

# **Nurdle Patrol Progress Report**

## **Year 2 Final Report (June 1, 2021 – May 31, 2022)**

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June 24, 2022

### **Administration:**

#### **Contract Activity**

- The Nurdle Patrol Expansion, Education, and Outreach was approved for funding for Year 2 on June 1, 2021.
- The Subaward Agreement No. UTA20-000902 between The University of Texas at Austin and Texas A&M University Corpus Christi was fully funded for year two for the amount of \$37,880.00 to further enhance the website for usability and the ongoing maintenance of the phone app to help promote the awareness and education of Nurdle Patrol.
- Purchase Order issued to Enlighted Images in June 2021 for \$12,000 to produce a four-part video series featuring Diane Wilson.
- Purchase Order issued to Augs Services in July 2021 for \$13,760.00 to create and post two billboards across Texas about Nurdle Patrol from August 2021 to April 2022.

**Risks and Impacts:** None

### **Project Tasks:**

***Hire full-time staff to organize annual meeting, training, travel, manage website and develop promotional materials about Nurdle patrol.***

Tracy Weatherall was hired during the first quarter of year one on July 1, 2020, and June 1, 2021, for year two.

***Host the Texas Plastic Pollution Symposium (TPPS)***

The 4<sup>th</sup> Annual Texas Plastic Pollution Symposium took place in Port Aransas, Texas on March 31<sup>st</sup>, 2022 and was a huge success again this year! It was held at the Port Aransas Community theater (PACT) and at the University of Texas Marine Science Institute (UTMSI).

One hundred twenty-two people attended in-person and 32 attended virtually. Those who attended in-person received a cotton “Swag Bag” (donated by Surfrider Foundation) filled with a TPPS t-shirt, vacuum insulated ceramic coated coffee mug, notebook with a recyclable pen, stainless steel straws (donated by Texas Sea Grant) and a 16GB USB Flash Drive (Figure 1). The 18 oral presentations and 11 poster presentations focused on Monitoring, the Chemistry of Plastic Pollution, Impacts to Fish & Wildlife and Solutions. Five students presented their research orally, and 9 students presented posters. The Coastal Bend Bays & Estuaries Program donated \$300 for student oral presentation winners (\$150 1<sup>st</sup> place, \$100 2<sup>nd</sup> place, \$50 3<sup>rd</sup> place) and \$200 for student poster presentation winners (\$100 1<sup>st</sup> place, \$75 2<sup>nd</sup> place, \$25 3<sup>rd</sup> place). Dr. Jenna Jambeck PhD

was the invited speaker this year whose presentation was titled, “Sea to Source: Preventing Plastics in our Environment”. Her presentation was well received.

UTMSI catered the breakfast foods and other event items such as high-top table rentals, etc. (\$761.10), Miss Kay’s catered lunch (\$1,500.00), La Playa Cantina catered the heavy Hors d’oeuvres (\$1,440.00), Spanky’s Liquor provided the bar service during the poster session (\$543.29) and the sunset cruise was outfitted by Neptune Charters (\$1,200.00). Additional associated costs were the following: E&F Audio & Visual Services supplied the necessary equipment and technical expertise for the Zoom portion of the symposium (2,397.66), the swag (\$5,693.16) was purchased for 200 people from multiple vendors (\$1,605.00 t-shirts, \$2,703.37 coffee mugs, \$462.74 notebooks, \$922.05 USB’s) and the rental cost for the venue (PACT) was (\$335.56).



**Figure 1. Texas Plastic Pollution Symposium swag.**

### ***Student Scholarships***

As described in the consent decree, students that attend in person and present their research at the Texas Plastic Pollution Symposium will receive a \$500 stipend to cover costs for travel and expenses. This year, 7 students traveled from outside the Corpus Christi area and received their \$500.00 scholarship for travel accommodations etc. They were very grateful for this opportunity.

### ***Create Starter and Teacher Kits***

The Nurdle Patrol Starter Kit was created during the first year of Nurdle Patrol (2020) for organizations to start-up their own Nurdle Patrol citizen science project or to incorporate nurdle surveys into their existing monitoring program. The kits were designed to supply organizations with resources needed to conduct surveys, talk to their volunteers about nurdles, and provide a foundation for a successful project. As of the May 31, 2022, 177 partners have received the starter kits (Figure 2).



**Figure 2 . Nurdle Patrol Starter Kit items.**

The Nurdle Patrol Teacher Kits were also developed during the first year of Nurdle Patrol due to many requests from teachers across the United States that wanted to teach their students about how plastics reach the ocean and what negative impacts plastics have on the environment. These kits include a curriculum about nurdles entering the ocean, what negative impacts there are, and what solutions are out there to prevent nurdles from getting into the waterways. The interactive teacher kits include six jars of nurdles, information card about how to conduct a nurdle survey, a presentation all about nurdles, and articles describing the problem. An updated version of the teacher kit curriculum was completed during the third quarter which includes an All Level Nurdle Survey, a Nurdle Hurdle Race, K-5 curriculum that includes lesson plans for age specific children in K-1, 2-3, and 4-5, and Middle School and High School Chemistry curriculums. These lesson plans are now linked to our webpage. As of the end of the fourth quarter, 1,000 teacher kits have been shipped to educators in the USA, Canada, Mexico, Puerto Rico, Costa Rica, Columbia, UK, Spain, Africa, Australia, and Thailand (Figure 3).

