollars in financial assistance from Texas and Cameron County. Elon Musk’s 2018 announcement of the company’s plan to launch the

Starship Heavy from the Boca Chica site required the company to modify its existing license with the FAA which included the need for a new Programmatic Environmental Assessment (PEA) to assess the impact of the larger and more powerful rocket. In June 2022, the FAA released the final PEA determining that Starship launches would not result in significant environmental effects; however, it required the company to take mitigating actions to limit launch impact (Chang, 2022).

## SPACEX AND THE TEXAS GOVERNMENT

SpaceX engaged in a full court lobbying effort to ensure the state would produce policy that would convince the company to pick Boca Chica Beach, Texas, as its private spaceport. Josh Havens, an aide to Texas Governor Rick Perry, notes that SpaceX officials contacted the governor’s office in 2011 expressing interest in a site on Boca Chica Beach, located near Brownsville, in Cameron County (Preston & Tillman, 2014). The governor’s office contacted Gilberto Salinas, who was then the executive vice president of the Brownsville Economic Development Council (BEDC), and 3 weeks later he along with four others from Brownsville, met with Musk at the company’s headquarters in Hawthorne, California, where he expressed interest in building the world’s first commercial rocket launchpad in Cameron County if Texas was able to offer a competitive package (Preston & Tillman, 2014).

Gilberto Salinas believed that bringing SpaceX to Cameron County would be a positive development noting, “It made me want the project, I thought, if we’re not going to go all out for this project, which one will we go all out for?” (Preston & Tillman, 2014, para. 20). In June 2012, Elon Musk met with Governor Perry in Austin in order to discuss the economic incentives the state would provide as well as legislation that would be required by the company in order to secure a launch site for SpaceX with Musk commenting that although South Texas was the leading candidate for the site, other locations remained in the running (ABC7, 2012).

Around the same time as the meeting with Perry, *The Brownsville Herald* reported that SpaceX began buying land in Cameron County, purchasing a half-acre lot in June for US\$2,500, and two additional purchases made at auctions in September 2012 with one lot purchased for US\$6,400 and another for US\$15,000; while local officials cautioned that the purchases did not mean the

company was coming, then Cameron County Judge Carlos Cascos, Republican, noted, “It is a good sign” (Perez-Trevino, 2012, para. 1). Any final approval regarding the site placement hinged upon the FAA, which was actively conducting an environmental and safety review of SpaceX’s application; the proposed site is adjacent to two state parks including Brazos State Park and Boca Chica State Park, the Boca Chica Wildlife Preserve, the Las Palomas Wildlife Management Area, Isla Blanca Park, as well as a small residential neighborhood known as Boca Chica Village.

In addition to property purchases, November 2012 marked the first time that Musk made contributions to politicians in Cameron County, donating US\$1,000 to Texas House Representative Rene Oliveira, Democrat, US\$1,000 to Texas House Representative Eddie Lucio, III, Democrat, and US\$2,000 to Texas State Senator Eddie Lucio, Jr, Democrat; in the following month, the lawmakers were actively pursuing state funding options for the upcoming legislative session in order to entice SpaceX to Cameron County (Markay, 2014; Rauf, 2013a). Representative Oliveira would go on to become SpaceX’s key “cheerleader”/supporter in the legislature (Rauf, 2013a). Oliveira viewed lawmakers’ efforts as essential in order to craft a deal that would be competitive as there were concerns over Florida’s US\$20 million commercial space recruitment fund noting, “For us to be competitive with other states, we have to make this attractive, we’ve heard numbers from other states that are pretty aggressive” (Preston & Tillman, 2014, para. 26).

As the 83rd Texas legislative session approached, SpaceX ramped up its political outreach by hiring Demetrius McDaniel of Greenberg Traurig LLP, considered to be one of the most prominent lobbyists in the state, spending approximately US\$219,000 on lobbying efforts including trips, gifts, and entertainment for legislators, a considerable departure from the 2011 session when it had a contract with one lobbyist spending less than US\$25,000 (Rauf, 2013b). The 2013 lobbying effort directly targeted members in positions who had considerable sway over legislation related to SpaceX.

One target was House Representative Jim Pitts, Republican and top budget writer on the House Appropriations Committee, the committee that would consider legislation regarding appropriating incentive money in the 2014–2015 state budget to the company. In January 2013, several weeks into the legislative session, Pitts and

his aide were invited on a SpaceX funded trip to California to learn about the company, which included a side outing to a Lakers game; the trip, according to campaign finance filings, cost SpaceX US\$6,803 (Rauf, 2013b). Representative Pitts became one of SpaceX’s biggest supporters during the session and he noted, “I have heard about SpaceX . . . really for the first time this session . . . this is our opportunity. It’s going to be like bringing NASA to the Valley” (Rauf, 2013b, para. 7).

On March 8, Elon Musk spoke at a hearing before Pitts and other members of the House Appropriations Committee alongside Representative Oliveira and a SpaceX lobbyist to encourage lawmakers to support SpaceX incentive funding noting, “Any support Texas can offer would be helpful,” Musk said at the hearing noting while Texas was the leading candidate, “We are absolutely looking at other locations” (Preston & Tillman, 2014, para. 23). The committee and full legislature went on to approve a US\$15 million appropriation to the Spaceport Trust Fund in the 2014–2015 budget, which was approved by Governor Perry (Preston & Tillman, 2014).

Shortly after the California trip, SpaceX courted members of the House Economic and Small Business Development Committee by inviting committee chairman Representative John Davis, Republican, as well as five lawmakers and three staffers from the committee to tour the SpaceX facility in McGregor (Rauf, 2013b). Representative Davis would end up sponsoring House Bill 1791, which would grant companies like SpaceX immunity from liability for damages resulting from nuisance related to spacecraft testing, launch, reentry, or landing and would not allow people to seek injunctive relief to stop spaceflight activities (Rauf, 2013a). Representative Davis, who worked with SpaceX officials to draft the legislation noted, “This bill is a must. They gotta have that. You don’t want people to shut you down if someone objects to the sound” (Rauf, 2013a, para. 7). Texas House Bill 1791 was voted out of the committee and ultimately signed into law by Governor Perry.

The final piece of legislation that SpaceX needed passed, House Bill 2623, was written and sponsored by Representative Oliveira. It would amend the 1959 Texas Open Beach Act, which keeps beaches open to the public, in order to permit the Cameron County Commissioners Court to limit access to land within a 3-mile radius of the launch site during rocket liftoffs. Senator Eddie Lucio Jr.

wrote its Senate companion bill (Markay, 2014). The law, which was signed by Governor Perry on May 2013, allows for up to 12 beach closures a year for rocket launches and prohibits beach closures during Memorial and Labor Day holidays unless approved by the general land office. SpaceX's lobbying efforts paid off as the legislature and governor delivered; in its report on the 83rd Texas legislative session, Greenberg Traurig LLP, the lobbying firm hired by the company, highlighted the legislative achievements it helped SpaceX accomplish in the session (Greenberg Traurig LLP, 2013).

### SPACEX SUPPORT FROM THE GROWTH COALITION IN CAMERON COUNTY

Key city and county officials knew about SpaceX's interest in Cameron County for a private spaceport in 2011, however the project was not mentioned publicly until April 10, 2012, when *The Brownsville Herald* published an article of a notice in the *Federal Register* revealing that the area was in contention for a vertical launch area (VLA) and a control center to support up to 12 annual commercial launches of the Falcon 9, Falcon Heavy and smaller reusable, suborbital launch vehicles (Clark, 2012). From the outset, the arrival of SpaceX was framed as a job creation opportunity by members of the Cameron County growth coalition.

