

Nurdle Patrol Y5Q1 Quarterly Report (June 1, 2024– August 31, 2024)

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Administration:

Contract Activity

- The Nurdle Patrol Expansion, Education, and Outreach was approved for funding for Year 5 (June 1, 2024 through December 31, 2025) on June 16, 2024.
- The Subaward Agreement No.: 5 UTAUS-SUB00001508 between The University of Texas at Austin and Texas A&M University Corpus Christi (TAMU-CC) was fully funded for year five for the amount of \$74,465.00 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.

Risks and Impacts: None

Project Tasks:

Hire full-time staff to organize annual meetings, 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. Her contract was renewed on June 1, 2021 for year two, June 1, 2022 for year three, June 1, 2023 for year four and June 1, 2024 for year five.

Host the Texas Plastic Pollution Symposium (TPPS)

The planning committee will meet in the fall of 2024 to discuss the 2025 7th Annual Texas Plastic Pollution Symposium logistics.

Student Scholarships

As an incentive to attract students to attend the annual Texas Plastic Pollution Symposium in person and present their research at the Texas Plastic Pollution Symposium, we plan to offer a \$500 student stipend again this year to help cover costs for travel and expenses.

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 monitoring program (Figure 1). As of August 31, 2024, 461 partners have received the starter kits.

The Nurdle Patrol Teacher Kits were also developed during the first year of Nurdle Patrol. These kits were developed based on the many requests from teachers across the United

States, wanting 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 they can have, and what solutions are out there to prevent nurdles from getting into the waterways. These interactive teacher kits include six jars of nurdles, an information card about how to conduct a nurdle survey, a presentation about nurdles, and articles describing the problem (Figure 1). An updated version of the teacher kit curriculum was completed during the third quarter of Year 2 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. We are excited to announce that new lesson plans will be created during year 5 and will be linked to our webpage. As of August 31, 2024, 2,280 teacher kits have been shipped to educators in the USA, Canada, Mexico, Puerto Rico, Costa Rica, Columbia, Cuba, UK, Spain, Africa, South Africa, Australia, Turkey, Italy, and Thailand. We estimate that each teacher would have 60 students, which means these kits could reach close to 136,800 students, making this an effective tool for educating students about plastics along the Gulf of Mexico and beyond.



Figure 1. Nurdle Patrol Startup Kit (left) and Teacher Nurdle Kit (right)

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 wins a Plastic Free Life starter kit, containing 42 single-use plastic alternatives (Figure 2).



Figure 2. Plastic Free Life Starter Kit items.

Individual Kit

Individual Kits were created during the first quarter of Year 3 to give individual citizen scientists everything they need to conduct a nurdle patrol survey on a regular basis. The kit includes a cotton zippered pouch with a Nurdle Patrol information card, a glass vial to hold the collected nurdles, a sticker and magnet (Figure 3). As of August 31, 2024 there have been 702 individual kits distributed to citizen scientists.



Figure 3. Nurdle Patrol Individual Kit.

Meet with organizations about Nurdle Patrol – Outreach

During the first quarter of Year 5, we acquired 19 new Nurdle Patrol partners and shipped 198 teacher kits (Figures 4-5; Tables 1-6). Virtual and in-person presentations and

meetings were given to promote Nurdle Patrol to new organizations, including the following since June 1, 2024:

- June 4 – June 25, 2024 – Eight Nurdle Patrol presentations and trainings were given to the Summer Science Sea Stars (Grades 3 – 4) and Tidal Waves (Grades 5-6) at UTMSI in Port Aransas, Texas.
- June 10, 2024 - Nurdle Patrol and Beachcombing booth at Our Lady of Mt Carmel Church in Portland, Texas.
- June 11, 2024 – Nurdle Patrol and Beachcombing the Coastal Bend presentation to the Billabong Surf Camp at Horace Caldwell Pier in Port Aransas, Texas.
- June 17- June 18, 2024 – Four Nurdle Patrol presentations and beach trainings workshops were given to the GWET group from Kansas at UTMSI in Port Aransas, Texas.
- June 17, 2024 – Nurdle Patrol presentation in the classroom at Flour Bluff High School in Corpus Christi, Texas.
- June 24, 2024 – Nurdle Patrol and Beachcombing presentation to the Wildlife Preserve Conservation Job Corps at the Harte Research Institute (HRI) in Corpus Christi, Texas.
- July 2, 2024 –Nurdle Patrol Zoom presentation to the Golden Triangle Sierra Club.
- July 11, 2024 – Nurdle Patrol and Beachcombing the Coastal Bend presentation to the Billabong Surf Camp at Bob Hall Pier on North Padre Island in Corpus Christi, Texas.
- July 15, 2024 – Nurdle Patrol and Beachcombing Zoom presentation to the TAMUCC STEM Program.
- July 20, 2024 – Nurdle Patrol Presentation to the Gulf Youth Climate Summit in Corpus Christi, Texas.
- July 26, 2024 – Nurdle Patrol and Beachcombing Presentation to the Marine Biologist for a Day participants at HRI in Corpus Christi, Texas.
- August 7, 2024 – Nurdle Patrol and Beachcombing in the Coastal Bend Presentation to the Pleasanton Lions Club in Pleasanton, Texas.
- August 8, 2024 – Nurdle Patrol training and Live Beachcombing to the Texas Children in Nature Network at Bob Hall Pier in Corpus Christi, Texas.
- August 24, 2024 – San Jose Nurdle Patrol training and Beachcombing event with the Gulf Coast Growth Ventures on San Jose Island, Aransas County, Texas.

