

The deadline to apply for the 2023 Conservation Wrangler program is January 31, 2023, at 5PM CST

Application

Applicant Name: Chloe Dannenfelser

Applicant Title: Texas Coastal Outreach Coordinator

Applicant Organization: American Bird Conservancy, SPLASH Program

Applicant Email:

Applicant Phone Number:

Project Name: Stopping Plastics and Litter Along Shorelines (SPLASH)

Project Website: <https://www.splashtx.org/>

Project Social Media Platforms

- Facebook: @splashtx
- Twitter: @splashtx
- Instagram: @splashtx
- LinkedIn:
- Other:

Project Objective

1. **Provide a clear and detailed outline of the project goals and objectives. Please include the mission of the project, what issue or problem this project is addressing if applicable, and why this project is important/relevant to conservation in Texas.**

According to a report from the National Oceanic and Atmospheric Administration (NOAA) and Ocean Conservancy, Texas has the highest average weight of trash debris per mile surveyed of any state in the nation¹. Texas also accumulates trash ten times faster than any other Gulf state². Trash pollution poses a serious threat to the bird species that rely on our coastal ecosystems for their breeding habitat and migration. It also impacts the local and coastal communities located in trash-concentrated areas. For over a decade, American Bird Conservancy's Gulf Conservation Program has been addressing this challenge by investing in conservation capacity-building with over 70 partners. After identifying plastic and trash pollution as a threat to birds along Texas coastlines, ABC partnered with Gulf Coast Bird Observatory and Black Cat GIS to create Stopping Plastics and Litter Along Shorelines (SPLASH) to address the overlapping issues of trash pollution and wildlife conservation.

SPLASH's mission is to create a cleaner environment for people, birds, and other wildlife in the greater Houston-Galveston region through community science, education, and outreach. Using volunteers and trained staff, we conduct transect surveys at our cleanup events to better understand the Texas trash problem on a local level. SPLASH also offers many educational resources for K-12 educators including classroom lessons, field trips experiences, an educator's guide, and classroom supply kits. Lastly, we work with community members to provide local solutions through best management strategies, present at local meetings like rotary clubs, and

offer private cleanup opportunities to businesses and organizations who wish to be a part of our mission

Since 2020, we've partnered with 45 organizations and 3,301 volunteers & students to remove 26,150 pounds of trash from beach and bayou habitats. We have cleaned 355 acres of habitat and hope to grow these numbers with the help of the Conservation Wrangler Program. Our goal is to expand our reach throughout the Texas coast by connecting with more schools, partner organizations, and local businesses. Not only do we want to reduce the direct threat of trash and plastic from Texas waterways and coastlines, but we want to work with communities to prevent more trash from entering our natural habitats through education, outreach, and local solutions.

- 2. Specify how support and visibility from Texan by Nature could help you reach your goals and objectives that were outlined in the answer to question one. (Reminder: The Conservation Wrangler program is not a grant and selected applicants are not guaranteed funding through this program)**

Though SPLASH has been widely well-received in its first couple years, it is a relatively new program and we need help expanding its overall reach. Visibility through the Conservation Wrangler Program would help connect us with more partner organizations and local businesses. We hope our messaging will motivate local businesses and organizations to work with us in developing trash management plans and foster greater support and participation for our trash cleanups. Furthermore, we hope to increase the number of educators and science coordinators in the Houston-Galveston region who want to use SPLASH's valuable educational resources. We would love feedback on our social media content and insight on how to effectively advertise for our educational programming and cleanup events. Using Texan By Nature's professional content production options, we will increase our marketing capacity and skills, be seen by a larger audience, and increase our partnerships and volunteers. In turn, we hope to provide trash management strategies for these partners and communities to make a positive and lasting impact in their local communities and habitats.

Project Details

- 1. How did you hear about the Conservation Wrangler program?**

One of our teammates (Richard Gibbons) previously worked with Houston Audubon and Texan by Nature with the Lights Out Texas Program.