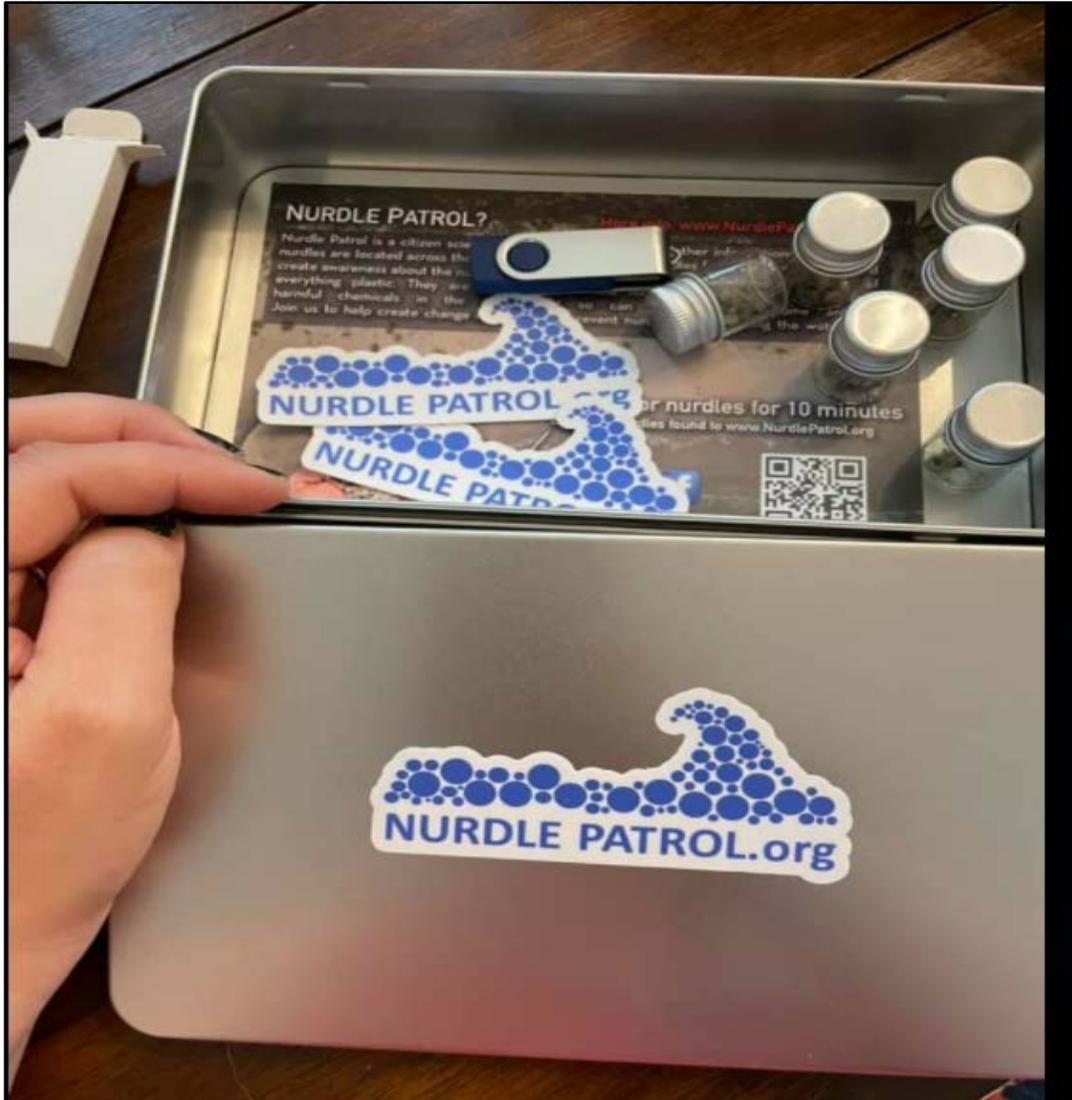


Figure 3. Teacher kit items.

### **Plastic Free Life Kit**

In January 2021, we initiated the Plastic Free Life Challenge. This friendly competition was designed as an incentive to encourage our partners and individuals to conduct as many nurdle surveys as possible each month. The group that conducts the most surveys will win a Plastic Free Life starter kit that includes 42 single-use plastic alternatives (Figure 4).



**Figure 4. Plastic Free Life Starter Kit items.**

### ***Meet with organizations about Nurdle Patrol – Outreach***

During the 4<sup>th</sup> quarter, we acquired 58 new Nurdle Patrol partners and shipped 662 teacher kits (Figures 5-14; Table 1-3). Virtual and in-person presentations and meetings were given to promote Nurdle Patrol to new organizations, including:

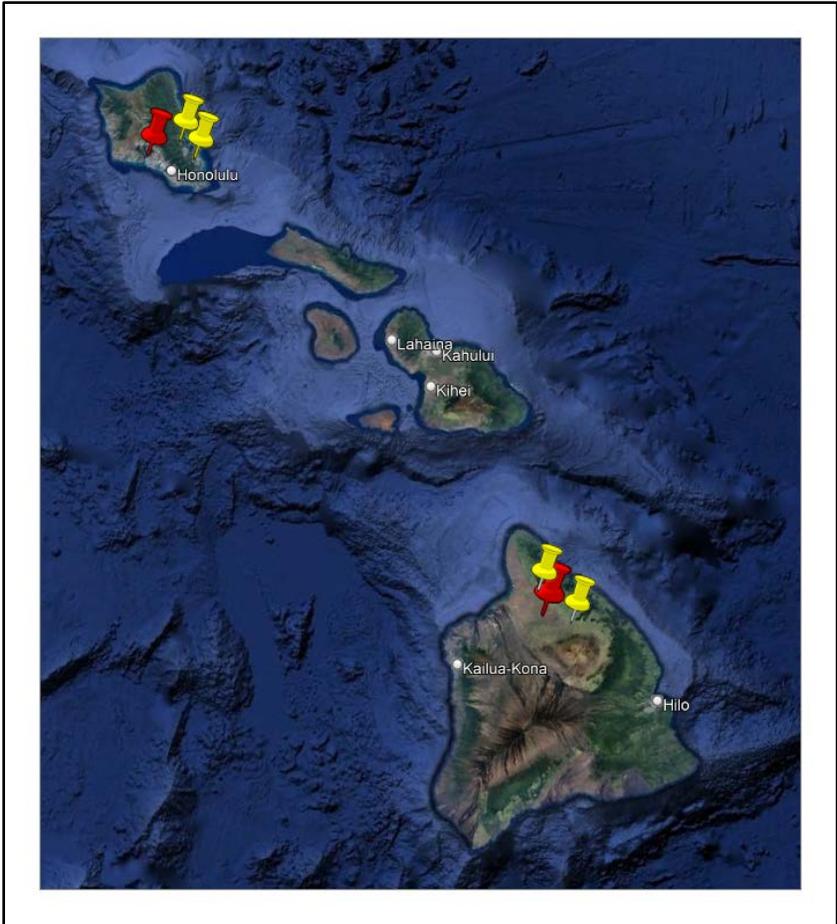
- June 9, 2021 - New York students via Zoom.
- July 7, 2021 – Teachers on The Estuary (TOTE) Nurdle Patrol presentation in Port Aransas, TX.
- August 4, 2021 - Fidra Nurdle Patrol partnership meeting via Zoom in Scotland.
- August 11, 2021 - Texas Parks & Wildlife Depart. Angler Class via Zoom to area chiefs all over Texas.
- September 9, 2021 – Virtual presentation to the San Diego Girl Scout Club about nurdles and the new nurdle patch.
- September 10, 2021 – Nurdle Patrol presentation to Saint Stanislaus School in Mississippi.
- September 12, 2021 – Virtual presentation to the Texas Parks and Wildlife Leadership Angler Class
- September 21, 2021 – Illinois River Watch virtual presentation.
- September 22, 2021 – Galveston Audubon virtual presentation.
- October 1, 2021 – In-person presentation invited speaker at the Valley Environmental Summit in South Padre Island, Texas.
- October 4, 2021 – Tracy Weatherall attended the STEAM (Science Technology Engineering Arts Mathematics) night at Kaffie Middle School in Corpus Christi, Texas to inform students and their families about nurdles and the issues with marine debris and microplastics and their impact on the environment, animals and people.
- October 10, 2021 – Tropical Trail Association virtual presentation.
- October 22, 2021 – virtual presentation to Loyola University in New Orleans to a natural science class.
- October 28, 2021 – Invited speaker to the General Land Offices’ Adopt-a-Beach Workshop in Galveston, Texas.
- November 1, 2021 – presented to the Galveston Master Naturalists through a virtual presentation.
- November 10, 2021 – Texas A&M University-Kingsville presentation to the SAFER student group.
- January 5, 2022 – Mississippi High School via Zoom presentation
- January 26, 2022 – Gulf of Mexico Alliance presentation to all 5 Gulf states researching plastics in the environment.
- February 18, 2022 – Presentation to multiple universities in Mexico about partnership with Nurdle Patrol.
- January 27, 2022 and February 17, 2022 – The education specialists at the Mission-Aransas NERR met with the general public at the Bay Education Center in Rockport, Texas to discuss the negative impacts of nurdles, microplastics and marine debris to the environment, marine life and people.
- March 1, 2022 – Presentation to Directors of UT Austin’s Campus Environmental Center.

- March 9, 2022 – Presentation at the Harte Research Institute Seminar Series in Corpus Christi.
- March 31, 2022 – Texas Plastic Pollution Symposium presentation about nurdles.
- April 1, 2022 – Presentation at the Society of Environmental Journalists in Houston, Texas.
- April 5, 2022 – Presentation and nurdle survey with the Ocean’s Class from Flour Bluff Jr High.
- April 18, 2022 – Presentation through Zoom to University of Texas class about nurdle policy’s in Texas.
- April 27, 2022 – Nurdle presentation at the Gulf of Mexico Alliance meeting in Baton Rouge, LA.
- May 22, 2022 – Nurdle presentation through zoom to Orange County Girl Scout group.
- May 23, 2022 – Nurdle presentation to UTMSI marine policy class about nurdle policy in Texas.
- May 31, 2022 – Microplastics Science Team meeting presentation in-person about nurdles.

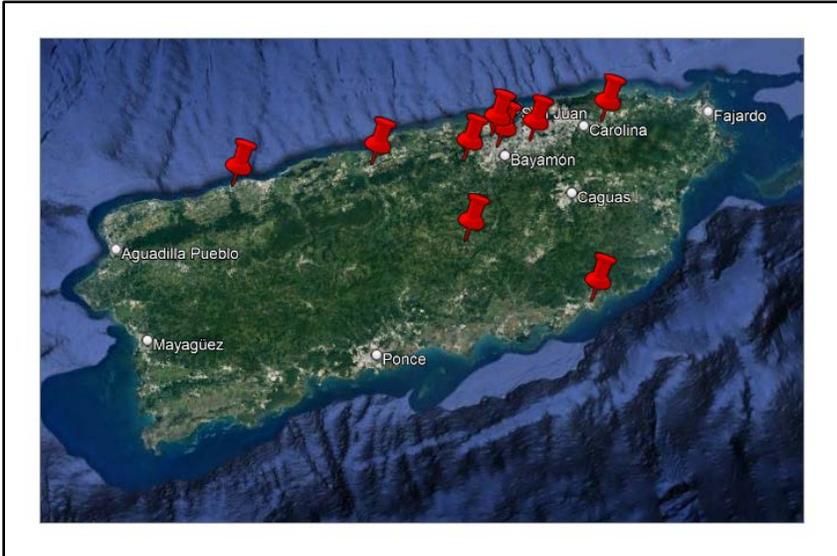
The Nurdle Patrol Facebook group is being utilized as a way to communicate with individual citizen scientists as well as new organizations about new efforts related to Nurdle Patrol. News stories, survey results, and other related material are also shared with the more than 2,800 followers on the closed group Nurdle Patrol Facebook page. Also, the Nurdle Patrol Twitter account (public) was created in August 2020 to educate and inform the general public about plastic pollution and other science related topics. To date there are 370 followers.