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 3,000+ followers on the closed group Nurdle Patrol Facebook page.

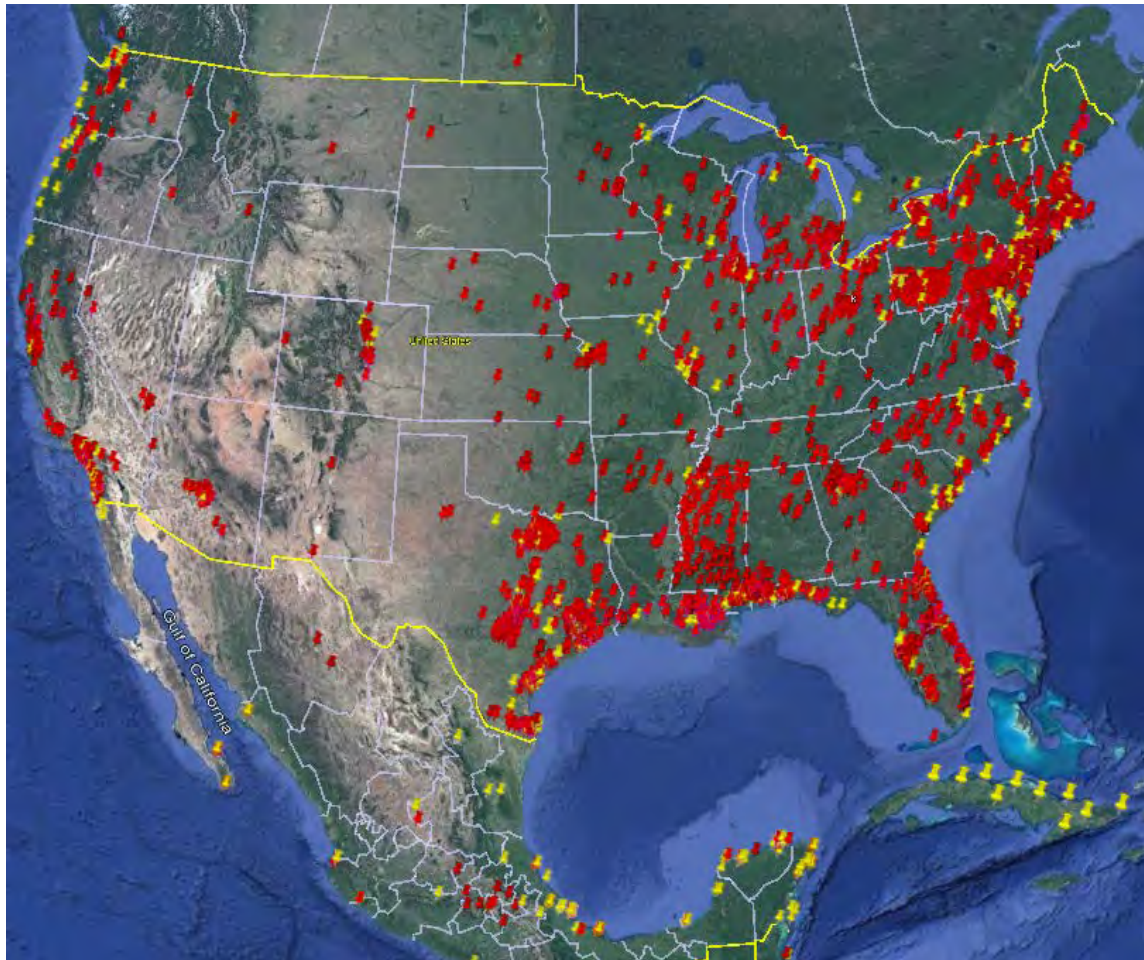


Figure 4. Nurdle Patrol Partners (yellow) and Teacher Kits (red) shipped in the continental United States, Canada, Cuba, Belize and Mexico.