- 2. Location and size of project area— Please provide the counties in the state that the project spans and size of the project area in acres. If applicable, provide an address for the project.**

We currently work in the Houston-Galveston region and some surrounding areas. Those include Harris, Galveston, Fort Bend, Brazoria, and Chambers, Waller, Liberty, and Fort Bend counties. We have done cleanups along Brays Bayou, Sims Bayou, White Oak Bayou, the Houston Ship Channel, Galveston Bay, and the Gulf of Mexico. Our cleanups in total have covered 321.755 acres, and we are continually finding new trash cleanup site locations.

3. **When was the project start date? (Include end date if applicable). In addition, please outline any project milestones or project phases that you have completed or plan to complete. If your project has not started, please detail why, and elaborate on the likelihood / timeline for project start and goal completion.**

SPLASH was started in 2020 as a partnership between American Bird Conservancy, the Gulf Coast Bird Observatory, and Black Cat GIS. Since then, we have removed 26,150 lbs. of trash (greatly exceeding our original EPA grant deliverable of 10,500 lbs.) and reached 7,879 people through cleanup events, outreach, and educational programming. We have developed four trash management plans that have been adopted by local municipalities and/or land or natural resource managers.

- Working with the Galveston Park Board to develop new trash prevention and reduction initiatives.
- Worked with Audubon Texas to conduct trash transect surveys on nesting islands they manage and will be providing support to continue surveys, monitor trash accumulation, and manage accordingly.
- Partnering with Galveston Park Board, Surfside Tourism, Brazoria County, and Quintana Beach County Park as well as students in Region 4 to design and post artistic trash prevention signs along high-traffic areas on Texas coastlines and beaches.
- Working with Cradle of Texas Conservancy, the Mayor of Surfside, the Tourism board of Surfside, and Bird City Surfside to create a trash management plan for vital bird habitat in Surfside. This involves installing trash cans and monofilament disposal tubes, as well as installing signage to educate the public on the dangers of fishing line to wildlife.

4. **If the project is complete what are the planned on-going project initiatives? What follow up efforts will be made, when, and for how long?**

This is an ongoing project and now that our original EPA funding is almost up we are moving to work more with wildlife-based organizations such as USFWS and TPWD to include more wildlife-centered programming to our educational and outreach initiatives. We are also looking to expand our educational curriculum to include bird ecology and wildlife conservation lessons and activities for educators.

Recently, we received funding through the Bipartisan Infrastructure Law (BIL) that will allow us to expand our programming and community partnerships into Houston bayou watersheds, specifically Sims and Brays, which are historically underserved. This effort will include planning large-scale cleanup events in these communities as well as providing more educational programming in local schools. We also hope to work with local municipalities to develop trash management plans, as well as partner with local organizations such as BioArt Bayoutorium.

5. **Will there be an expansion of the project? If yes, what are your plans to expand the project and its impact? If no, would you be interested in expanding the project in the future?**

Yes, we are currently working on expanding into Houston bayou watersheds. Our next expansion goal is to push toward Matagorda County and Matagorda Bay.

- a. **Has your project acted a successful model for other projects and/or been replicated in other areas?**

Our program has not been replicated or modeled in other areas, but that is the goal and where we would like help from Texan by Nature and the Conservation Wrangler program. It is our sincere hope that we can find partners that will help us expand our program and reach a larger audience. We believe that the SPLASH program could be replicated in other coastal communities throughout the country.

6. **Specify any risks or concerns associated with the project (e.g., not securing adequate funding, unable to bring on additional landowners or partners, lack of volunteers, lack of organizational capacity etc.).**

Our cleanup participation is quite varied. We may have anywhere between 5-45 volunteers at our cleanup events. Lack of volunteers isn't a major concern, but we would like for more consistent numbers. Another minor consideration is organizational capacity as we continue to grow. This is not a major concern at this time, but one of our weak spots is finding time to focus on social media content. We are not concerned about funding because we have secured funding through the BIL for the next 3 years. We also have a full-time grants development team that is always on the lookout for relevant funding.

- a. **Outline your risk mitigation plan for the risks and concerns stated in questions six above. Please include name and/or role of personnel responsible for the risk mitigation. If there are risks that have no mitigation plan, please indicate that no plan / mitigation is available.**

We have partners who can provide volunteers. Ideally, we are trying to get more community members over volunteers who are not from the area.