Lisa Scobel, a graduate student studying Environmental Conservation from the University of Wisconsin-Madison, joined the Nurdle Patrol team this summer as an intern and recruited 14 new partners along the Mississippi River’s 2,350 mile stretch as well as New York and Canada. In addition, she published 5 Nurdle Patrol related articles that are posted on the [nurdlepatrol.org](https://nurdlepatrol.org) website at <https://nurdlepatrol.org/Forms/News/index.php>.

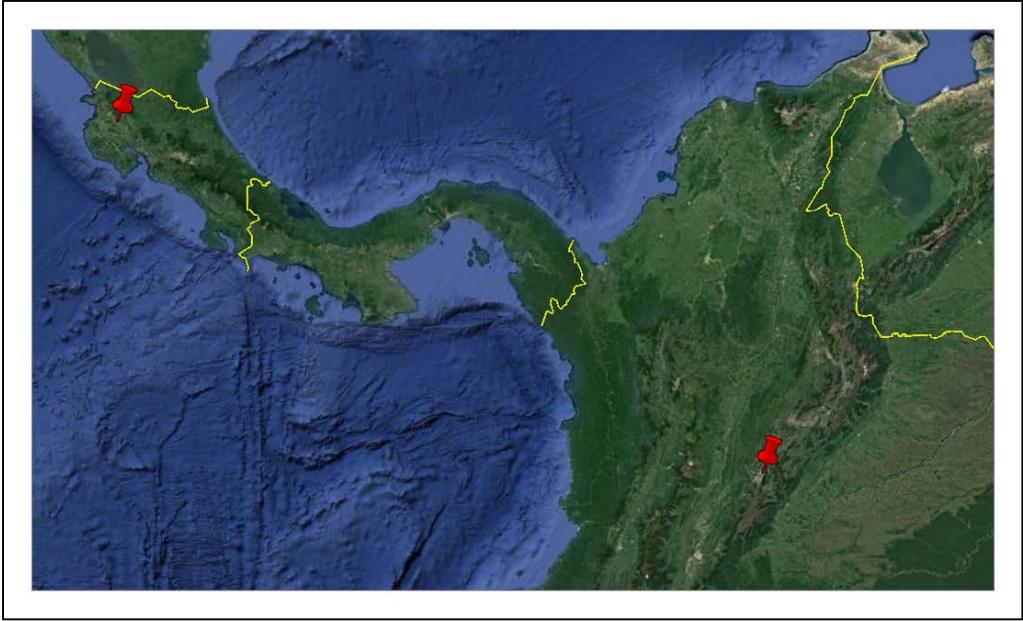




**Figure 7. Nurdle Patrol Partners (yellow) and Teacher Kits (red) shipped to Hawaii.**



**Figure 8. Teacher Kits shipped to Puerto Rico.**



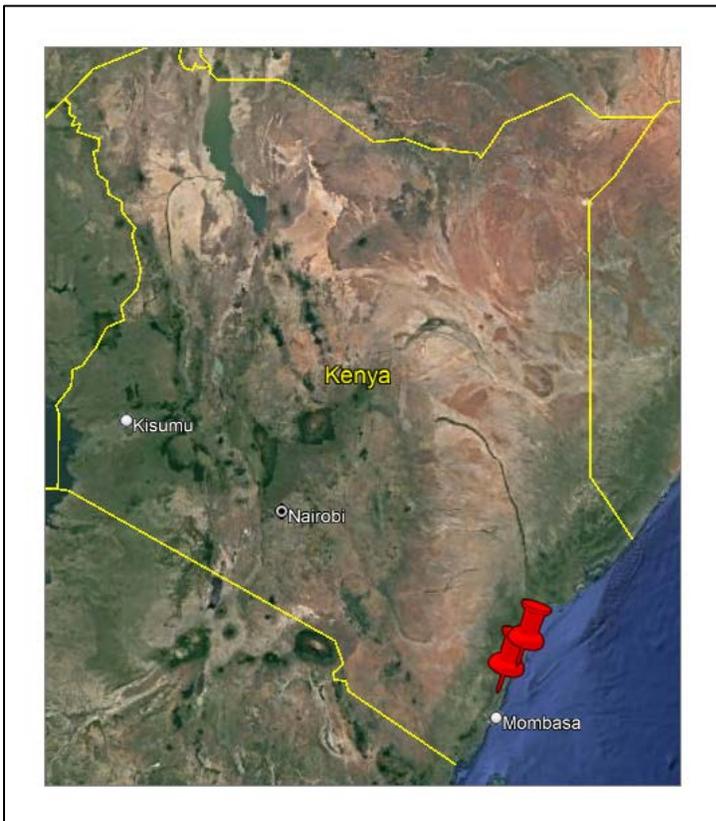
**Figure 9. Teacher Kits shipped to Costa Rica and Columbia.**