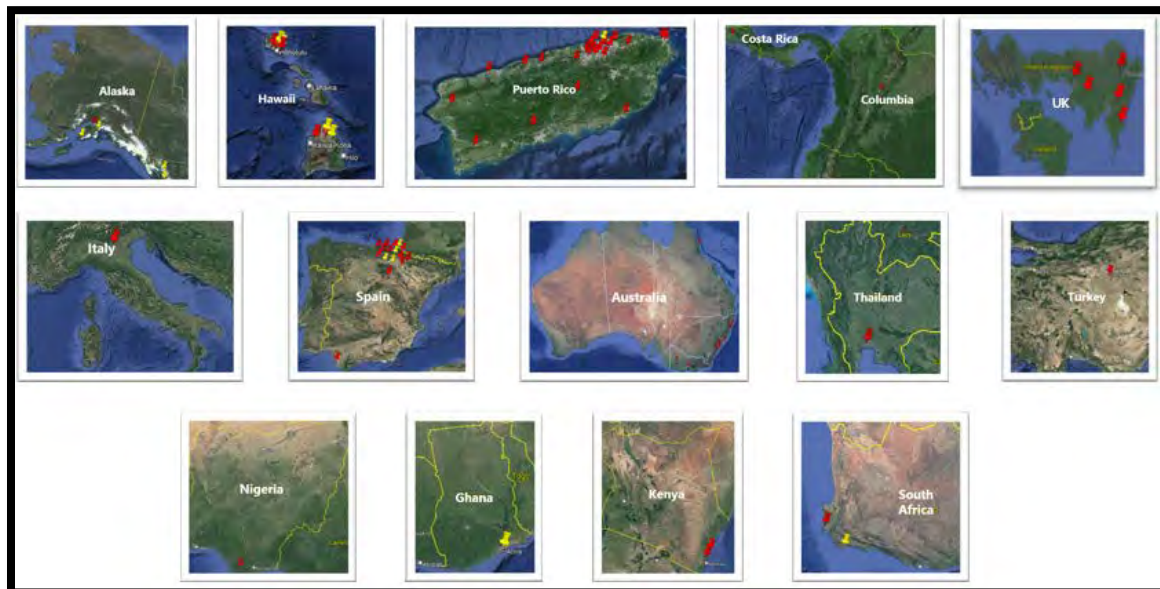


Figure 5. Nurdle Patrol Partners (yellow) and Teacher Kits (red) shipped to Alaska, Hawaii and worldwide.

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 Action Foundation	Nonprofit	FL
6	Rockport Fulton Middle school Ecology/Environmental Club	School	TX	45	Hudson River NERR	NERR	NY
7	Island R/V 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 - Youghiogheny 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'eia 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 Laudholm	NERR	ME	76	Tillamook 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 August 31, 2024.

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	Sierra 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 Reserve	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 August 31, 2024 (continued).