7. **List important project personnel and their respective duties as they relate to the project. Please include first and last name, email, and phone number for the individuals listed.**

- Chloe Dannenfelser, Texas Coastal Outreach Coordinator at American Bird Conservancy. Chloe organizes the beach cleanups and outreach events. She also supports the education specialist whenever needed and shares social media management with the team.
- Elizabeth Virgl, Education Specialist at American Bird Conservancy. Liz is the Texas Coastal Education Specialist overseeing all of SPLASH's educational programming.
- Celeste Silling, Education and Outreach Manager at the Gulf Coast Bird Conservatory. Celeste assists all educational and outreach aspects of the SPLASH program.
- Richard Gibbons, Gulf Conservation Program Manager, Partnership and programming management and development advisor.

8. **Please designate one person as the primary project lead and point of contact for regular communication with Texan by Nature, if different than the specified applicant.**

- a. Project Lead Name: Chloe Dannenfelser
- b. Project Lead Title: Texas Coastal Outreach Coordinator
- c. Project Lead Organization: American Bird Conservancy

- d. Project Lead Email:
- e. Project Lead Phone Number:
- f. Project Lead Location: Houston, TX

Project Funding

1. **How is the project funded and how much money has been spent on the project to date? How does this amount compare to the original planned budget? Include a financial plan and/or budget.**

SPLASH’s original funding was a 3-year Marine Debris grant through the EPA. We are in our second year of funding from the Meadows Foundation as well, and intend to apply for a third year of funding. SPLASH is also funded by the Galveston Bay Estuary Program through their Bipartisan Infrastructure Bill.

2. **If this is a multi-year project, please specify your funding strategy for subsequent years.**

The BIL grant will partially (approximately half) fund SPLASH for 3 years starting Fall 2023 and we will continue to apply for relevant grant opportunities. American Bird Conservancy is committed to the program and has met the fundraising needs for the last 2.5 years of the program’s existence.

3. **Are there any current funding needs for the project that have not been met?**

Currently, we are fully funded. The next shortfall will occur in Fall 2023. We have funding sources identified for continuing and new support.

4. **What funding strategies are used to secure funds for the project? (e.g., flyers, emails, newsletters, sent out X times a year OR applying for grants X times a year etc.)**

Our funding strategy is working with a combination of public and private funding sources that are actively identified and assessed for fit. In addition to these project-specific funding pursuits, we also pursue a more general programmatic request for ABC’s Gulf Conservation Program support via a digital media campaign.

5. **Is your project currently in a grant cycle with a funder that requires deliverables and/or has a specific timeline, in which you’ve committed to achieving a large goal that would overlap with Conservation Wrangler program (if accepted - April 2023-October 2024)? Please include a brief description of the grant you received and any relevant deliverables, timelines, staff capacity commitments, etc. (e.g. Our organization received a NFWF grant in 2022 to restore a certain species or landscape over 5 years, 50% of our staff capacity in 2023 will be spent on fulfilling this grant’s requirements).**

50% of our efforts go to EPA and 50% of our efforts go to the Meadows Foundation. When the EPA grant is completed that 50% will be replaced by the BIL grant.

EPA Gulf of Mexico Trash-Free Waters (July 1 2020-June 30 2023)

Deliverable	Goal	Current Status as of 1/31/2023
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Pounds of trash removed	10,500	26,150.1
Number of cleanup events	36	65
Number of people educated/reached	6,000	7,957
Number of trash-free pledges signed	3,600	304
Behavioral change surveys	≥ 150	1175
Number of land/natural resource managers or municipalities engaged/reached	10	15
Number of visitor's centers engaged/reached	5	27
Number of trash management plans or best practices adopted by land/natural resources managers and/or municipalities	5	4
Number of billboard impressions (2 summers)	8,530,816	2021 season: 8,636,406 2022 season: 7,311,749