Work by Pipkin (2012, p. 192) on studying the underlying cause of economic development differences between McAllen and Brownsville indicates that elites in Brownsville are oriented toward a "pro-business" prospective and have not successfully integrated "pro-labor, pro-poor, and poor-environment groups into its administrative and planning agendas." We interviewed local journalist Gaige Davila, who covers the region for *Texas Public Radio*, and he echoed that observation:

*SpaceX does not seem to receive any opposition from local leadership. They only receive opposition from local activists who, of course, are ignored or treated unfairly by the police that believes that they should be arrested. This is happening . . . the advocates are not being listened to. And at first, they were somewhat successful trying to talk with local leaders. For example, Eddie Trevino had promised Dr. Christopher Basaldu—who is a member of the Carrizo Comecrudo Tribe and a Native American Studies Scholar, and their tribal leader, Juan Mancias, a meeting to talk about SpaceX—because the tribe was never consulted. The*

*activists had been pushing for this meeting in order to convey something that the community wants. But in the end, there was no meeting. Nothing has happened.* (Davila, 2022)

Gilbert Salinas, executive vice president of the BEDC, said in a meeting before the Brownsville City Commission, "This is money from the heavens," noting that if the company decides to build such a launch site in Brownsville, "It could cut the area's unemployment rate by at least 1% and would bring 600 direct jobs to the city with a minimum average salary of \$55,000" (Clark, 2012, para. 6).

On May 4, 2012, the Brownsville City Commission passed a unanimous resolution supporting SpaceX coming to the city and Mayor Tony Martinez highlighted the hundreds of jobs it could bring noting that, "It's a win-win situation for everyone," and he encouraged city commissioners to talk to their constituents and rally support for the company (Martinez, 2012a, para. 2).

Most of the Brownsville City Commissioners at the time including the mayor were and are members of the growth coalition as small business owners, real estate owners, and real estate investors (Sheridan, 2022b), and they and others in the coalition continually highlighted their support for the project emphasizing the need for the community to support the company. As noted by Gilbert Salinas:

*If the people in Brownsville come out and say not in my backyard, that just might kill the whole deal. The owner of the company has told us that he prefers to go into a community that would appreciate this. Brownsville's attitude could be if it's too good to be true, it's too good to be true, and we are here trying to tell them this is not the project we are waiting for, this is the opportunity we are waiting for.* (Martinez, 2012b, para. 38–39)

In order to encourage the company to pick the region, The Greater Brownsville Incentives Corporation, a non-profit organization created to oversee the disbursement of a ¼ cent sales tax collected in the city of Brownsville, awarded SpaceX a US\$5 million job creation credit as an incentive for it to choose it for its launch site (Sheridan, 2022a). In our interview with Brownsville City Commissioner, Nurith Galonsky-Pizana, she highlighted the rationale behind luring companies like SpaceX to the region, "In order to promote development, governments change their ordinances for noise and other effects by the

company's actions, concede tax abatements and provide other incentives. In this region, they've been very flexible with the company [SpaceX] because they want to see it thrive with the idea that the community will thrive" (Galonsky-Pizana, 2022).

Members of the Cameron County government also expressed support for the company coming to the region. In a 2012 interview, Cameron County Precinct 1 Commissioner Sofia C. Benavides, one of several Cameron County officials invited to SpaceX's corporate headquarters, noted that she was initially concerned of the launch site (which would be in her precinct) due to the potential impact it could have on wildlife and people that visit Boca Chica beach (Martinez, 2012b). However, the commissioner indicates her visit to SpaceX's launch site at Vandenberg Air Force Base changed her mind and she was excited about SpaceX coming, "What it would do for our local job market, our schools and our higher education institutions, to be able to partner and to be able to develop programs" (Martinez, 2012b, para. 33).

The Cameron County Commissioner's Court approved several initiatives to encourage SpaceX's arrival. In 2013, upon the request of the company, the commission voted to close two roads on the land that would be used in future launches with County Judge Carlos Cascos stating, "We're doing everything from our part that needs to be done in order to make sure that our area is selected by the SpaceX folks" (Perez-Trevino, 2013, para. 4). Also, in that year the Court created the new Cameron County Spaceport Development Corporation, whose goal is to help establish a commercial launch facility on the Texas Gulf Coast for use by SpaceX and to entice other space companies to the region (Reagan, 2013). In August 2014, following SpaceX's announcement that Cameron County would be home to the launch site, the commission approved a 10-year county tax abatement and economic agreement with the company (Hutchinson, 2014).

In 2018, Musk announced that the Boca Chica site would now support launches of the much larger Starship, rather than the Falcon rockets since the company had sufficient Falcon 9 capability at Cape Canaveral and Vandenberg Air Force Base (Block 5 Phone Presser, 2018). In July 2022, the commission voted unanimously to support SpaceX's plan to launch the Starship super heavy rocket, instead of the Falcons, despite protests from community members, and approved the abandonment of a portion of four additional county roads near the facility (Rosales,

2022). In our interview, Gaige Davila, local reporter for Texas Public Radio noted that at the meeting,

*Activist Emma Guevara, who is the Sierra Club's Brownsville organizer, took over 300 public comments and placed a physical copy of them on each of the commissioners' desks. These were all public comments against SpaceX. And this discussion was about the roads that they were thinking of abandoning to Space X. Of course, it passed; the roads were abandoned. . . Yeah, they were abandoned. They are smart. They're attorneys. They're developers. They know how to do this stuff politically. But that just goes to show you that they, they do not listen. They, they do not care. (Davila, 2022)*

### NEIGHBORHOOD OPPOSITION TO SPACEX IN CAMERON COUNTY

Despite the use of a discourse about job creation and economic development, according to Gendron and Domhoff (2009), local power structures often face considerable opposition when their projects affect neighborhoods due to the negative implications that such developments often bring, which can include new commercial development, new road construction, increased traffic, industrial pollution, noise, and other adverse factors. This pattern continued regarding SpaceX's arrival to Cameron County with many residents of the unincorporated neighborhood of Boca Chica Village, which is 1.5 miles from the SpaceX site, expressing concerns of how the company's arrival would impact their lives. In an interview with *The Brownsville Herald* upon hearing about SpaceX's interest in the area, Pat Bellovary, an owner of a home in the village for 30 years and who lives in the neighborhood seasonally, was not pleased about the site potentially being in his backyard, and Terry Heaton, a 12-year resident who lives at the village year-round noted, "To have it out here, I am not too thrilled about. We like the solitude that we have out here, and I think if they would put something like that out here, it would change everything" (Martinez, 2012a, para. 12).

The company officially broke ground on the site in 2014. However, Boca Chica Village residents indicate that the activity picked up following the company's plan to use the site for the Super Heavy. Then they began to experience considerable disruptions to their daily lives—including being required to pass through SpaceX manned checkpoints during launch operations to access their homes, 24-h noise from construction equipment,



industrial lighting at the site at night, and construction trash blowing into their yards (Koren, 2020). In August 2019, prior to the test of the Starhopper, residents of the village were visited by the Cameron County sheriff who handed out flyers indicating a pending launch and noting that a siren would sound during liftoff, signaling residents to exit their homes with pets due to the risk of a potential malfunction of the craft that could result in broken windows to surrounding property (Wattles, 2019). Prior to the flight, the FAA required SpaceX to purchase additional liability insurance—from US\$3 million to US\$100 million (Koren, 2020).