Number	Partner	Group Type	State	Number	Partner	Group Type	State
155	Centro de Investigación y de Estudios Avanzados del I.P.N. Mérida	University	MX	195	Urban Rivers	Nonprofit	IL
156	Sea Hero	Nonprofit	NJ	196	Girl Scout Troop 809	Nonprofit	FL
157	American Association of University Women.	Nonprofit	IL	197	North Carolina Coastal Federation	Nonprofit	NC
158	Casteel High School	High School	AZ	198	North Carolina Coastal Federation	Nonprofit	NC
159	NASA TX Space Grant Consortium UT Austin Center for Space Research	Governmental	TX	199	Kaizo Musto	School	Spain
160	Lower Brazos Riverwatch	Nonprofit	TX	200	Unity College Department of Animal Behavior	University	PA
161	Gulf of Mexico Youth Climate Summit	Nonprofit	TX	201	National Park Service	Governmental	VA
162	City by the Sea Museum	Nonprofit	TX	202	Colegio Congregacion Mita	University	PR
163	City by the Sea Museum	Nonprofit	TX	203	Crew 454	Scouts	TX
164	Northampton Oceanography	University	PA	204	Girl Scout Troop 28173	Girl Scouts	TX
165	Loggerhead Marinellife Center	Nonprofit	FL	205	The Modern Mortician	Business	VA
166	Lehigh Elementary Science club	School Club	PA	206	Sustainability is Sexy	Business	CA
167	NAHS Oceanography Club	High School	PA	207	Lucy Beckham High School	High School	SC
168	Bois d' Arc Chapter of Texas Master Naturalist	Governmental	TX	208	Squirrel Friends	Business	LA
169	River Arts Community Arts Center	Nonprofit	VT	209	Jerseyshoredetecting	Business	NJ
170	Ocean Knoll Elementary School	School Club	CA	210	Galveston Nurdle hunters	Nonprofit	TX
171	Center for Reservoir and Aquatic Systems Research, Baylor University	University	TX	211	Seaview learning	Elementary	MA
172	Fundación Pedro y Elena Hernández, AC	Nonprofit	MX	212	K.I.N.D (Kids In Nature Discovering)	Nonprofit	TX
173	Menos Plastico En Mahahual	Nonprofit	MX	213	Intermission - NAFI	Nonprofit	ME
174	CICESE (Center for Scientific Research and Higher Education)	University	MX	214	Vance Charter School Environmental Club	High School	NC
175	El Colegio de la Frontera Sur	College	MX	215	Marine beach cleanup	Nonprofit	RI
176	Instituto EPOIMEX	University	MX	216	SCCPSS	School District	GA
177	Campamento Tortuguero Santander	Nonprofit	MX	217	Cascadia Daily News	Business	VA
178	Pensacola & Perdido Bays Estuary Program	Governmental	AL	218	Price Cathedral AME Zion Youth Group	Youth Group	NC
179	Three Rivers Waterkeeper	Nonprofit	PA	219	Katie Kate's Clean up	Business	FL
180	Moderna	Pharmaceutical	MA	220	The Bubbly Moon	Business	PA
181	Adventure Aquarium	Business	NJ	221	North Carolina Wesleyan University	University	NC
182	Prince William Sound Stewardship Foundation	Nonprofit	AK	222	Coastal Carolina University	University	SC
183	Scott Township Conservancy	Nonprofit	PA	223	Gamma Zeta Chapter of Industry Pharmacists Organization (IPhO)	Business	FL
184	Big Sewickley Creek Watershed Association	Nonprofit	PA	224	Pagan Academy	Private School	MS
185	NC State University- Environmental First Year Program	University	NC	225	JACKSON COUNTY SOIL & WATER CONSERVATION DISTRICT	Governmental	CA
186	North American Marine Environment Protection Association	Nonprofit	CT	226	Helix Charter High School	High School	MD
187	Manitowoc Public Library	Library	WI	227	SMCM Marine Science Program	High School	FL
188	HAR	Real Estate	PA	228	Riviera Revived	Business	MX
189	Hawaii Pacific University, Center for Marine Debris Research	University	HI	229	NOAA-Disaster Response Center	Governmental	AL
190	Audubon Texas Bird City Texas	Nonprofit	TX	230	Texas Master Naturalist Galveston Bay Chapter	Governmental	TX
191	toeswater	Nonprofit	IL	231	Universidad Nacional Autonoma de México	University	MX
192	Coast Episcopal School	Private School	MS	232	Fundacion Rescate Rapaz	Nonprofit	MX
193	Cimarron Middle School	Middle School	CO	233	Eco.oiland Tizimín	Nonprofit	MX
194	ClimbPDX	Nonprofit	OR	234-238	Cuba	Nonprofit	Cuba

Table 3: Nurdle Patrol Partners who have received startup kits as of August 31, 2024 (continued).