Meadows Foundation, Performance Period: August 2022-August 2023

Deliverable	Goal	Current Status as of 1/31/2023
Pounds of trash removed	8,500	6163.71
Number of cleanup events	12	12
Number of people educated/reached	2000	1711
Number of Schools in educational programming in Region 4	10	4
<i>Number of schools in educational programming considered Title I</i>	5	3
Number of students engaged	1,500	537
Learning kits to Region 4 Teachers	10	10
Number of teachers reached with the learning kits/using the kits in their classroom	≥ 20	0
Educational Beach Signs developed by students posted at beach trash collection sites and beach-nesting bird sites	40	These will go out in April/May

Bipartisan Infrastructure Law, Performance Period: August 2023-July 2026

Deliverable	Goal	Current Status as of
Pounds of trash removed	3,750	N/A performance period has not yet begun.
Number of cleanup events	18	N/A performance period has not yet begun.
Number of large scale annual cleanup events - bayou focused event	3	N/A performance period has not yet begun.
Number of educational programs delivered to Region 4 K-12 students	30	N/A performance period has not yet begun.
Number of educational programs delivered to Title I schools	15	N/A performance period has not yet begun.
Number of students engaged	3,000	N/A performance period has not yet begun.

Number of people educated/reached	3,000	N/A performance period has not yet begun.
Behavioral change surveys	>300	N/A performance period has not yet begun.
Number of visitor's centers engaged/reached	8	N/A performance period has not yet begun.
GIS Bayous & maintenance Maps		N/A performance period has not yet begun.

6. If you are a 501(c)(3) organization, please submit your 990 with your application.

American Bird Conservancy is listed as a 501(c)(3) organization. 990 is included in the Google Drive.

People Contributing, Impacted, and Reached

1. How many people contribute directly to the project?

- a. 4 staff
- b. 339 volunteers
- c. 2,962 students
- d. 45 partners
- e. 4,561 other, please specify: Community Members

2. How do the people outlined above contribute directly to the project? (e.g., time, supplies, money, etc.)

These people contributed their time to help further SPLASH’s mission by volunteering or participating in SPLASH events. Partners contribute their time and sometimes money for supplies. They also help with organizing cleanups and using their network to advertise for cleanup events which helps bring in more volunteers. They also offer their land for us to use for our cleanup events and to collect trash data.

3. How many people are impacted by your project and how are they impacted? (e.g., X number of people in the surrounding city are impacted because they have access to clean water).

The population of Houston and Galveston benefit from our efforts because it increases their access to clean water and natural spaces in their communities and waterways. Our project has the potential to reach over 2.8 million people (population of Houston and Galveston).

Similarly, the tourism industry in Galveston economically benefits from SPLASH efforts. The industry reported more than 7 million visitors to Galveston Island in the past year. Tourism spending in Galveston totaled \$345 million in 2019, alone.⁹ This industry directly benefits from having clean beaches and waterways because tourists come to recreate on the island’s outdoor spaces.

4. Based on your answers from questions 1 and 3 please share the demographics of the people impacted by this project. Please be as thorough as possible and specify the demographics for each group listed (i.e., provide demographics such as: age, race, gender, income, etc.).

The following is obtained from US Census Bureau³

City of Houston Demographics:

Population: 2,288,250

Age:

- Persons under 5 years: 7.2%
- Persons under 18 years: 24.6%
- Persons over 65 years: 11.1%

Race:

- White alone: 46.8%
- Black or African American: 22.6%
- Hispanic or Latino: 44.5%
- Two or More Races: 10.8%
- Asian alone: 6.8%
- White alone, not Hispanic or Latino: 24.1%

Gender:

- Female persons: 50.2%

Income:

- Median household income: \$56,019
- Persons in poverty: 19.5%

City of Galveston Demographics:

Population: 53,585

Age:

- Persons under 5 years: 4.6%
- Persons under 18 years: 16.1%
- Persons over 65 years: 18.9%

Race:

- White alone: 68.6%
- Black or African American: 16.2%
- Hispanic or Latino: 31.1%
- Two or More Races: 9.6%
- Asian alone: 2.7%
- White alone, not Hispanic or Latino: 48.2%

Gender:

- Female: 49.2%

Income:

- Median household income: \$52,899
- Persons in poverty: 18.6%

The SPLASH Program targets schools and communities within Region 4 and counties in the Houston-Galveston region. Of the 1.1 million students enrolled in this area, 62% are considered part of an “economically disadvantaged” racial or ethnic group.⁴ According to the United States census, the eight counties within the Houston-Galveston region experience the following poverty

rates among all residents (2015-2019): Harris - 15.7%, Chambers - 12.1%, Galveston - 12.4%, Brazoria - 8.7%, Waller - 16.5%, Liberty - 14.1%, Montgomery - 12.3%, and Fort Bend - 7.4%.⁵

5. Who are the target audiences for this project and how are they being reached currently (i.e., social media, word of mouth, collateral, etc.)?