In order to assess the impact that SpaceX has had on residents, we took a survey of 665 Cameron County residents, which was conducted by the Center for Survey Research and Policy Analysis at the University of Texas Rio Grande Valley (UTRGV) in Spring 2023. Responses reveal that 40.8% of residents surveyed indicated that they live close to the SpaceX facility. Out of those residents, 1.4% noted that they have experienced launch debris on their property, 1% indicated property damage due to launch debris, and 2.4% experienced property damage as a result of sonic booms. In the survey, property owners also experienced access issues with 5.7% reporting that road closures have limited access to their property and 1.9% indicating that road removals had limited access to their property. In addition, 4% of respondents who live near the facility reported environmental damage as a result of SpaceX's activities (see Appendix 3).

A few weeks following the Starhopper launch, SpaceX reached out to property owners in Boca Chica Village by letter offering to purchase their homes due to the continued disruptions and safety concerns that its activities produced (and that would increase over time); the letters included contracts offering to buy their homes for three times more than the appraised value as well as invitations to private VIP launches of Starship to those who agreed to sell (Koren, 2020). Many residents signed contracts; however, there are estimated to be at least seven property owners who have refused to sell out (Keates & Maremont, 2021). Village resident Mary McConnaughy, who has rejected SpaceX's offers to sell, sums up the sentiment of the holdouts, "They're here to stay and they want us to leave" (Koren, 2020, para. 8).

The Bloomer family received an email from SpaceX's senior director of finance David Finlay in September 2020 confirming its final offer for their home warning

that it was in a hazard zone, "in which no civilian would be permitted to remain" and that the company may need to pursue "alternative approaches" in order to be able safely launch (Keates & Maremont, 2021, para. 37–38)—an offer Mrs. Bloomer refused. After rejecting multiple offers to sell, the Workmans' received a phone call with a new offer indicating that they had a week to respond or SpaceX would pursue a different route; the couple declined the offer and continued living in the village (Keates & Maremont, 2021). Although SpaceX uses safety concerns as a rationale for the buyouts, in 2020—around the same time the company began ramping up their buyout offers to residents—it was advertising for a resort manager who would be responsible for planning kayaking and volleyball tournaments to turn Boca Chica into, "An epic place to live and work" (Keates & Maremont, 2021, para. 38).

Although Elon Musk expressed his interest to incorporate the neighborhood into SpaceX's own city (Starbase) in a March 2021 tweet, and current Cameron County Judge Eddie Trevino said he discussed the possibility of incorporation with SpaceX officials prior to the tweet (Keates & Maremont, 2021), there is no evidence that any official attempt to do so by the company has occurred. Holdout residents could still be forced to move under eminent domain, and Judge Trevino has indicated that it remains a possibility noting, "The remaining Boca Chica Village residents might need to leave for their own safety . . . you don't want individuals near rocket ships being tested and landing. We don't want anyone to get hurt" (Keates & Maremont, 2021, para. 13).

## ENVIRONMENTAL OPPOSITION TO SPACEX IN CAMERON COUNTY

In addition to neighborhood opposition, environmental concerns regarding SpaceX were raised shortly after it was revealed that the company was considering the region. The area is home to the biodiverse Lower Laguna Madre, the largest and southernmost estuary along the Gulf of Mexico, which contains unique flora and fauna and houses federally endangered species including the ocelot, gulf coast jaguarundi, piping plover, snowy plover, brown pelican, whooping crane, bald eagle, peregrine falcon, least tern, reddish egrets, white-tailed hawks, and several types of endangered sea turtles including Kemp's Ridley sea turtles which nest in the region more than at any other location in the United States (Guerrero et al., 2022). The

Lower Laguna Madre includes several unique ecosystems including one of only five hypersaline lagoons in the world (Tunnell et al., 2001), Padre Island, Boca Chica Beach, the Bahia Grande, and South Bay, and it contains eight major habitats including jettied tidal inlets, seagrass, oyster reefs, mangroves, salt marsh, wind-tidal flats, dredge material islands, and open-bay bottom (Guerrero et al., 2022).

The area is a crucial habitat and nursery for marine animals such as blue crabs and shrimp and houses 131 fish species with five species of fish threatened or endangered (Campbell, 2003). It is also home to approximately 54 taxa that are endemic to Texas (Carr, 2019), and it is the nesting ground to 77% of the North American wintering population of redhead duck (Guerrero et al., 2022). It provides the largest continuous expanse of suitable habitats for migrating birds in North America between the northern breeding grounds and the wintering grounds in South America accounting for 80% of all Texas seagrass beds, providing a key habitat to a large variety of colonial waterbird rookeries (Guerrero et al., 2022).

Given the region's diverse wildlife and habitats, environmentalists have raised concerns about the threats that the launch site poses to the wildlife and their habitats. The ecosystem provides a number of important functions to the community including raw materials and seafood, breeding habitats for aquatic life, tourism, recreation, education, and research benefits, as well as a coastal storm barrier to provide coastal protection to mitigate tropical storms and coastal flooding (Barbier et al., 2011). Ecotourism is very important for the region with the Rio Grande Valley, as a key area for migratory birds, and it is considered to be the one of the top birding sites in North America which brings in thousands of people generating between US\$100 million and US\$170 million per year and employing several thousand people (Chapa, 2004).

The interaction between flora and fauna in the region is essential for the proper functioning of the ecosystem and environmentalists are concerned that the elimination of the habitats and wildlife through the activities of SpaceX, including noise, air, light pollution, as well as debris, fires, and particulates, will result in the loss of genes, species, and biological traits that contribute to the biodiversity of the area (Adebayo, 2019). The fears are compounded given that a number of endangered species

that call the area home. Boca Chica Beach is a key nesting location for the critically endangered Kemp Ridley sea turtle and the use of 24-h industrial lighting has been shown to cause hatchlings to become misoriented, moving in the wrong direction and interferes with their ability to orient in a continual direction resulting in them being unable to find the water resulting in hatchling deaths due to dehydration and predators (Witherington et al., 2014). Endangered birds that nest in the area, including the piping plover, also face threats from light and noise pollution which can impact the reproduction success of birds by causing early nesting (Senzaki et al., 2020). Debris and particulate matter caused by launches are also harmful to birds, impacting nesting grounds, upsetting their environmental sensory perception, as well as damaging their respiratory systems (Richard et al., 2021). Additionally, the area is home to one of only two ocelot populations in the United States and presence of the SpaceX site poses a risk due to increased vehicle traffic which is a leading cause of ocelot deaths, and fencing which can limit the range and habitat of the animals (Janečka et al., 2012).

The group Environment Texas launched an online petition in June 2012 to stop the launchpad raising concerns that the industrialization of the site would endanger wildlife in the region. Luke Metzger, director of the group, noted that the Texas Parks and Wildlife Department, in letter to the FAA, indicated that the project would result in, "Noise, heat, vibration, fencing and hazardous material spills' from the project that could harm endangered and threatened species and diminish the value of Boca Chica State Park and the Lower Rio Grande Valley National Wildlife Refuge" (Martinez, 2012c, para. 18). Our survey of Cameron County residents reflects this sentiment with 44% of those surveyed indicating that SpaceX has contributed to environmental damage in the community (see Appendix 4).

In October 2021, in response to road closures by SpaceX which block Highway 4, the only access to Boca Chica Beach, local environmental group SaveRGV filed suit against Cameron County and the Texas General Land Office arguing that the amount of beach closures violated the Texas Constitution, which was amended in 2009 to include the Open Beaches Act protections. In an interview with *Texas Standard*, SaveRGV board member Mary Angela Branch noted how the shutdowns had become a burden to the community and they impeded on citizens' rights of free beach access (Cabrera, 2021).