Number	Partner	Group Type	State	Number	Partner	Group Type	State
239	LL Corral	Business	FL	293	Chaminade College Preparatory	University	CA
240	StopUsingPlasticBags	Non Profit	FL	294	Polk County Recycling & Beautification	Non Profit	TX
241	Wright Charter	Private School	CA	295	Navarre Beach Marine Science Station	University	FL
242	The University of Oregon	University	Or	296	Girl Scouts of Greater Mississippi Troop 4661	Girl Scouts	MS
243	Douglas County Conservation District	Governmental	CO	297	Arniaton Tackle	Business	St. Africa
244	AmeriCorps	Governmental	NJ	298	Sol Margin Fishing & Conservation Foundation	Non Profit	FL
245	Houston Zoo	Non Profit	TX	299	Kailua Elementary (a NOAA Ocean Guardian School)	Elem. School	HI
246	PCHS Green Environmental Club	High School	MS	300	Gulf Breeze High School	High School	FL
247	Elk River Yacht Club	Business	MD	301	Sheridan Lion's Club	Non Profit	TX
248	Friendwood Junior High School National Junior Honors Society	Junior High	TX	302	Kent Island Beach Cleanups	Non Profit	MD
249	Sea Camp - TAMUG	Non Profit	TX	303	Helix Charter High School	High School	CA
250	Tobacco Cove Marine Station Concordia University Nebraska	Non Profit	Belize	304	Reciclemos y Ayudemos	Recycle Center	MX
251	Gall and Gannon ocean protection group	Non Profit	CA	305	Asociacion de Scouts de México, SEEDNEE	Scouts	MX
252	Saluki Reefers- SIU Marine Bio Club	University	IL	306	Ecosociety MX	Non Profit	MX
253	Trash4Tokens	Non Profit	CA	307	Apiyayus	Business	MX
254	Instituto de Ciencias Marinas y Pesquerías	University	MX	308	Vida milenaria, campamento tortuguero	NGO	MX
255	Instituto de Ciencias Marinas y Pesquerías	University	MX	309	Bird & Nature	NGO	MX
256	Girl Scouts	Non Profit	TX	310	Instituto continental	University	MX
257	Abson Academy	Private School	ME	311	Ocean Science Explorer	NGO	MX
258	Vassar Club of Texas	Non Profit	TX	312	Colegio de educación profesional técnica para el estado de Veracruz	College	MX
259	Charleston Charter School for Math and Science	Charter School	SC	313	TRASTORNA	Business	MX
260	Argosy Adventures	Influencer	TX	314	Colectivo Feniron	Business	MX
261	Southold Jr/Sr High School Environmental Club	Public School	NY	315	Naturales más nosotros	NGO	MX
262	Coalition of Community Organizations	Non Profit	TX	316	Iniciativa Vallarta	NGO	MX
263	Port of Houston Partners in Maritime Education	Business	TX	317	Campamento Tortuguero Las Barras	Non Profit	MX
264	4-H Natural Resources	Non Profit	TX	318	Grupo de guías turísticas Ecoave	Non Profit	MX
265	Antonio Ilustrexa	Non Profit	Spain	319	Campamento Tortuguero Barra del Tordo	Non Profit	MX
266	Elk County Catholic High School Pennsylvania Envirothon Teams	High School	PA	320	Campamento Tortuguero Rancho Nuevo CONANP	Non Profit	MX
267	Plastic Punch	Non Profit	Ghana	321	TRASTORNA	Business	MX
268	San Jacinto Girl Scouts Troop 132372	Girl Scouts	TX	322	Monkey Fish Veracruz	Business	MX
269	Zarautzpuntura	Business	Spain	323	Centro de Estudios Superiores de Veracruz, CESUVER	College	MX
270	Playa Platino Río Lagartos	Non Profit	MX	324	OCTOPLUS+	Business	MX
271	Mosacu	Non Profit	MX	325-333	Instituto de Ciencias Marinas y Pesquerías	College	MX
272	Colordaz flora y fauna	Non Profit	MX	334	Lorena Violeta León Denis	Individual	MX
273	Universidad Autónoma de México. Instituto de Ciencias del Mar y Limn	University	MX	335	Jefatura Guardavidas Veracruz	Individual	MX
274-278	Cuba	Non Profit	Cuba	336	Greenbow	Business	MX
279-283	Instituto de Ciencias Marinas y Pesquerías	University	MX	337	Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE)	College	MX
284	UC Climate Stewards	Non Profit	CA	338	CETY'S Universidad	University	MX
285	Jarequi	Influencer	Spain	339	Proyecto Fronterizo de Educación Ambiental A.C	College	MX
286	Freedom Boat Club	Non Profit	FL	340	Alteraciones al Ambiente por Actividad del Hombre (ALTERAAH)	NGO	MX
287	Buffalo Maritime Center	Non Profit	NY	341	Grupo Baja de la Climate Science Alliance	NGO	MX
288	Glaszroots	Non Profit	LA	342	Arroyo Vivo, Modelo de remediación y reciclaje inclusivo en diáritotoc e Iniciativa Campana-Alatamira	NGO	MX
289	UGA Marine Extension and Georgia Sea Grant	Governmental	GA	343	José hoil	Individual	MX
290	Marine Biology Class (BIOL-3311) Fall 2023	High School	TX	344	Kilómetro Uno	NGO	MX
291	Friends of the San Juan	Non Profit	WA	345	Limpieemos Yucatán Fundación GMA	NGO	MX
292	Coastal Cadet Club	Non Profit	TX				

Table 4: Nurdle Patrol Partners who have received startup kits as of August 31, 2024 (continued).