Target audience is everyone who hasn't been exposed to environmental education, including students, community members, and people who live in or near the coast and are affected by trash pollution. They are being reached through volunteer opportunities, educational programming, social media, volunteer recruitment websites, and advertising through partnerships.

6. Are there audiences that haven't been reached and you wish to reach?

Yes, we have found that it can be a struggle to reach audiences outside of the environmental space. A lot of the people we encounter at outreach events are already environmentally conscious as we attend many environmentally-focused events and festivals. We would like to reach people who aren't as environmentally literate or aware of the plastic pollution issues that the state of Texas faces.

a. Is there a strategy in place to reach those audiences?

Yes.

b. If so, what is the strategy?

We are investing time and resources into digital ads and using social media to reach new audiences. We are also expanding our events into Sims and Brays bayous. Lastly, we are looking into attending events that aren't directly related to our cause, but show promise for reaching a wider audience. Some events include the Galveston Fishing Expo, Mosquito Fest, and more.

c. If not, what are some strategies that you are considering using?

Project Partners

1. How many partners does the project have? 45 partners

a. Out of the total number of partners please specify how

many are business partners: 3 business partners (business partners include for-profit industry companies)

Black Cat GIS, Tampico Beverages, and Refinement House

b. Please list all project partners and specify their role(s) as a partner:

- Black Cat GIS: This was one of our founding partners. They assist with outreach events and processing the trash data we collect during our cleanups and use them in the Texas Litter database. They also send their interns to some of our events to increase our capacity and run trash transects for data collection. They also facilitate the story map on our website (<http://www.splashtx.org/storymap>).

- Gulf Coast Bird Observatory: One of the founding partners of SPLASh. Their Education and Outreach manager works on the SPLASh team to develop educational materials and assist with our events.
- Keep Texas Beautiful: we work together on the Texas Litter Database
- Houston Advanced Research Center (HARC): We work with them on the Texas Litter Database and the Partners in Litter Prevention.
- Galveston Bay Foundation: Collaboration on cleanup events, outreach events, and promoting each other's initiatives.
- Houston Audubon: Collaborate on cleanup events.
- Gulf Center for Sea Turtle Research, Texas A&M University: Collaboration for cleanup events. Specifically Nest Fest which is a large cleanup event that covers Bolivar Peninsula, Galveston Island, and Follet's Island with the goal of preparing beaches for beach nesting birds and sea turtles.
- Sea Center Texas: We participate in Nature Day Texas.
- Texas Master Naturalists: We collaborate with their volunteers for large scale outreach events. Specifically, NestFest (<http://www.splashtx.org/nestfest>).
- Mission Aransas NERR/UT Marine Science Institute: We collaborate with them for the Plastic Pollution Symposium.
- Buffalo Bayou Partnership: We work with them for KBR Kids Day in Houston
- Village of Surfside Beach, TX: We work with them for NatureFest.
- Children's Environmental Coalition: We work with them on their Green Careers series, as well as their summer institute/workshops.
- Galveston Bay Estuary Program: Organizes the Public Participation and Education (PPE) committee meetings where staff from local conservation organizations attend and discuss their education/outreach efforts. They also provide some funding opportunities
- Turtle Island Restoration Network: We have partnered with them for a single use plastic reduction grant.
- Moody Gardens: We participate in their educator open house.
- Becoming Kings and Queens: We partner with them for some cleanup events and volunteer recruitment.
- Houston Botanic Garden: Collaborate on educational events and cleanups along Sims bayou.
- University of Houston: Helped with their "UH Day of Service" in 2021. We plan on collaborating with them for future events.
- Galveston Park Board: We worked on their Trash Initiative & they are working with us to install trash prevention signs along their beaches.
- Texas Brigades: We have helped with past events of theirs.
- Texas Ornithological Society: Worked with editor of publications to contribute to an article in their magazine (2021).
- NOAA Marine Debris Program: They help advertise our cleanup events in their newsletter.
- BioArt Bayou-torium: We've partnered with them for their annual community event in Houston.
- United Way of Galveston: Tabled at their 2022 Volunteer and Nonprofit Showcase.
- Marathon Petroleum Wildlife Habitat Team: We partnered with them to use some of the SPLASh pages in their coloring book.