**Figure 10. Teacher Kit shipped to Spain.**



**Figure 11. Teacher kits shipped to the UK.**



**Figure 12. Teacher Kits shipped to Kenya, Africa.**

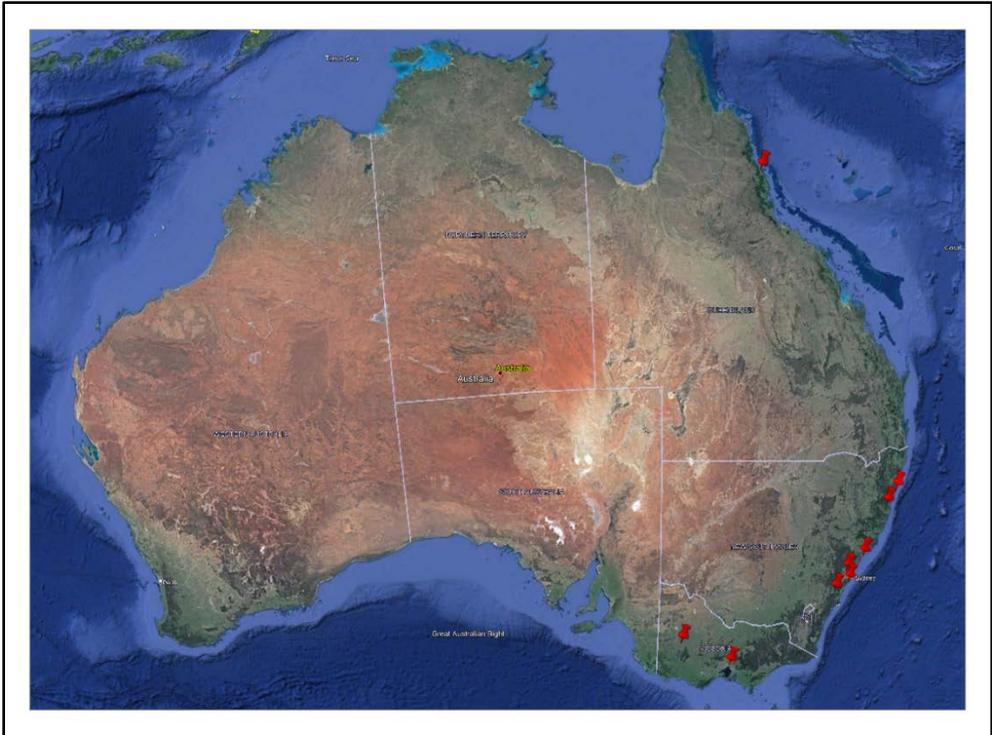


Figure 13. Teacher Kits shipped to Australia.

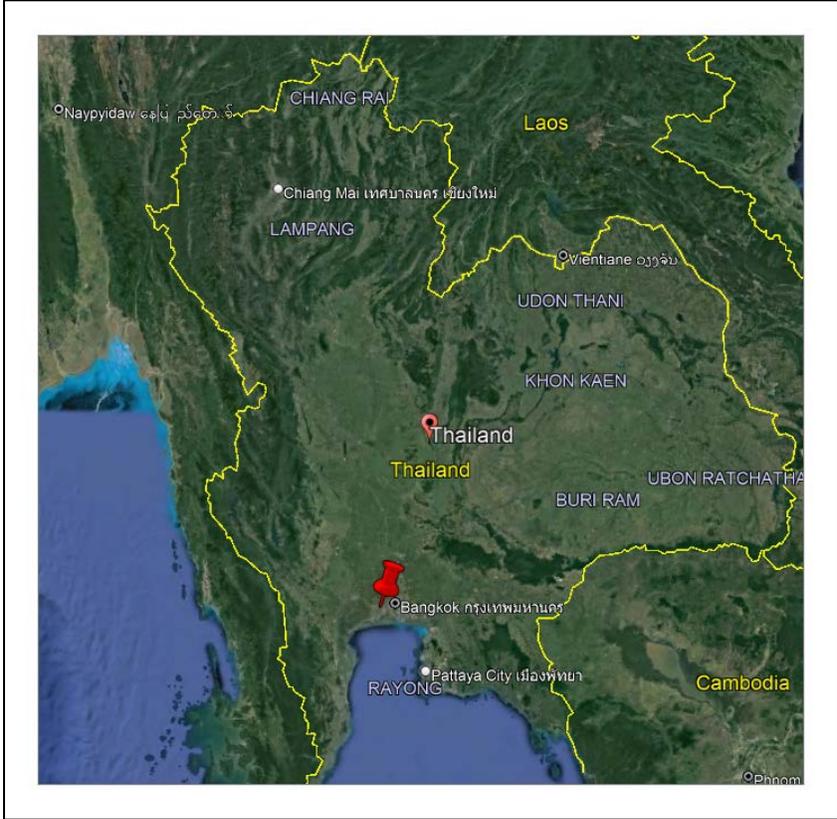


Figure 14. Teacher Kit shipped to Thailand.