Number	Partner	Group Type	State	Number	Partner	Group Type	State
346	Texas Children in Nature Network, TCiNN	Non Profit	Tx	379	CIDIR, Sinaloa	Governmental	MX
347	Pershing Middle School	Jr. High	Tx	380	Los Arrecifes, Campamento Tortuguero	NGO	MX
348	Girl Scouts Troop 4645 SU 603	Girl Scouts	Mx	381	El Salado, Campamento Tortuguero	NGO	MX
349	Murcia Academy	Private School	Tx	382	Capulteolt, Campamento Tortuguero	NGO	MX
350	Environmental Justice Association	NonProfit	Tx	383	Punta Puntilla, Campamento Tortuguero	NGO	MX
351	Cheatham fire	Business	Tx	384	Agua Dulce, Campamento Tortuguero	NGO	MX
352	Millennium High School	High School	AZ	385	AMCOSK AC	Business	MX
353	St. John's School	Private School	Tx	386	Campamento Tortuguero Las Barras	NGO	MX
354	Parley mexico Parley for the Oceans	NonProfit	MX	387	CREMA UAECBS	University	MX
355	Facultad de nutrición, Universidad Veracruzana	University	MX	388	Arrecife Alacranes	National Park	MX
356	Facultad de Medicina Región Veracruz, Universidad Veracruzana	University	MX	389	CASA	Business	Spain
357	Grupo Ambiental Profauna A.C	NGO	MX	390	Parker Beach Patrol	Group	TX
358	Somos Más Decididos A.C.	NGO	MX	391	Anna Simmons	University	OR
359	Colegio de ingenieros de solidaridad DGD	College	MX	392	Irvington Middle School	Middle School	NY
360	CVICTM (Centro Veracruzano de Investigación y Conservación de la Tortuga)	NGO	MX	393	Laguna Ocean Foundation	NonProfit	CA
361	Tortugario Manzanillo	NGO	MX	394	Oystercatchers Searchers	Group	MD
362	Guardería ambiental Cabo Pulmo, Parque Nacional Cabo Pulmo	National Park	MX	395	Coastal Crusaders Florida	NonProfit	FL
363	ASUPMATOMA, AC, Campamento Tortuguero	NGO	MX	396	Beaver County Marcellus Awareness Community (BCMAMC)	NonProfit	PA
364	Campamento Morro Águta, Campamento Tortuguero	NGO	MX	397	Girl Scouts	Girl Scouts	TX
365	UAEC	University	MX	398	TPWD Caddo Lake State Park	Governmental	TX
366	Campamento Tortuguero Lechuguilas y PNSAV	NGO	MX	399	Georgetown Conservation Commission	NonProfit	NH
367	Ayuntamiento de Solidaridad	NGO	MX	400	Surfrider Foundation Conservation Commission	NonProfit	VA
368	Reserva de la Biosfera Los Tuxtlas	Reserva	MX	401	Surfrider Foundation Club	NonProfit	VA
369	Peña Hermosa, Campamento Tortuguero	NGO	MX	402	Neep Naps First year scientific group (seminar group)	Science Group	TX
370	Zapotitlán, Campamento Tortuguero	NGO	MX	403	Somers/Herman/Wigg Family	Group	MO
371	Biodiversidad y Cultura Ambiental	NGO	MX	404	Osprey Tours	Business	MX
372	CONANP/PNSAV	National Park	MX	405	El Centro de Protección y Conservación de la Tortuga Marina "ECOMAR-UAEC"	NonProfit	MX
373	Campamento tortuguero Bahía de Chacahua	NGO	MX	406	Facultad Ecología Marina	NonProfit	MX
374	Campamento CONANP	National Park	MX	407	Kahal Bajasur Bioturismo	Business	MX
375	Kanan Áak	NGO	MX	408	Gym shark	Business	MX
376	Osprey Tours	Business	MX	409	Holtan	Business	MX
377	NGO	NGO	MX	410	Colectivo Manglares	NonProfit	MX
378	Área de Protección de Flora y Fauna Laguna de Términos -CONANP	Governmental	MX	411	Surfrider Foundation North Shore MN	NonProfit	MN

Table 5: Nurdle Patrol Partners who have received startup kits as of August 31, 2024 (continued).

412	Northern Ohio Chapter Surfrider Foundation	NonProfit	OH	437	Joel Barlow High School	High School	CT
413	Salish Surf Beach Crew	NonProfit	OR	438	Missouri River Relief	NonProfit	MO
414	The Honeycomb Project	NonProfit	IL	439	Oceana	NonProfit	DC
415	Maverick Fishing Club	NonProfit	TX	440	San Diego Coastkeeper	NonProfit	CA
416	Marine Conservation Network	LLC	CA	441	Washington CoastSavers	NonProfit	WA
417	Interact Club- Westchester Academy for International Studies	Non Profit	TX	442	Oregon Coast Aquarium	Aquarium	OR
418	Environment Georgia	Charter School	GA	443	Move Past Plastic, (MPP)	NonProfit	PA
419	Grays Harbor Surfrider	NonProfit	WA	444	Riverkeeper	NonProfit	NY
420	Community Resource Center of Stanwood-Camano	NonProfit	WA	445	Inspirate Earth	NonProfit	CA
421	The Science Exchange	NonProfit	MX	446	Marine Endangerment Club	NonProfit	CA
422	Girl Scout Troop 979	Girl Scouts	TX	447	Rainier Commercial Cleaning Services	Business	WA
423	The Community Nook Inc.	Non Profit	FL	448	Ocean First Institute	NGO	CO
424	Facultad de Ecología Marina UA Gro	University	MX	449	Beaches Go Green	NonProfit	FL
425	GROBIOS AC	NGO	MX	450	Beach Bettys	Business	TX
426	Parque Estatal Estero el Salado	Reserve	MX	451	The Out-of-Door Academy	Private School	FL
427	Dirección de ecología y medios ambiente	Governmental	MX	452	Ecology Project International	NonProfit	MT
428	Niños y Crías A.C.	NGO	MX	453	Mountain Vista Governor's School	Private School	VA
429	Playa Norte	Volunteers	MX	454	Olney High School Biology Club	Biology Club	TX
430	Isla del Carmen	Volunteers	MX	455	Aquatic Science Club	Aquatic Club	TX
431	Isla Matamoros	Volunteers	MX	456	ECD-BAHIA	NGO	MX
432	Chenkan	Volunteers	MX	457	Grupo Lomas	NGO	MX
433	Sabaneguy	Volunteers	MX	458	Grupo Lomas	NGO	MX
434	Chacahito/Mic alango	Volunteers	MX	459	Grupo Lomas	NGO	MX
435	voluntario rio lagartos y coloradas	Reserve	MX	460	Eco- Bahía	NGO	MX
436	Shark Gym	Business	MX	461	Grupo Scout 11 Baluarte	Boy Scouts	MX