- Tampico Beverages: We were contacted by them to participate in their “Tampico Smiles Challenge” program.
- Bird City Surfside: We partnered with them for a Trash Management plan in Surfside. They also collaborate on outreach and cleanup events. Bird City Surfside: We partnered with them for a Trash Management plan in Surfside. They also collaborate on outreach and cleanup events and will be installing our trash pollution signs along their coastlines.
- Brazoria County Parks Department: We are working with them to install trash prevention signs along their beaches, specifically Quintana Beach County Park. We have also partnered with them for cleanup events.
- Audubon’s Conservation Leaders Program for Young Women (ACL): We have worked with ACL students in the summer of 2022 and will be partnering for educational programming in the Spring of 2023.
- Texas A&M Sea Camp: We led beach cleanups with their summer campers in 2022 and plan to continue the partnership in Summer 2023.
- Harris County Precinct 3 Jesse H. Jones Park & Nature Center: We have partnered with Precinct 3 to deliver professional development opportunities to educators, and are partnering in their educational programming for Spring 2023.
- We have partnered with many schools in the Houston-Galveston region to deliver marine debris educational programming via classroom lessons, field trips, providing supplies for educators, etc. These partners include Dickinson High School, Kingwood High School, Academy of Choice, Cleveland Middle School, RISE Academy, Black Elementary School, Pines Montessori School, AIM Academy, Cinco Ranch High School, Lamar High School, Ball High School, and Westbury High School.
- Refinement House: We partnered with them in 2021 to do a live Instagram presentation and they provided a discount code for our volunteers to use at their eco-good online store.

2. Are there any connections or partnerships to groups, organizations, and/or businesses you wish to develop? Please list desired project connections:

Any organization/institution that can increase SPLASH’s reach or would be interested in developing a trash management plan.

The vision is a fully developed network of municipalities, state and federal agencies, and private and public entities working to maintain Texas shores where nature is appreciated and maintained as a place where wildlife can thrive for generations to come.

a. How do you envision the partnership(s) helping your project succeed?

We have a Texas-sized challenge with trash on our beaches and along our shorelines and need to reach critical mass to achieve coast-wide awareness of the threat of trash to wildlife on our shorelines. Much like the old marketing campaign of the sea turtles and six-pack ring holders, we need Texans and the millions of tourists that visit our beaches to be aware and take action to keep our beaches and shorelines places where people and wildlife can coexist.

Economic Impact of the Project

1. What economic value does the project have? (e.g., ecosystem services, education, recreation, etc.)

Nature-based tourism is an important and growing sector of the Texas economy. According to a report from Texas Parks and Wildlife, there were 1 million visitors and residents of Texas who traveled to observe wildlife. Of those traveling, 851,044 people were viewing birds and 600,712 were observing mammals and in total spent \$228,779,736 on travel-related expenses.⁶ In general, \$1.28 billion was spent in Texas on equipment and services related to wildlife watching activities.⁶ As such, the continuing health and presence of the iconic wildlife is critical to continuing this economic growth. Perhaps even more important is the benefit that a healthy and clean coastal environment will provide to the more general tourism sector. A culture of caring for our coast is positive for nature-based economies. While it is challenging to determine the exact economic value of our project, it is safe to say our continued efforts ensure healthier natural spaces for wildlife to thrive and be enjoyed.

2. What conservation or ecosystem services does/will the project provide that can be measured economically? What is your current estimate of this value and how did you calculate it?

We are currently unaware of the measures for ecosystem services for the project, but would welcome any ideas or collaborations to develop these important metrics.