SaveRGV ultimately lost their lawsuit. In June 2022, Cameron Court's 445th district court ruled for the defendants, Cameron County and the Texas General Land Office, arguing that the group "lacked standing" and that Cameron County's decisions have "legislative immunity" (Von Preysing, 2022, para. 5). Our survey indicates that Cameron County residents have been impacted by the numerous road closures with 56% indicating that SpaceX's activities have resulted in road closures that has limited access to public beaches in the community (see Appendix 5).

Environmentalists also came out to oppose the company's change in plans to turn the site into a launch facility for the Starship super heavy rocket, the most powerful rocket to ever be built with a total of 33 engines. In October 2021, the FAA held two virtual hearings as part of their Environmental Assessment collecting public comment regarding the impact that the launches of the larger rocket would have at the site. Sharon Wilcox, senior Texas representative for Defenders of Wildlife, said her organization is, "Deeply concerned about the direct, indirect and cumulative impacts . . . including unplanned fires, debris fall and debris removal" (Mack, 2021, para. 8). Other environmentalists at the hearings implored the FAA to require the company to complete a full EIS (Berger, 2021a).

In June 2022, the FAA released its final PEA to assess the impact, determining that Starship launches would not result in significant environmental effects; however, it required the company to take 75 mitigating actions to limit launch impact including, "monitoring of vegetation and wildlife by a biologist, coordination with state and federal agencies to remove launch debris from sensitive habitats, and adjustment of lighting to lessen impact on wildlife and a nearby beach" (Chang, 2022, para. 3). Jim Chapman, a board member of the Cameron County environmental group SaveRGV, expressed disappointment at the FAA's decision, "For them to say there is no significant impact is ludicrous. The impacts are simply too large. We still feel that way. The FAA should have recognized that" (Chang, 2022, para. 6). On April 14, 2023, the FAA approved a test flight of the rocket noting, "After a comprehensive license evaluation process, the FAA determined SpaceX met all safety, environmental, policy, payload, airspace integration, and financial responsibility requirements" (Wattles, 2023, para. 4).

On April 20, 2023, in anticipation of SpaceX's first launch of the Starship, 27 Rio Grande Valley based organizations released a letter in opposition to the launch arguing that it would, "Increase the size and scale of SpaceX's already damaging impacts on nearby communities, wildlife, and the environment" (Rio Grande Valley Community, 2023). On April 20, 2023, SpaceX launched the most powerful rocket ever from Boca Chica Beach and after a brief ascent it exploded in flight prior to reaching orbit. In Port Isabel, a city 6 miles from the site, residents began reporting on social media that they saw "particulates" or "ash" settling onto homes, cars, and streets (De La Rosa, 2023, para. 3). Eric Roesch, an expert in environmental compliance and risk assessment who tracks SpaceX's launches noted that, "The presence of that dust kind of indicates to me that the impact modeling was inadequate, because this was not really disclosed as a possible impact" (Albeck-Ripka, 2023, para. 15). In addition to the dust, Louis Balderas who owns a company that films SpaceX launches noted that the impact of the liftoff was something he had never seen, "Bowling ball sized pieces of concrete that came flying out of the launchpad area" and that the blast had created a crater he estimated to be 25 feet deep (Albeck-Ripka, 2023, para. 10). The launch also caused a 3.5-acre fire in Boca Chica state park and large concrete chunks and sheets of stainless steel were found hundreds of feet from the site (Brasch, 2023).

In May 2023, five environmental groups and the Carrizo/Comecrudo Tribe of Texas filed a lawsuit against the FAA over its handling of SpaceX's April 20 launch arguing that the agency should have conducted a thorough environmental impact assessment prior to the launch, asserting that the FAA essentially delegated the review to the company rather than undertaking it themselves (Martinez, 2023). SpaceX joined the suit to assist the FAA in its fight and in a July 2023 court filing, the FAA and SpaceX argued that the groups lack legal standing for their claims and are seeking a dismissal of the lawsuit (Killelea, 2023).

## ENVIRONMENTAL CONSEQUENCES OF SPACEX IN CAMERON COUNTY

At a 2018 press conference Elon Musk indicated the company's plan and regard for the Boca Chica launch site when he was asked how soon it would be before SpaceX flights were to take off for the moon or to Mars. In

response, Musk noted the need for test flights first replying that they were, “Most likely going to happen at our Brownsville location because we’ve got a lot of land with nobody around, and so if it blows up, it’s cool” (SpaceX Founder’s Comments, 2018, para. 5). These remarks were greatly upsetting to the residents of Boca Chica Village (SpaceX Founder’s Comments, 2018), which is approximately 1.5 miles from the launch site, as well as to environmentalists given that the area is one of the most biologically diverse in Texas.

David Newstead, an environmental scientist and Director of the nongovernmental organization Coastal Bend Bays and Estuary Program (CBBEP), has been monitoring the wildlife on Boca Chica Beach since 2017. He discussed the impact that SpaceX has had on the area, stressing how the change in the site’s activities from a launchpad to a testing facility was worrisome particularly given that the area is home to one of the most important wetlands in the hemisphere for migratory shorebirds (Newstead, 2022). In our interview with David, he explained the consequences of the shift:

*They [SpaceX] bought these properties. They started building. And there wasn’t really that much impact until they started testing. So, it took a while before they got to that point. And they started building the launch facility. And then they were testing the Star Hopper. And then later the early prototype, the Starship, which were all blowing up. That’s what they were for. They were supposed to blow up. But that’s not what was originally proposed for that site. So originally, they were supposed to be doing they were supposed to be launching. They were supposed to be launch site for Falcon 9, for Falcon Heavy rockets. Those are the ones that they launched now out of Canaveral or, you know, on Florida. And they were supposed to be up to 12 of those a year. This is a successful rocket that does not blow up, right? Right. And that’s not at all what they did. That’s what they sold everybody on. Like a spaceport, right? And it’s really just a testing facility. Like it’s really, they turned it into a testing facility. It’s not a minor modification to their original plan. It’s huge. It changes the whole environmental scope of what they’re doing. (Newstead, 2022)*

In 2021, the SpaceX had four test flights in which Starship prototypes were destroyed during launch, flight, or landing which often resulted in the spread of debris as well as fires over the launch site impacting wildlife in the area. We interviewed Erin Sheridan,

who was a journalist for *The Brownsville Herald* and was in the city at the time, and she noted the impact of the SN11 prototype’s unsuccessful landing attempt on the March 30 launch:

*Huge explosion . . . and it blew debris all the way across the sound to South Padre Island. And it was buried in the algal flats out there. And so they, SpaceX, actually had to take excavators onto the public, the protected refuge lands and then dig into those and they form over thousands of years. And so there’s no replacing them. You can’t do mitigation measures and there was nobody monitoring them. (Sheridan, 2022b)*

The increase in SpaceX’s activities at the site has severely disrupted the work of David’s organization due to the number of road closures, which has limited their ability to monitor wildlife in the area. Originally, the area was to be closed for launches 180 h per year, however, that number has been regularly exceeded and observing of the closures by CBBEP indicates that in 2022 there were over 1,000 h of closure (Newstead, 2022). In our interview he highlighted the difficulty the group has in its ability to monitor wildlife in the area due to the closures:

*We have been doing a number of monitoring projects. When we started doing things down at Boca Chica more intensively: 2017. So, we started doing monitoring projects on these species, as well as a few species that actually nest on the flats out there. And these are the same projects we’ve been doing up here for many, many years. Essentially an extension of that work. And we were able to continue it up at least through last year. And this year it’s gotten more and more difficult than we used because of the access issue. And I would have had some term on track. Biologist down there just after this winter is coming summer, last summer, if I could. But if we can’t guarantee that they can get access to at least three times a week, which is, I mean, it’s absurd. That’s not even possible. And then we can’t really do anything. (Newstead, 2022)*