Number	Partner	Group Type	State	Number	Partner	Group Type	State
1	Terra Science & Education	School	NY	40	Defenders of Wildlife	Nonprofit	NC
2	STEM Engagement	School	NY	41	Old Women Creek NERR	NERR	OH
3	Tampa Bay Estuary Program	NEP	FL	42	Delaware NERR	NERR	DE
4	Coastal Bend Bays & Estuaries Program	NEP	TX	43	ACE Basin NERR	NERR	SC
5	Weeks Bay NERR	NERR	AL	44	Angler Acton Foundation	Nonprofit	FL
6	Rockport Fulton Middle school Ecology/Environmental Club	School	TX	45	Hudson River NERR	NERR	NY
7	Island RV Resort	Business	TX	46	Friends of the Kaw	Nonprofit	KS
8	Southernmost Homeschoolers	Homeschool	FL	47	Buffalo Niagara Waterkeeper	Waterkeeper	NY
9	Inland Ocean Coalition North Texas Chapter	Nonprofit	TX	48	Crystal Coast Waterkeeper	Waterkeeper	NC
10	Choctawhatchee Basin Alliance	Waterkeeper	FL	49	White Oak New Riverkeeper Alliance	Waterkeeper	NC
11	National Park Service - Padre Island National Seashore	Federal	TX	50	Sapelo Island NERR	NERR	GA
12	Friends of Padre	Nonprofit	TX	51	NY-NJ Baykeeper	Waterkeeper	NY
13	Universidad de Veracruzana - Sea & Reef Program	University	MX	52	South Slough NERR	NERR	OR
14	Rookery Bay NERR	NERR	FL	53	A Rocha USA	Business	FL
15	Surfrider Foundation - Texas Coastal Bend Chapter	Nonprofit	TX	54	Sustain 2 Remain	Nonprofit	TX
16	Galveston Bay Foundation	Nonprofit	TX	55	Missouri Confluence Waterkeeper	Waterkeeper	MO
17	Texas A&M University - Corpus Christi, Conrad Blucher Instit.	University	TX	56	Great Bay NERR	NERR	NH
18	Texas Master Naturalist	Nonprofit	TX	57	Sea Grant - Mississippi-Alabama	Sea Grant	MS
19	The University of Texas, Rio Grande Valley	University	TX	58	Mississippi State University Extension	University	MS
20	Parley for the Oceans	Nonprofit	MX	59	Flour Bluff ISD	School	TX
21	11th Hour Racing	Nonprofit	TX	60	Corpus Christi Hooks	Business	TX
22	Monsignor McClancy Memorial HS	School	NY	61	Padilla Bay NERR	NERR	WA
23	Nicholls State University	University	LA	62	Kachemak Bay NERR	NERR	AK
24	Texans For Clean Water	Nonprofit	TX	63	Bayou City Waterkeeper	Waterkeeper	TX
25	Flyaway Paper Straws	Business	FL	64	Save Our Shores	Nonprofit	CA
26	Our Lady Academy	School	MS	65	Delaware Sea Grant	Sea Grant	DE
27	Saint Stanislaus	School	MS	66	Louisiana State University	University	LA
28	Shedd Aquarium	Aquarium	IL	67	Mountain Watershed Association - Youghiogeny Riverkeeper	Nonprofit	PA
29	Charleston Waterkeeper	Waterkeeper	SC	68	Florida Sea Grant - UF/IFAS Extension Pinellas County	Sea Grant	FL
30	South Padre Island Sessions	Business	TX	69	Narragansett Bay NERR	NERR	RI
31	Gulf Guardians	Nonprofit	TX	70	Barataria-Terrebonne National Estuary Program	NEP	LA
32	Sun of a Beach Cleanup	Nonprofit	FL	71	Sarasota Bay Estuary Program	Nonprofit	FL
33	Keep Bolivar Beautiful	Nonprofit	TX	72	He'ela National Estuarine Research Reserve	NERR	HI
34	University of Texas Marine Science Institute	University	TX	73	North Carolina Coastal Reserve and NERR	NERR	NC
35	Mission-Aransas NERR	Governmental	TX	74	North Inlet-Winyah Bay NERR	NERR	SC
36	Jacques Cousteau NERR	NERR	NJ	75	Wildlife Club	Nonprofit	FL
37	Wells Reserve at Lautholm	NERR	ME	76	Tilamook Estuaries Partnership	NEP	OR
38	Tijuana River NERR	NERR	CA	77	Chesapeake & Coastal Service, CBNERR	NERR	MD
39	Guana Tolomato Matanzas NERR	NERR	FL	78	Morro Bay National Estuary Program	NEP	CA

**Table 1: Nurdle Patrol Partners who have received startup kits as of May 31, 2022.**

Number	Partner	Group Type	State	Number	Partner	Group Type	State
79	Waterkeeper Alliance	Nonprofit	TX	117	Castal Brigade	Nonprofit	TX
80	Healthy Gulf	Nonprofit	LA	118	Northcoast Environmental Center	Nonprofit	CA
81	Texas Marine Mammal Stranding Network	Nonprofit	TX	119	Pascagoula River Audubon Center	Nonprofit	MS
82	Seaside Sustainability	Nonprofit	MA	120	Lower Mississippi River Foundation	Nonprofit	MS
83	Siera Club, Baton Rouge Group	Nonprofit	LA	121	Kipp Delta Public Schools	Public Schools	MS
84	The Gale Academy of Environmental Science and Technology	School	FL	122	Texas Parks and Wildlife Dept	governmental	TX
85	Lake Worth Waterkeepers	Waterkeeper	FL	123	Illinois River Watch Network	Nonprofit	IL
86	Columbia Waterkeeper	Waterkeeper	OR	124	Ohio Sea Grant	governmental	OH
87	Cahaba Riverkeeper	Waterkeeper	AL	125	Harris County Precinct 2	governmental	TX
88	MTHS Eco Club	Nonprofit	WA	126	Great Lakes Aquarium	Business	MN
89	USM School of Humanities	University	MS	127	Thunder Bay NMS	governmental	MI
90	TAMUCC Green Team	University	TX	128	Upper Mississippi River NWFR	governmental	IL
91	Jean Lafitte National Historical Park ad Barataria Preserve	Nonprofit	LA	129	New York Sea Grant	Governmental	NY
92	O'ahu Waterkeeper	Waterkeeper	HI	130	Great Lakes Environmental Center, Inc.	Business	MI
93	Plastic Free Grants	Nonprofit	MS	131	Lake Huron Centre for Coastal Conservation	Nonprofit	Ontario
94	Chesapeake Bay NERR	NERR	VA	132	Stream Teams United	Nonprofit	MO
95	Friends of Lake Superior Reseve	NERR	WI	133	A Rocha USA	Nonprofit	WI
96	University of Michigan	University	MI	134	KEEP PEARLAND BEAUTIFUL	Nonprofit	TX
97	Save Our Seas Mountain Ocean Project	Nonprofit	TX	135	Wisconsin Sea Grant	Governmental	WI
98	Maryland Coastal Bays Program	Nonprofit	MD	136	Sierra Club of Missouri	Nonprofit	MO
99	University of Alaska Fairbanks	University	AK	137	Environmental Club and Aquatic Science	School Club	TX
100	University of Oregon's Charleston Marine Life Center	University	OR	138	A Greener Future	Nonprofit	Ontario
101	Shoreline Education for Awareness (SEA)	Nonprofit	OR	139	TPWD	Governmental	TX
102	MARYSMA Mar Y Sustentabilidad Para El Medio Ambiente	Eco-Tourism	MX	140	University of Houston-Clear Lake	University	TX
103	Apalachicola Nat'l Estuarine Research Reserve	NERR	FL	141	Calhoun County Extension Service	Governmental	TX
104	FWS Bandon Marsh National Wildlife Refuge	Governmental	OR	142	Boyscouts of America Troop 168	Boyscouts	TX
105	Mobile Baykeeper	Nonprofit	AL	143	Chesapeake Bay Reserve	Governmental	MD
106	Connecticut River Conservancy	Nonprofit	CT	144	Northern Ohio Surfrider Foundation	Nonprofit	OH
107	Dimock and Dimock Photography	Business	OR	145	Black River Audubon Society	Nonprofit	OH
108	Costa Cleanups	Nonprofit	TX	146	Eastern Shore Fly Fishers	Nonprofit	AL
109	Elizabeth Kratzig	Eco-tourism	FL	147	Presque Isle State Park	Governmental	PA
110	Elizabeth Kratzig	Travel	FL	148	Charleston County Public Library	Governmental	SC
111	Rio Grande Chapter of the Texas Master Naturalist	Nonprofit	TX	149	The Sustainability Institute, Environmental Conservation Corps	Nonprofit	SC
112	Mustang Island State Park	Governmental	TX	150	Hawaii Preparatory Academy	Private School	HI
113	Texas Retired Teachers Association	Nonprofit	TX	151	Marine Science Graduate Student Organization	University	TX
114	Sea Turtle Inc.	Nonprofit	TX	152	Riverside-Corona Resource Conservation District	Nonprofit	CA
115	Choctawhatchee Basin Alliance	Nonprofit	FL	153	The Community Environmental Health Lab at MDI Biological Laboratory	Laboratory	ME
116	Turtle Island Restoration Network	Nonprofit	TX	154	Washington State Community College	College	OH