3. How does your project impact the local and/or broader surrounding community economically? What is your current estimate of this impact and how did you calculate it? (This could be detailed in money made, jobs created, business growth, tourism established, etc.)

We estimate the economic value of this project to be between 0.1% and 3% of the coastal nature-based tourism economy of the upper Texas coast through improved viewsheds, increased property values, a developing coastal culture of caring for nature, and healthy fish and wildlife populations that are the focus of the nature-based tourism industry. Nature-based tourism in Texas is more than a 14 billion in salaries and wages and more than 31 billion is total added value according to the Texas Alliance for Fish and Wildlife. We estimate that 10% of this value is on the upper Texas coast where we are currently working, or 3.5 billion in salaries and wages alone. This puts the estimated value to be between 3.5 million and 105 million dollars. We would welcome additional insights to measuring our impact on the Texas economy!⁸

Natural Resources Questions

Ecological Impact

1. Why is the project important for conservation and improving the health and functionality of natural systems?

Texas faces a major trash problem, research shows that it has more trash accumulation per mile than any other state in the nation.¹ This poses not only a threat to wildlife, but also to humans from entanglement and ingestion hazards to plastic toxicity and chemical leeching. By removing

debris, educating students and residents, and partnering with local entities, SPLASH is making a positive, long-lasting impact on Texas shorelines and waterways.

2. How large is the project area and/or the habitat created (e.g., miles, acres, hectares, square feet, etc.)?

Our programming covers the Houston-Galveston Region. Our cleanups in total have covered 321.755 acres in this region and we are continually finding new trash location sites.

3. Is the project using an ecosystem, species specific, or other approach? Please specify why the project has this approach.

Our goal is to improve ecosystems by removing marine debris. This approach allows us to impact bird species on the coast, wildlife in the Greater Galveston Bay Watershed, and people who live in these areas. This approach is broader and allows us to work with many entities from wildlife conservation organizations to local scout groups concerned about their park.

4. What ecosystems are positively impacted by this project? Please specify how the ecosystems are positively impacted and why it is important.

The SPLASH program targets ecosystems along the Greater Galveston Bay Watershed and the coast. These include the gulf prairies and marshes along the Texas coast, post oak savannah community in and around Houston, and the marine plant communities off the Gulf of Mexico.⁷ These ecosystems are positively impacted when we remove plastic and trash pollution. Pollution takes up space, suffocates & shades plant life, entangles & chokes wildlife, and impacts the water, soil, and air quality. By removing the trash, we are removing these hazards and improving the overall health of the ecosystems.

5. How many/what wildlife species are positively impacted by this project? Please specify how the wildlife species are positively impacted and why it is important, note any species of greatest conservation need.

Texas has over 600 identified bird species, many of which rely on our coastal ecosystems for their breeding habitat and migrations. Trash poses a major threat to these species as they can become entangled in it or accidentally ingest it. Sea turtles are also impacted by trash on the coast as they need that habitat for nests. Specific species that are at risk include the Kemp Ridley Sea Turtle, Black Rail, Snowy Plover, and other beach nesting birds and sea turtles.

6. How many/what plant species/communities are positively impacted by this project? Please specify how the plant species/communities are positively impacted and why it is important, note any species of greatest conservation need.

The plant communities that are most impacted by the SPLASH program include the gulf prairies and marshes along the Texas coast, post oak savannah community in and around Houston, and the marine plant communities off the gulf.⁷ Soil and natural water systems carry microplastics and chemicals that have bonded to these plastics impacting the health of the ecosystem and the plant community. Plants are affected by the pesticides and fertilizers that bond and are released by plastics that travel through waterways. Furthermore, trash pollution takes up space, shades out natural sunlight, and can even entangle plants. Our cleanup efforts directly benefit these

communities by removing these hazards from the environment and preventing further chemical leeching into the waterways and soil.

7. What bodies of water (rivers, streams, lakes, aquifers, watersheds, etc.) are positively impacted by this project? Please specify how the bodies of water are positively impacted and why it is important.