Monitoring work performed by David and others at the CBBEP at Boca Chica indicates that SpaceX’s activities have had a negative impact on wildlife in the area. In their survey of the abundance and survival of piping plover from 2018 to 2021, Newstead and Hill (2022) found that the population of the birds on Boca Chica decreased by approximately 54% over the course of 3 years (from over 300 to below 150) and that the population at the site is experiencing a downward trend that is significant

and continuous (Newstead & Hill, 2022). The CBBEP has also monitor declines in nesting of snowy and wilson's plovers at Boca Chica; they observed in five breeding seasons from 2017 to 2021 and found that that the population of snowy plovers nesting in the area has declined significantly throughout the area, and that both species are now nearly absent from the vicinity of the VLA, where they were previously common (Coastal Bend Bays and Estuary Program at Boca Chica, 2021). In our interview, David commented on the impact of SpaceX's activities on birds at the site:

*So, the research, it turns out, has shown that those birds that have been nesting there, nest in those flats, they've shown a clear decline and have almost completely abandoned the area. And it certainly is more for the area that is closer to the production area and the launch facility. And we also did some modeling of plover populations that showed that they've had a negative response. (Newstead, 2022)*

The downward trend in migrating shorebirds in the region as a result of SpaceX activities is concerning given that they are one of the most endangered avian groups in the world and the Lower Laguna Madre, which include South Padre Island and Boca Chica Beach, are crucial wintering and stopover habitats for birds traveling north and south (Newstead & Hill, 2022). Stopover and wintering habitats are important to the lifecycle and reproductive success for migrating birds and habitat loss and human activities in areas along migratory routes have been linked to further declines in shorebird populations in the region that are already endangered including the red knot (Burger et al., 2022) and piper plovers raising fears about the viability of their continued habitation in the area (Newstead & Hill, 2022).

## DISCUSSION

Our findings show how the power elite impacted policy at the federal, state, and local levels regarding SpaceX's arrival to Cameron County as well as environmental policy concerning the activities at the SpaceX Starbase facility and the negative neighborhood and environmental consequences of its presence in Cameron County. Our evidence indicates how Elon Musk as CEO of SpaceX and the power elite used their structural economic power at multiple levels of government through lobbying, campaign finance, and appointments to key government

positions to achieve policy outcomes favorable to the company.

At the federal level, SpaceX had a clear advantage in the new commercial space race through Michael Griffith, who was affiliated with SpaceX at its founding and was asked by Musk to be the Chief Engineer of the company, a position he declined to become president and Chief Operating Officer of In-Q-Tel (Berger, 2021b). Michael Griffith was appointed as NASA administrator in 2005 by George W. Bush who advocated for public-private partnerships in the new space race. His appointment resulted in SpaceX being awarded NASA contracts that Musk has indicated saved the company. This has resulted in SpaceX supplanting Boeing to become NASA's largest private vendor in 2022, 14 years after winning its first major NASA contract (Ralph, 2022). Additionally, SpaceX has attained a monopoly on rocket launches from the United States (Maidenberg, 2023).

SpaceX also engaged in heavy federal lobbying efforts spending over US\$24.9 million from 2003 to 2023 (Open Secrets, 2023). The FAA was a key target of SpaceX lobbying and environmental groups and citizens have criticized the relationship between the two particularly regarding the agency declining to require SpaceX to apply for a new EIS following the company's 2018 decision to launch Starships instead of Falcons from the Boca Chica site. In 2023, environmental groups filed a lawsuit against the FAA regarding its failure to require SpaceX to submit a more comprehensive environmental review arguing that the FAA essentially allowed SpaceX to undertake the review itself with little agency oversight.

Talks about the project between members of the power elite and state and local officials began in secret in 2011, when SpaceX officials privately reached out to Governor Rick Perry about the Boca Chica site. In 2012 local officials, including Gilbert Salinas, who was executive vice president for the BEDC at the time, were treated to an all SpaceX expenses paid trip to California to discuss the project and the discussions continued in secret among a small group of SpaceX, local, and state officials for a year until *The Brownsville Herald* published an article in April 2012 indicating that Brownsville was a SpaceX site contender (Martinez, 2014a). In 2014, Gilbert Salinas was quoted in *The Brownsville Herald* about the initial secrecy of the project noting that, "It had been kept under wraps for a little more than a year, I don't know how we did that, because quite a few people knew about the project,

but everybody knew that it was a project of significance” (Martinez, 2014a).

When Elon Musk visited the 83rd Texas legislative session on April 20, 2013, to directly lobby for the needed SpaceX legislation, he made it clear that while the Boca Chica site was a leading candidate, other locations were under consideration creating an imperative for state executives and state legislators to pass the laws that SpaceX deemed critical to the company’s decision to make it their launch site. Elon Musk and SpaceX flexed their structural power at the state level by donating campaign funds to Texas state legislators for the first time awarding three Texas legislators who would become crucial to passing the legislation. The company paid for lavish trips for key Texas state officials to SpaceX’s site in McGregor, Texas, and California, including a L.A. Lakers game, to influence votes on the pending legislation. The company also hired Demetrius McDaniel of Greenberg Traurig LLP, one of the most prominent lobbyist firms in the state, to ensure that it got the needed policy outcomes. The power elite and their allies at multiple levels of government were successful, the 83rd Texas Legislature approved a US\$15 million appropriation to the Spaceport Trust Fund, House Bill 1791 passed, which granted SpaceX immunity from liability for damages resulting from nuisance related to spacecraft testing, launch, reentry, or landing, and the 1959 Texas Open Beach Act was amended, which keeps beaches open to the public, in order to permit the Cameron County Commissioners Court to limit access to land within a 3-mile radius of the launch site during rocket liftoffs.

Our study shows that the power elite was also influential at the local level regarding SpaceX’s arrival to Cameron County. Local officials and developers who we interviewed for this study highlighted that the economic growth opportunities that the presence of the company would provide to region would be beneficial to the point that the opportunities would mitigate the environmental and neighborhood concerns. Gilbert Salinas indicated cooperation at the multiple levels paid off,

*The BEDC has done everything needed on its part, Salinas said, and so have the other parties involved. Although the BEDC has worked on many projects across its 20 years, the SpaceX project could be the “game changer” for Brownsville, officials say. “It is not the biggest in capital investment, it’s not the biggest in jobs, but it is definitely the biggest just because of the industry*

*that it’s in,” Salinas said. “It is the biggest in the sense, that it is the biggest game-changing project that we have worked on.” In economic development, when you have a project that can literally change the face of your community, change the face of your region, turn it for the better, for the best, that is usually called a game changer. It is definitely the biggest, most important game changing project that we have touched. (Martinez, 2014b, para. 10)*

Opposition to SpaceX endures at the local level while the company’s growth plans continue. Although SpaceX worked to buyout residents in Boca Chica Village, the number of housing units near the facility are selling fast and the majority of people living in the neighborhood now are current SpaceX employees leaving some to refer to the neighborhood as a company town (Lingle, 2024). Construction near Starbase has soared and recent news reports note that SpaceX is planning to develop a 16,200-square-foot facility including a US\$13.5 million recreation center and a US\$500,000 sushi restaurant near the launchpad site on Boca Chica Beach outside Brownsville in addition to the company’s plans for a US\$100 million office complex, a US\$96 million rocket factory, a US\$21 million parking garage, a US\$15 million restaurant and retail complex, and several smaller projects with a job listing for a sushi chef appearing on SpaceX’s careers website (Lingle, 2024).