**Table 2: Nurdle Patrol Partners who have received startup kits as of May 31, 2022 (continued).**

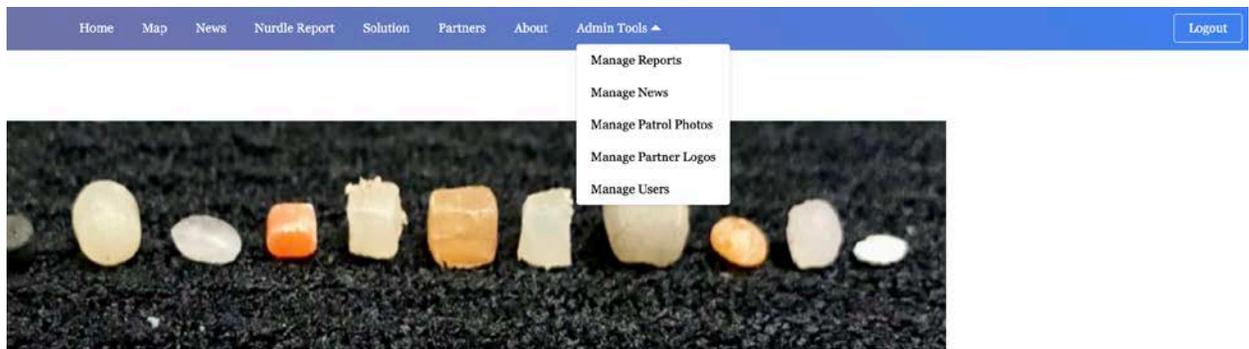
155	Centro de Investigación y de Estudios Avanzados del I.P.N. Mérida	University	MX
156	Sea Hero	Nonprofit	NJ
157	American Association of University Women.	Nonprofit	IL
158	Casteel High School	High School	AZ
159	NASA TX Space Grant Consortium UT Austin Center for Space Research	Governmental	TX
160	Lower Brazos Riverwatch	Nonprofit	TX
161	Gulf of Mexico Youth Climate Summit	Nonprofit	TX
162	City by the Sea Museum	Nonprofit	TX
163	City by the Sea Museum	Nonprofit	TX
164	Northampton Oceanography	University	PA
165	Loggerhead Marinelifelife Center	Nonprofit	FL
166	Lehigh Elementary Science club	School Club	PA
167	NAHS Oceanography Club	High School	PA
168	Bois d' Arc Chapter of Texas Master Naturalist	Governmental	TX
169	River Arts Community Arts Center	Nonprofit	VT
170	Ocean Knoll Elementary School	School Club	CA
171	Center for Reservoir and Aquatic Systems Research, Baylor University	University	TX
172	Fundación Pedro y Elena Hernández, AC	Nonprofit	MX
173	Menos Plastico En Mahahual	Nonprofit	MX
174	CICESE (Center for Scientific Research and Higher Education)	University	MX
175	El Colegio de la Frontera Sur	College	MX
176	Instituto EPOMEX	University	MX
177	Campamento Tortuguero Santander	Nonprofit	MX

*Table 3: Nurdle Patrol Partners who have received startup kits as of May 31, 2022 (continued).*

### ***Phone App Maintenance and update website***

A contract was signed with Texas A&M University-Corpus Christi Conrad Blucher Institute (CBI) in August 2021. The work by CBI includes improvement to the phone app for Nurdle Patrol by adding all data onto a map, as well as updates to the Nurdle Patrol website ([www.NurdlePatrol.org](http://www.NurdlePatrol.org)). Both versions of the phone app, Android, and iOS, were released in May 2021. The app is being downloaded and utilized by citizen scientists. The development team completed the following administrative tasks during the fourth quarter of year two:

- Manage Logo
- Manage Reports
- Manage News
- Manage Patrol Photos
- Manage Partner Logos
- Manage Users (Figure 15)



**Figure 15. Menu showing admin tools .**

The administrative features have been released and are now available on [nurdlepatrol.org](http://nurdlepatrol.org) and the old Nurdle website has been taken down and is no longer accessible on the Internet. In addition, the development team received more than a hundred partner logos and made them available on the Partners page on the website. The new Resource page is now available as well. There were 3T bug fix releases on the new Nurdle web app in response to user's bug reports.