Table 6: Nurdle Patrol Partners who have received startup kits as of August 31, 2024 (continued).

Phone App Maintenance and update website

The subaward agreement between TAMU-CC Conrad Blucher Institute (CBI) and UTMSI for year five was fully funded on September 26, 2024. 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). Both versions of the original phone app, Android, and iOS, were released in May 2021.

Overview:

During the first quarter of year five the CBI Nurdle Patrol team initiated the design phase for a new user interface to enhance the website's functionality. Efforts focused on modernizing the layout and improving user interaction to foster greater engagement.

CBI Nurdle Patrol Team Updates

- **Intern Developer:**
 - CBI welcomed a summer intern developer (Rodrigo Davila Castillo) to their team. Rodrigo's primary focus was the redevelopment of the website's map page, a crucial tool for visualizing data collection.
 - **Obstacle:** The development faced initial delays due to an administrative issue regarding subaward, which affected the intern's compensation. This issue was eventually resolved.
- **Current Website and Mobile App Enhancements:**
 - **Software Bug Fixes:** Routine bug fixes were implemented to ensure the seamless operation of the current website.
 - **Library Updates:** Updates were made to the libraries of the mobile apps to comply with the latest requirements of the Android Google Play Store and the Apple App Store.
- **New User Interface Development:**
 - **New Website Technology:** The upcoming version of the website will incorporate the latest software technologies, including enhanced support for Search Engine Optimization. Once deployed, these improvements are designed to boost the visibility of the nurdlepatrol.org website on search engines like Google and Bing, enhancing its online presence.
 - **New Data Design and New Map Page Design: (Table 7; Figure 6).**

PATROL ID	USER	ORGANIZATION	AMOUNT COLLECTED	STANDARDIZED AMOUNT COLLECTED	VOLUNTEERS	COLLECTING TIME	LONGITUDE	LATITUDE	PATROL DATE	SUBMISSION DATE	NOTES	COUNTRY
8703	Andy Avila	Jefatura de guardavientos	82	31	1	20	-86.125849	19.194652	2023-10-19	2023-11-06		Mexico
8702	Andy Avila	Jefatura de guardavientos	124	42	1	30	-86.12584	19.194713	2023-10-18	2023-11-06		Mexico
8701	Andy Avila	Jefatura de guardavientos	255	67	2	20	-86.128227	19.196884	2023-10-19	2023-11-06		Mexico
8700	Yuzemila Helguera	Centro de Estudios Ambientales de Cienfuegos	10	6	1	10	-84.7663	23.835	2023-10-31	2023-11-03		Cuba
8699	Nicole Henderson	A Greener Future	154	33	1	60	-78.665182	43.887607	2023-10-30	2023-11-02		Canada
8698	Kuba Doyle	Flour Bluff ISD	500	20	21	10	-87.210286	27.581301	2023-10-30	2023-11-01	It was windy and cold with a	United States

Table 7: New data table design.