Environmental groups continue to protest the company and have found recent success with the Texas 13th District Court of Appeals unanimously overturning a ruling of Cameron County’s 445th state District Court in a lawsuit brought by SaveRGV, the Sierra Club Lone Star Chapter, and the Carrizo/Comecrudo Nation of Texas Inc. against Cameron County, the Texas General Land Office, and Texas Attorney General Ken Paxton over SpaceX related restrictions to public beach access (Clark, 2024). The court ruled that the plaintiffs have jurisdiction to sue noting that, “according to SaveRGV’s initial petition, the appellees (Cameron County, etc.) ‘have allowed the closure of Boca Chica Beach . . . for up to 450 hours per year to allow (SpaceX) to conduct activities related to space flight launches’ with the court ruling that the Texas Natural Resources Code (TRNC) statute is unconstitutional because it violates the Open Beaches Amendment, and further, that the TRNC Natural Resources Code statute allowing the Texas land commissioner to make rules allowing

beach closures for space flight activities also violates the Open Beaches Amendment, noted the appeals court” (Clark, 2024, para. 7).

## CONCLUSION

This article constitutes an early attempt to examine how the power elite impact policy at the federal, state, and local levels, specifically regarding SpaceX’s arrival to Cameron County, as well as neighborhood and environmental consequences concerning the activities at the SpaceX Starbase facility, located on Boca Chica Beach, Texas. Elites at the federal, state, and local level in one of the poorest counties in the United States took actions to attract SpaceX to the region in spite of neighborhood opposition and citizen concerns about environmental damage.

These fears were heightened following the failed Starship Super Heavy launch in April 2023, which caused widespread damage and triggered a lawsuit by environmental groups in the region. The FAA issued its final report on the failed launch in September 2023 citing multiple root causes for the failure and is requiring SpaceX to take 75 corrective actions to prevent a recurrence and it must apply for and receive a license modification from the FAA that addresses all safety, environmental, and other applicable regulatory requirements prior to the next Starship launch (FAA, 2023).

It is assumed that once SpaceX addresses the corrective actions, launches of the Starship Super Heavy will resume posing a continuing threat to residents and wildlife in the region. Road closures, which have been a continual issue following SpaceX’s arrival, have impacted the community with 56% of residents reporting limited access to public beaches due to SpaceX activities, are expected to increase. Environmental threats will also rise as a result of increased launches. Residents in our survey indicated that the impacts of SpaceX’s activities in the environment are already being felt by citizens with 44% of those surveyed indicating that SpaceX has contributed to environmental damage in the community.

Future research will involve collecting data to make additional connections between the various levels of influence that the power elite have in regard to SpaceX and Cameron County including further interviews with key stakeholders as well as a more in-depth analysis of our survey of the citizens of Cameron County regarding their experiences with the company’s presence in the region.

## AUTHOR CONTRIBUTIONS

Michelle Keck: Writing-original draft, writing-review and editing, conceptualization, investigation, and project administration. Guadalupe Correa-Cabrera: Conceptualization, investigation, and project administration.

## COMPETING INTERESTS

The authors have declared that no competing interests exist.

## SUPPLEMENTAL MATERIAL

Appendices 1–5.docx

## REFERENCES

- ABC7. (2012, June 14). Perry, SpaceX chief talk for hours about spaceport. *ABC7*. <https://abc7.com/archive/8700715/>
- Adebayo, O. (2019). Loss of biodiversity: The burgeoning threat to human health. *Annals of Ibadan Postgraduate Medicine*, 17(1), 1–3.
- Albeck-Ripka, L. (2023, April 21). SpaceX’s starship kicked up a dust cloud, leaving Texans with a mess. *The New York Times*. <https://www.nytimes.com/2023/04/21/us/spacex-rocket-dust-texas.html>
- Barbier, E. B., Hacker, S. D., Kennedy, C., Koch, E. W., Stier, A. C., & Silliman, B. R. (2011). The value of estuarine and coastal ecosystem services. *Ecological Monographs*, 81(2), 169–193. <https://doi.org/10.1890/10-1510.1>
- Berger, E. (2021a, October 19). Supporters and opponents of SpaceX launch site air their concerns. *Ars Technica*. <https://arstechnica.com/science/2021/10/faa-conducts-hearing-on-spacex-launch-site-hears-pro-and-con-views/>
- Berger, E. (2021b). *Liftoff: Elon Musk and the desperate early days that launched SpaceX*. William Morrow.
- Berger, E. (2022, October 26). SpaceX becomes NASA’s second-largest vendor, surpassing Boeing. *Ars Technica*. <https://arstechnica.com/science/2022/10/spacex-becomes-nasas-second-largest-vendor-surpassing-boeing/#:~:text=NASA%20obligated%20%242.04%20billion%20to%20SpaceX%20in%20fiscal%20year%202022.&text=For%20the%20first%20time%20C%20the,leading%20hardware%20provider%20to%20NASA>
- Block 5 Phone Presser. (2018, May 10). *GitHubGist*. <https://gist.github.com/theinternetftw/5ba82bd5f4099934fa0556b9d09c123e>
- Brasch, B. (2023, April 26). SpaceX launch torched part of state park, sent debris flying, feds say. *The Washington Post*. <https://www.washingtonpost.com/technology/2023/04/26/spacex-explosion-fire-debris/>
- Burger, J., Porter, R., Niles, L., & Newstead, D. (2022). Timing and duration of stopovers affects propensity to breed, incubation periods, and nest success of different wintering