### ***Develop Educational and promotional videos***

Videos produced from year 1 funding (2020) have been placed on the YouTube Channel that the Mission-Aransas Reserve maintains, as well as posting to various social media platforms, and added to the [NurdlePatrol.org](http://NurdlePatrol.org) website. For year 2 (2021) funding, a four-part video series featuring Diane Wilson was produced and completed. The videos will be shown at a Nurdle Patrol Film Festival being planned for September 2022.

1. Diane Bio: Diane's life growing up as a multigenerational shrimper, raising kids, living and working on the bay in Texas, and her passion with ensuring that environmental justice was being served. Towards the end of the video, Diane talks about the early days of knowing that Formosa was discharging plastic pellets into the waterways where she had raised her kids and fished for a living and knew that something had to be done.
2. Formosa Lawsuit: Diane describes the long battle with Formosa, taking samples daily for three years straight, making allies with whistle blowers that worked for Formosa, the dangers of working against Formosa in the community, and the lawsuit's ultimate decision. Diane discusses the key pieces of evidence that brought down Formosa, including utilizing Nurdle Patrol data as part of that effort.
3. Working with Nurdle Patrol: Diane and Jace talk about collecting nurdles at Formosa and at other plastic manufacturing sites, sending TCEQ complaints across the state to put nurdle releases from the many plastic manufacturing sites on the official record of the state, using the Formosa lawsuit funding to expand Nurdle Patrol efforts across the U.S., and the continued fight with Formosa. At the end they discuss "where do we go from here?".

4. Future: Where do we go from here? Diane and Jace talk about the Matagorda Bay Mitigation Trust, the \$50M in funding that was set up from the Formosa lawsuit consent decree that Diane established, what projects are being funded, where Nurdle Patrol is going in the future, and what Diane's future plans are. At the end of this video they discuss the future with plastic policy changes that have occurred in Texas and other states, federal efforts going on, and if there is going to be another series about the good things happening.

**Public Awareness**

In year 1 (2020) we created a Nurdle Patrol rack card that describes how to conduct a Nurdle Survey on the front side and on the back side it has more detailed information including where to look for nurdles, what nurdles are, and a QR Code link to NurdlePatrol.org where a training video can be found (Figure 16). We created this card in English and Spanish (Figure 17).



Figure 16. Nurdle Patrol outreach flyer front and back.



Figure 17. Spanish version of the Nurdle Patrol outreach flyer front and back.

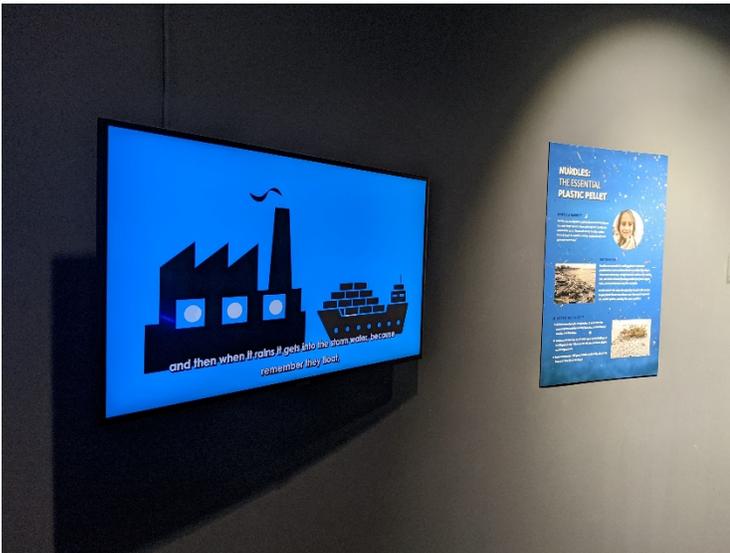
The billboard campaign was created during the first year (2020) of Nurdle Patrol and was a huge success and has been extended for the second year. One billboard was installed in

August 2021 in Portland, Texas near the Gulf Coast Growth Ventures plastics plant that is being constructed, and the second billboard was installed in Point Comfort (site 355751) in February 2022 (Figure 18).



**Figure 18. Nurdle Patrol billboard campaign.**

Nurdle Patrol is proud to have an outreach installation at the Texas State Aquarium (Figure 19). The Texas State Aquarium reached out to us in the summer of 2021 to request video footage, images of nurdles, and text on the impact of plastics in the environment. From the information we sent, the aquarium was able to create an exhibit with a video that plays continuously, and a poster display educating folks on what nurdles are, how they get into the environment, and solutions for reducing plastics getting into the ocean.



**Figure 19. Nurdle Patrol outreach installation at the Texas State Aquarium.**

## Summary

A total of 1,534 surveys were conducted during Year 2, Quarter 4 (Y2Q4) and 122,186 nurdles were removed from the beaches, riverbanks, and lake shorelines across the United States, Mexico and 7 additional countries around the world. Nurdlepatrol.org acquired 25 new partners and shipped 257 teacher kits to educators in the USA, Canada, Mexico, Puerto Rico, Costa Rica, Columbia, UK, Spain, Africa, Australia, and Thailand (Table 4). A total of 58 partner kits and 662 teacher kits were shipped during the second year of Nurdle Patrol.

Y2Q4	Number of Surveys	Nurdles Removed	New Partners	Teacher Kits
March	218	6,231	8	168
April	693	9,194	6	58
May	623	106,761	11	31
Total	1,534	122,186	25	257

*Table 4: Y2Q4 Progress Report Summary.*

## Obstacles

Currently there are no obstacles to report.