A large part of the Greater Galveston Bay Watershed is impacted by SPLASH. Our cleanup efforts focus on bayous in the city of Houston, the Houston Ship channel, Galveston Bay, and the Gulf of Mexico. We have cleaned over 26,000 lbs. of trash from these areas which greatly improves habitat for beach nesting birds, sea turtles, other wildlife, and the people that live there.

Natural Resources Data and Monitoring

8. Do you currently collect metrics related to natural resources impacted by this project?

We monitor trash removed and conduct transect surveys to determine the type of trash we are finding on the Texas coastline.

- a. Please provide a list of metrics collected to date (e.g., native plants planted, wildlife diversity, water quality, acres established, etc.). Include attachments of any existing reports that define and quantify natural resources metrics.**
- Weight of trash removed from each clean up
 - # of coastal, bay, and bayou cleanups
 - Top 15 Most Abundant Trash Items
 - # of land or natural resource managers or municipalities educated/reached
 - # of voluntary Trash Management and Prevention plans adopted by local municipalities and/or land or natural resource managers
 - # of people educated/reached, # of volunteers, volunteer hours
- b. How are the metrics collected, used, interpreted, and/or reported? (Please outline tools and methodologies used).**

Metrics are collected at each clean up, educational, and outreach event. We collect data on the individuals we educate and the volunteers who work. We collect our trash data by conducting transect surveys and using the STOP method, a modified method created for the Texas Litter Database. Environmental data is also collected.

All transect data is reported through the Texas Litter Database (<http://www.txlitter.org>), a statewide initiative to better understand Texas's trash pollution problem. We report our data in all grant reports, use our data to educate students and communities, and present our findings at relevant conferences such as the Plastic Pollution Symposium and the Gulf of Mexico Marine Debris Cross Team Initiatives Mid-Year meetings.

c. Why are these metrics beneficial to your project?

It is important for us to know what sites have the most trash and what kind of trash we are finding. We use this information to support our trash management plans with local municipalities and communities in order to develop effective, locally-focused solutions to trash pollution.

- d. Please provide links to relevant research/studies below and/or attachments when emailing in the

Research found in Google Drive attached.

- e. If you are not collecting or reporting metrics/data on your project's impact, please describe why.

N/A

9. Do you plan to collect additional metrics related to natural resources impacted by this project?

No.

- a. Please provide a list of metrics you plan to collect and specify how you plan to collect them or who you plan to work with to collect them.
- b. How will these metrics be collected, used, interpreted, and/or reported? (Please outline tools and methodologies used).
- c. What is the benefit of collecting these metrics?

Stopping Plastics and Litter Along Shorelines (SPLASH) Clarifying Questions

After receiving this Conservation Wrangler application, TxN followed up with the following questions to get more clarity, and SPLASH provided the following answers in return.

1. **Is recycling a part of SPLASH trash management plans today?**
- a. One of our trash management plans includes recycling recommendations. The Galveston Park Board of Trustees "[Let's Talk Trash – Roundtable Series](#)" (We partnered with them to provide recommendations and develop initiatives for Galveston Island. In general we focus on prevention and removal/proper disposal over recycling as the US recycling rate is a lowly 8.7% ([2018 EPA report](#)) and really isn't the best strategy, yet. Also to note: Our trash management strategies are individualized based on the partner(s)/municipalities needs and goals so current strategies do not include recycling, though, we do have resources on how to implement [recycling efforts](#) for future partners.
2. **Has SPLASH looked into broader partnerships with litter boats or other clean up initiatives? If so, which ones? If you've tried and it hasn't worked, why not?**
- a. We've partnered with partners to clean up and prepare nesting islands. We are working with Galveston Island Park Board, Surfside Tourism, and Brazoria County to install trash prevention signs along beach access points. Our trash prevention recommendations are included in the

Texas General Land Office’s “Adopt a Beach” information packet. We have future initiatives underway ([NestFest](#) & Sims & Brays Bayous). We have supported policy change – [Nurdles Bill](#).

3. **Given your staff size, how much time do you have to commit to the Conservation Wrangler process from April 2023-November 2024?**
 - a. The Conservation Wrangler Program aligns with many initiatives and efforts we already have underway (social media efforts, marketing, finding new partnerships) therefore we foresee having enough availability and time to commit to the program.

EXAMPLE