- cohorts of red knots in the Canadian Arctic during the Years 2009 to 2016. *Environmental Research*, 215(1), 114227.
- Cabrera, K. (2021, October 14). Environmental group sues for Texas beach access amid SpaceX road closures. *Texas Standard*. <https://www.texasstandard.org/stories/environmental-group-sues-for-texas-beach-access-amid-spacex-closures/>
- Campbell, L. (2003). *Endangered and threatened animals of Texas: Their life history and management*. Texas Parks and Wildlife. PWD BK W7000-013.
- Carr, W. C. (2019). *Some plants of the south Texas sand sheet*. School of Biological Sciences. <http://w3.biosci.utexas.edu/prc/DigFlora/WRC/Carr-SandSheet.html>
- Chang, K. (2022, June 13). SpaceX wins environmental approval for launch of Mars rocket. *The New York Times*. <https://www.nytimes.com/2022/06/13/science/spacex-starship-faa-review.html>
- Chapa, S. (2004, January 29). Water key to Valley eco-tourism. *Valley Morning Star*, A1.
- Clark, S. (2012, April 10). Brownsville in running for commercial space port. *The Brownsville Herald*. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=tih&AN=2W6215727188&site=ehost-live>
- Clark, S. (2024, February 2). Appellate court sides with environmentalists over SpaceX beach closure lawsuit. *MyRGV.com*. <https://myrgv.com/local-news/2024/02/02/appellate-court-sides-with-environmentalists-over-spacex-beach-closure-lawsuit/>
- Coastal Bend Bays and Estuary Program. (2021, November 1). Comments on SpaceX draft programmatic environmental assessment for Starship/Super Heavy Program.
- Davila, G. (2022, December 20). Interview by Guadalupe Correa-Cabrera and Michelle Keck. *Zoom*.
- De La Rosa, P. (2023, April 22). Port Isabel reports ‘raining particulates’ after SpaceX rocket explodes over the Rio Grande Valley. *Texas Public Radio*. <https://www.tpr.org/technology-entrepreneurship/2023-04-20/port-isabel-particulates-spacex-explosion-rio-grande-valley>
- Domhoff, G. W. (1967). *Who rules America?* Prentice-Hall.
- Domhoff, G. W. (2007). C. Wright Mills, Floyd Hunter, and 50 years of power structure research. *Michigan Sociological Review*, 21, 1–54.
- Domhoff, G. W. (2014). *Who rules America?* McGraw-Hill.
- Federal Aviation Administration. (2023, September 8). FAA closes SpaceX starship mishap investigation. <https://www.faa.gov/newsroom/faq-closes-spacex-starship-mishap-investigation>
- Forbes. (2023). The world’s real time billionaires. *Forbes*. <https://www.forbes.com/real-time-billionaires/#357961043d78>
- Friedman, J. (2003, April 22). Entrepreneur tries his Midas touch in space. *Los Angeles Times*. <https://www.latimes.com/archives/la-xpm-2003-apr-22-fi-spacex22-story.html>
- Galonsky-Pizana, N. (2022, December 20). Interview by Guadalupe Correa-Cabrera and Michelle Keck. Brownsville Public Library.
- Gendron, R., & Domhoff, G. W. (2009). *The leftmost city: Power and progressive politics in Santa Cruz*. Taylor & Francis.
- Greenberg Traurig LLP. (2013, July 2). Update on the 83rd Texas legislature. <https://www.lexology.com/library/detail.aspx?g=4f06c942-988c-466a-ac95-117981c82e26>
- Guerrero, J., Mahmoud, A., Alam, T., Sanchez, A., Jones, K. D., & Ernest, A. (2022). Collaborative environmental approach for development of the lower laguna Madre estuary program strategic plan in south Texas. *Journal of Environmental Informatics Letters*, 7(1), 1–11.
- Hunter, F. (1953). *Community power structure: A study of decision makers*. University of North Carolina Press.
- Hutchinson, L. (2014, August 22). SpaceX Texas launch facility gets no-tax deal with hosting county. *Ars Technica*. <https://arstechnica.com/science/2014/08/spacex-texas-launch-facility-gets-ten-year-no-tax-deal-with-hosting-county/>
- Janečka, J. E., Tewes, M. E., Laack, L. L., Caso, A., Grassman, L. I., Jr., Haines, A. M., Shindle, D. B., Davis, B. W., Murphy, W. J., & Honeycutt, R. L. (2012). Reduced genetic diversity and isolation of remnant ocelot populations occupying a severely fragmented landscape in southern Texas. *Animal Conservation*, 14(6), 608–619.
- Keates, N., & Maremont, M. (2021, May 7). Elon Musk’s SpaceX is buying up a Texas village. Homeowners cry foul. *The Wall Street Journal*. <https://www.wsj.com/articles/elon-musk-spacex-rocket-boca-chica-texas-starbase-11620353687>
- Killelea, E. (2023, July 3). SpaceX, FAA ask for dismissal of suit seeking new environmental assessment of Starship launches. *San Antonio Express News*. <https://www.expressnews.com/business/article/spacex-faa-ask-dismissal-suit-seeking-starship-18183067.php>
- Koren, M. (2020, February 11). Why SpaceX wants a tiny Texas neighborhood so badly. *The Atlantic*. <https://www.theatlantic.com/science/archive/2020/02/space-x-texas-village-boca-chica/606382/>
- Lingle, B. (2024, April 16). SpaceX building Starbase sushi restaurant, recreation center. *San Antonio Star Express*. <https://www.expressnews.com/business/article/spacex-starbase-sushi-restaurant-recreation-center-19406418.php>
- Logan, J., & Molotch, H. (1987). *Urban fortunes: The political economy of place*. University of California Press.
- Mack, E. (2021, October 18). SpaceX Starship launch proposal draws vocal support, some criticism in FAA hearing. *CNET*. <https://www.cnet.com/science/spacex-starship-launch-proposal-draws-vocal-support-some-criticism-in-faa-hearing/>
- MacLeod, A. (2022, May 31). Elon Musk is not a renegade outsider—He’s a massive pentagon contractor. *MintPress News*. <https://www.mintpressnews.com/elon-musk-not-renegade-outsider-cia-pentagon-contractor/280972/>
- Maidenberg, M. (2023, July 7). Elon Musk’s SpaceX now has a ‘de facto’ monopoly on rocket launches. *The Wall Street Journal*. <https://www.wsj.com/articles/elon-musk->