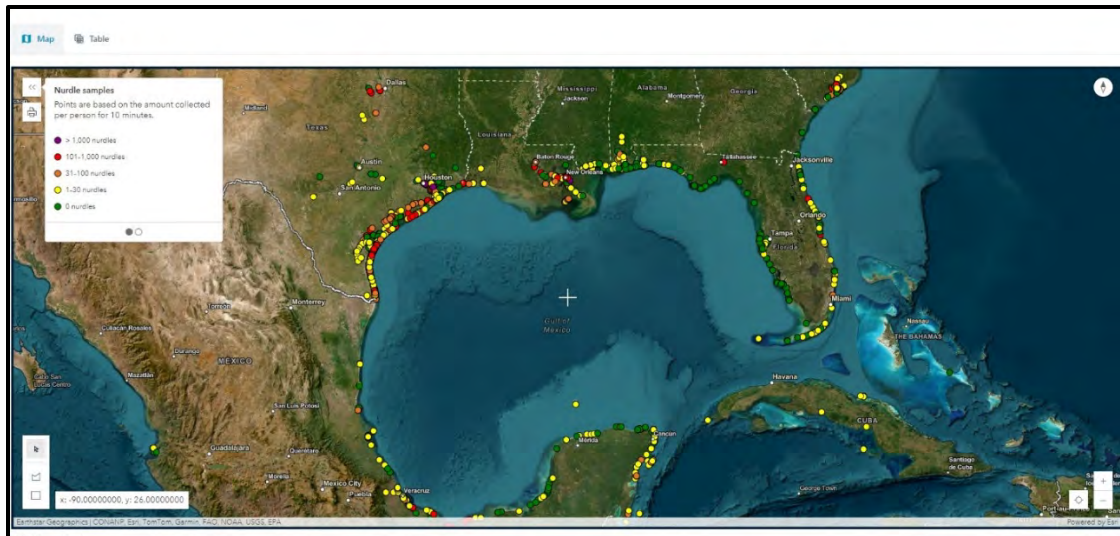


Figure 6. New map design.

- **Upcoming plans for the second quarter:**
 - **Continued Website Development:** The team will focus on enhancing the remaining website pages to ensure a cohesive user experience across all platforms.
 - **Ongoing Maintenance:** Regular updates and maintenance of the existing website and mobile apps will continue to be a priority to ensure operational stability and security.

Coordinate Nurdle Patrol Program

- **Data Management and Quality Assurance:**
HRI has been actively involved in monitoring and ensuring the quality of data entered into the NurdlePatrol.org portal. Key issues include incorrect survey locations, inaccurate survey durations, and duplicate entries. To address these issues, HRI has implemented a rigorous daily monitoring process. When errors are identified, volunteers are contacted via email and guided on proper data entry procedures. This proactive approach aims to maintain high data integrity and improve overall quality.
- **Public Engagement and Presentations:**
HRI gave 16 presentations during the first quarter of year five about Nurdle Patrol at various venues, including at festivals, schools, community groups, and via Zoom. These presentations are designed to educate the public and researchers, promote the citizen science project, and attract new partners. The consistent outreach efforts contribute significantly to raising awareness and support for the Nurdle Patrol initiative.
- **Partnership Expansion:**
HRI's efforts to enhance partnerships include working closely with UTMSI on the distribution of 19 new startup kits and 198 teacher kits, which are crucial for expanding the program's reach. By leveraging the program's growing visibility, HRI aims to further increase the number of partners and strengthen collaborative efforts in the citizen science project.

Public Awareness

The Nurdle Patrol rack card continues to be printed and 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. We created this card in English and Spanish (Figures 7 & 8).



Figure 7. Nurdle Patrol outreach flyer front and back.



Figure 8. 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 into the third year with one near the Formosa Plastics Plant in Point Comfort, Tx (site 355751) in February 2022 and will remain at this site until February 2025 (Figure 9).



Figure 9. Nurdle Patrol billboard campaign.

The Port Aransas Wildlife magazine highlights the diverse wildlife that can be found in Port Aransas and surrounding areas. A large portion of the earnings from the advertisers is donated to organizations that benefit wildlife in Port Aransas such as the Amos Rehabilitation Keep (ARK) for their dedication to helping sick and injured wildlife and the Carolyn Grosse Conservation Fund which supports the Port Aransas Nature Preserve. Nurdle Patrol has a full-page ad (pg. 25) in the new 2024-2025 edition (Figure 10).

Figure 10. Nurdle Patrol advertisement in the Port Aransas Wildlife Magazine.

Nurdle Patrol is proud to have a permanent outreach installation at the Texas State Aquarium (Figure 11). 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 11. Nurdle Patrol outreach installation at the Texas State Aquarium.

Summary

A total of 951 surveys were conducted during Y5Q1 and 109,291 nurdles were removed from the beaches, riverbanks, and lake shorelines across the United States, Mexico and additional countries worldwide. Nurdlepatrol.org acquired 19 new partners and shipped 198 teacher kits to educators in the USA, Canada, Mexico, Puerto Rico, Costa Rica, Columbia, UK, Spain, Africa, Australia, Turkey, Italy, Spain and Thailand. Forty-four individual kits were handed out during this quarter (Table 8).

Y5Q1	Number of Surveys	Nurdles Removed	New Partners	Teacher Kits	Individual Kits
June	609	6,536	8	79	44
July	257	4,484	3	35	0
August	85	98,271	8	84	0
Total	951	109,291	19	198	44

Table 8. Y5Q1 Summary.

Obstacles

- The Subaward Agreement between UTMSI and TAMU-CC for Year 5 was delayed because UTA experienced personnel turnover in the department that handles the execution and distribution of subaward agreements. It was fully funded September 26, 2024.