- spacex-now-has-a-de-facto-monopoly-on-rocket-launches-3c34f02e
- Markay, L. (2014, August 27). Political clout pays off big for Elon Musk's SpaceX. *The Washington Free Beacon*. <https://freebeacon.com/politics/political-clout-pays-off-big-for-elon-musks-spacex/>
- Martinez, A. (2023, May 2). Federal agency failed to weigh possible environmental impacts of SpaceX rocket launch, lawsuit claims. *Texas Tribune*. <https://www.texastribune.org/2023/05/02/texas-spacex-lawsuit-faa-environmental-pollution/>
- Martinez, L. B. (2012a, May 4). City backs SpaceX proposal. *The Brownsville Herald*. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=tih&AN=2W6641772476&site=ehost-live>
- Martinez, L. B. (2012b, May 16). Hundreds turn out for SpaceX hearing. *The Brownsville Herald*. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=tih&AN=2W61495120341&site=ehost-live>
- Martinez, L. B. (2012c, June 2). Environmentalists petition against Brownsville launch site. *The Brownsville Herald*. The (TX). <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=tih&AN=2W63972622534&site=ehost-live>
- Martinez, L. B. (2014a, May 30). Local officials 'cautiously optimistic'. *The Brownsville Herald*. [https://go.gale.com/ps/retrieve.do?tabID=RecentNews&resultListType=RESULT\\_LIST&searchResultsType=MultiTab&retrievalId=f8678b57-daeb-4ae9-8443-117905e2417c&hitCount=64&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA369600861&docType=Article&sort=Pub+Date+Reverse+Chron&contentSegment=GBIB&prodId=GBIB&pageNum=1&contentSet=GALE%7CA369600861&searchId=R1&userGroupName=txshracd2633&inPS=true](https://go.gale.com/ps/retrieve.do?tabID=RecentNews&resultListType=RESULT_LIST&searchResultsType=MultiTab&retrievalId=f8678b57-daeb-4ae9-8443-117905e2417c&hitCount=64&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA369600861&docType=Article&sort=Pub+Date+Reverse+Chron&contentSegment=GBIB&prodId=GBIB&pageNum=1&contentSet=GALE%7CA369600861&searchId=R1&userGroupName=txshracd2633&inPS=true)
- Martinez, L. B. (2014b, January 19). Local hopes high on SpaceX location choice. *The Brownsville Herald*. [https://go.gale.com/ps/retrieve.do?tabID=RecentNews&resultListType=RESULT\\_LIST&searchResultsType=SingleTab&retrievalId=791adf44-bc41-4318-8494-0842cc9dfd70&hitCount=64&searchType=AdvancedSearchForm&currentPosition=8&docId=GALE%7CA355979663&docType=Article&sort=Pub+Date+Reverse+Chron&contentSegment=GBIB&prodId=GBIB&pageNum=1&contentSet=GALE%7CA355979663&searchId=R2&userGroupName=txshracd2633&inPS=true](https://go.gale.com/ps/retrieve.do?tabID=RecentNews&resultListType=RESULT_LIST&searchResultsType=SingleTab&retrievalId=791adf44-bc41-4318-8494-0842cc9dfd70&hitCount=64&searchType=AdvancedSearchForm&currentPosition=8&docId=GALE%7CA355979663&docType=Article&sort=Pub+Date+Reverse+Chron&contentSegment=GBIB&prodId=GBIB&pageNum=1&contentSet=GALE%7CA355979663&searchId=R2&userGroupName=txshracd2633&inPS=true)
- Mills, C. W. (1956). *The power elite*. Oxford University Press.
- Molotch, H. (1976). The city as a growth machine. *American Journal of Sociology*, 82, 309-330.
- Molotch, H., & Logan, J. (1996). The theory of the growth machine. In S. S. Fainstein & S. Campbell (Eds.), *Readings in urban theory* (pp. 291-337). Blackwell Publishers.
- Newstead, D. (2022, December 19). Interview by Guadalupe Correa-Cabrera and Michelle Keck. *Zoom*.
- Newstead, D., & Hill, B. (2022, April 15). Piping plover abundance and survival at Boca Chica, 2018-2021: Extended analysis incorporating additional data. Coastal Bend Bays & Estuaries Program.
- Open Secrets. (2023). SpaceX. <https://www.opensecrets.org/federal-lobbying/lookup?lobbying-search-input=SpaceX>
- Perez-Trevino, E. (2012, September 24). Public records show SpaceX buying local properties. *The Brownsville Herald*. [https://go.gale.com/ps/retrieve.do?tabID=RecentNews&resultListType=RESULT\\_LIST&searchResultsType=MultiTab&retrievalId=d35b99d6-87db-4d55-a104-040908d4c4bb&hitCount=2&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA303235232&docType=Article&sort=Pub+Date+Reverse+Chron&contentSegment=GBIB&prodId=GBIB&pageNum=1&contentSet=GALE%7CA303235232&searchId=R1&userGroupName=txshracd2633&inPS=true](https://go.gale.com/ps/retrieve.do?tabID=RecentNews&resultListType=RESULT_LIST&searchResultsType=MultiTab&retrievalId=d35b99d6-87db-4d55-a104-040908d4c4bb&hitCount=2&searchType=AdvancedSearchForm&currentPosition=1&docId=GALE%7CA303235232&docType=Article&sort=Pub+Date+Reverse+Chron&contentSegment=GBIB&prodId=GBIB&pageNum=1&contentSet=GALE%7CA303235232&searchId=R1&userGroupName=txshracd2633&inPS=true)
- Perez-Trevino, E. (2013, August 18). Cameron county takes steps to win rocket launch complex. *Valley Morning Star*. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=tih&AN=2W62471649237&site=ehost-live>
- Peterson, P. (1981). *City limits*. University of Chicago Press.
- Pipkin, S. (2012). *Repertoires of development in economic divergence on the U.S.-Mexico border*. [Dissertation, Massachusetts Institute of Technology]. <https://dspace.mit.edu/handle/1721.1/77818>
- Preston, D., & Tillman, L. (2014, February 13). Texas, others launch incentive wars to get SpaceX's rocket pad. *Bloomberg News*. <https://www.arkansasonline.com/news/2014/feb/13/texas-others-launch-incentive-wars-get-sp-20140213/>
- Ralph, E. (2022, October 25). SpaceX bests Boeing to become NASA's largest for-profit vendor. *Telsarati*. [https://www.telsarati.com/spacex-second-largest-nasa-vendor/#google\\_vignette](https://www.telsarati.com/spacex-second-largest-nasa-vendor/#google_vignette)
- Rauf, S. D. (2013a, April 29). SpaceX bill moves closer to passage. *My San Antonio*. [https://www.mysanantonio.com/news/local\\_news/article/SpaceX-bill-moves-closer-to-passage-4474065.php](https://www.mysanantonio.com/news/local_news/article/SpaceX-bill-moves-closer-to-passage-4474065.php)
- Rauf, S. D. (2013b, May 5). SpaceX's lobbying in Texas zooming. *San Antonio Express-News*. [https://www.expressnews.com/news/local\\_news/article/SpaceX-s-lobbying-in-Texas-zooming-4490048.php.16](https://www.expressnews.com/news/local_news/article/SpaceX-s-lobbying-in-Texas-zooming-4490048.php.16); <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=tih&AN=2W62098533957&site=ehost-live>
- Reagan, M. (2013, February 15). Spaceport board named. *The Brownsville Herald*.
- Rosales, S. (2022, July 19). Despite concerns from residents, Cameron County commissioners vote for resolution supporting SpaceX. *KRGV.com*. <https://www.krgv.com/news/despite-concerns-from-residents-cameron-county-commissioners-vote-for-resolution-supporting-spacex/>
- Richard, F-J., Southern, I., Gigauri, M., Bellini, G., Rojas, O., & Runde, A. (2021). Warning on nine pollutants and their

- effects on avian communities. *Global Ecology and Conservation*, 32, e01898.
- Rio Grande Valley Community React Ahead of SpaceX Rocket Launch Blast on the South Texas Coastline. (2023, April 19). *ReformAustin*. <https://www.reformaustin.org/press-release/rio-grande-valley-community-react-ahead-of-spacex-rocket-launch-blast-on-the-south-texas-coastline/>
- Seedhouse, E. (2022). *SpaceX: Starship to Mars—The first 20 years*. Springer.
- Senzaki, M., Barber, J. R., Phillips, J. N., Carter, N. H., Cooper, C. B., Ditmer, M. A., Frstrup, K. M., McClure, C. J. W., Mennitt, D. J., Tyrrell, L. P., Vukomanovic, J., Wilson, A. A., & Francis, C. D. (2020). Sensory pollutants alter bird phenology and fitness across a continent. *Nature*, 587, 605–609.
- Sheridan, E. (2022a, May 24). The fine print: Exploring Musk's impact, local leaders' complacency, & the community's struggle. *Truchargv.com*. <https://truchargv.com/the-fine-print-spacex/#:~:text=Records%20from%20the%20Greater%20Brownsville,given%20to%20SpaceX%20in%202014>
- Sheridan, E. (2022b, December 19). Interview by Guadalupe Correa-Cabrera and Michelle Keck. *Zoom*.
- SpaceX Founders Comments Sparks Frustration for Boca Chica Village Residents. (2018, February 8). *KRGV.com*. <https://www.krgv.com/news/space-x-founder-s-comments-sparks-frustration-for-boca-chica-village-residents/>
- Tunnell, J. W., Judd, F. W., & Bartlett, R. C. (Eds.). (2001). *The Laguna Madre of Texas and Tamaulipas*. Texas A&M University Press.
- Von Preysing, C. (2022, July 7). Lawsuit filed against Cameron County over closure of public beach for SpaceX tests denied. *KRGV.com*. <https://www.krgv.com/news/lawsuit-filed-against-cameron-county-over-closure-of-public-beach-for-spacex-tests-denied/>
- Wattles, J. (2019, August 28). SpaceX's Starhopper prototype soars in 150-meter 'hop test'. *CNN Business*. <https://www.cnn.com/2019/08/28/business/spacex-starhopper-starship-hop-150-meter-test/index.html>
- Wattles, J. (2023, April 14). SpaceX's Starship rocket, the most powerful ever built, receives government approval for launch. *CNN*. <https://www.cnn.com/2023/04/14/world/spacex-starship-launch-license-scn/index.html>
- Weinzierl, M. (2018). Space, the final economic frontier. *Journal of Economic Perspectives*, 32(2), 173–192.
- Witherington, B. E., WitheringtonMartin, E. R., & Trindell, R. N. (2014). *Understanding, assessing, and resolving light-pollution problems on sea turtle nesting beaches*. Florida Fish and Wildlife Conservation Commission, Florida Fish and Wildlife Research Institute Tech. Rep. TR-2, Version 2, 1–83. [http://f50006a.eos-intl.net/ELIBSQL12\\_F50006A\\_Documents/TR-2Rev2.pdf](http://f50006a.eos-intl.net/ELIBSQL12_F50006A_Documents/TR-2Rev2.pdf)
- Wood, C. (2002). Voter turnout in city elections. *Urban Affairs Review*, 38(2), 209–231.