Developing Implementation Resources of the Coastal NPS Pollution Control Program for the Texas Coastal Management Program

October 2022 | Report: 2022-02

The Meadows Center for Water and the Environment
Texas State University

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THE MEADOWS CENTER
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TEXAS STATE UNIVERSITY

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WELDER FLATS AT SUNSET IN SAN ANTONIO BAY, MATAGORDA ISLAND, TEXAS
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EXECUTIVE SUMMARY

The purpose of this project was to continue building on previous efforts of the Clean Coast Texas (CCT) program with broad outreach and direct engagement to support implementation of the Guidance for Sustainable Stormwater Drainage on the Texas Coast (Sustainable Stormwater Manual) by coastal communities. This project included the refinement and delivery of online educational modules, the development of additional education and outreach materials, and targeted engagement with local municipalities and regional entities. As ongoing Watershed Protection Plans and Total Maximum Daily Loads are valuable initiatives in the implementation of the Texas Coastal Nonpoint Source Pollution Control Program, Texas State University (TXSTATE) coordinated with these planning efforts to demonstrate the Sustainable Stormwater Manual, coastal stormwater pollution management, and community resiliency tools. A considerable focus of this effort was the addition of a Coastal Outreach Specialist and partnerships with environmental education specialists in the private sector to develop and communicate educational tools and Clean Coast Texas resources. Project tasks are described below with a completion date of 9/30/2022; however, a continuation of these efforts is expected to expand and enhance the project deliverables identified herein with additional resources in the future. This project continued to provide web-based resources, written materials, and other resources to conduct engagement activities in a manner suitable for stakeholders.

PROJECT TASKS

Task 1: Module Refinement

OBJECTIVE

TXSTATE developed three online educational modules serving as an introduction and user guide for the Sustainable Stormwater Manual. The modules are accessible online (https://cleancoast.texas.gov/) and include videos, interactive content, quizzes, and links to additional resources. The modules are designed to satisfy continuing education requirements for professional licenses and a variety of other programs. Under this task, TXSTATE will invite partners to complete the modules through direct engagement opportunities (workshops/meetings/webinars) and electronic communications (email/website/social media platforms).

Feedback from participants will be documented for analysis and refinement of the online module format and content. Further, internal processes and databases for tracking participation, enhancing user experience, and documenting continuing education units will be developed and refined. TXSTATE issued a subgrant to WaterPR to refine and enhance educational module content and delivery. TXSTATE will coordinate scheduling and delivery of the online modules and issuance of education credits with the General Land Office, Coastal Resiliency Master Plan advisory committee, and other coastal programs to maximize program efficiency and effectiveness. TXSTATE is responsible for ensuring all program documents conform to professional standards related to document control and technical writing, including correct formatting, grammar, citations, graphics, figures, etc.

DELIVERABLES

- WaterPR subgrant-- See Appendix A
- Advertise and distribute online modules through direct and electronic communication
- Documentation and summary feedback from online module participants
    - Refine and enhance module content to improve user experience – See Appendix B
- Expand availability and function of continuing education credits for end users
- Documentation of internal process and database for tracking module participation and continuing education credits
- Documentation of coordination with the General Land Office and Coastal Resiliency Master Plan advisory committee on module refinement and enhancement

Task 2: Development and Delivery of Education and Outreach Materials

OBJECTIVE

TXSTATE has served as the coordinating entity with the General Land Office in the Clean Coast Texas launch. Working in collaboration with other academic institutions, scientists, educators, and engineers, Clean Coast Texas works with communities throughout the Texas Coastal Zone to provide capacity and best-fit solutions for addressing water quality concerns, habitat loss, erosion, flood mitigation, and resiliency. A critical need to provide additional education and outreach for stakeholders and community leaders has been identified in the early stages of program rollout, particularly as these efforts relate to the adoption of best management practices identified in the Sustainable Stormwater Manual. TXSTATE led Clean Coast Texas stakeholder planning efforts with community leaders including elected officials, city/county staff, educators, and citizens in six coastal communities to identify and define the highest priority outreach and educational needs (12 total meetings estimated). Stakeholder planning efforts will

be coordinated with the General Land Office and Coastal Resiliency Master Plan advisory committee. To maintain consistency of findings and next steps, an informational form will be developed as a framework for structuring meetings, stakeholder feedback, and data collection. Stakeholder planning effort participants should have expert knowledge of:

- public education and messaging
- local political issues and history
- local regulations including planning, zoning, ordinances, etc.
- local business community
- local volunteer groups

TXSTATE issued a subgrant to WaterPR to produce three concise and captivating videos to be available and distributed to communities throughout the Texas Coastal Zone. TXSTATE will coordinate with the General Land Office to review video storyboards and scripts and to make videos available on the website (https://cleancoast.texas.gov/) and social media. The videos will be professionally produced and incorporate subject matter experts and local stakeholders to communicate water quality challenges, efforts, goals, and successes. Partnerships with Clean Coast Texas will be highlighted. Videos will be designed for a diverse audience and encourage community efforts in the upper, middle, and lower coast.

TXSTATE developed Clean Coast Texas educational signage to promote, enhance, and educate the public in cooperating communities throughout the Texas Coastal Zone. Signage will focus on water quality and name recognition for Clean Coast Texas. Both the General Land Office and Coast Resiliency Master Plan advisory committee will have an opportunity to review, revise, and approve signage for messaging and branding consistency prior to printing. TXSTATE will seek local input for sizing, location, and installation requirements. It is anticipated that signs will be produced in two or more sizes ranging from 12” X 18” to 24” X 36”. All signs will include a QR code linking to additional information available through the https://cleancoast.texas.gov/ website. Spanish versions of signage will be made available in either print or digital format based on stakeholder feedback.

This project will design and print 50 signs. TXSTATE will coordinate with local jurisdictions to complete the final installation in public parks and beaches. This project will provide partial funding for installation assistance and/or hardware; however, it is the expectation that local jurisdictions will complete the final installation of signage.

TXSTATE will enhance their stakeholder database by integrating an existing smartphone application (REMIND) to promote education and outreach tools and resources, announce upcoming meetings and events, and facilitate feedback and coordination efforts among stakeholders. TXSTATE will provide documentation of website updates quarterly.

DELIVERABLES

- WaterPR subgrant – See Appendix A
- Draft and Final Informational Form for stakeholder planning efforts – See Appendix C
- Agendas, sign-in sheets, and meeting notes from stakeholder planning efforts
- Completed Informational Forms for each community (6 total)
- Draft and Final scripts and/or storyboards for three educational videos – See Appendix D
- Documentation of three educational videos available on the project website and social media platforms
- Draft and final design for 50 educational signs (English and Spanish) - See Appendix E
- Documentation of coordination efforts with communities to install educational signs

- Documentation of stakeholder database integration with smartphone application
- Updated communications log and contact list
- Quarterly documentation of website updates
- Documentation of coordination with the General Land Office and Coastal Resiliency Master Plan advisory committee

Task 3: Reporting

OBJECTIVE

TXSTATE will maintain regular communication with GLO staff through phone, e-mail, meetings, and monthly reports. Monthly status report meetings may be scheduled, and occasional work group meetings will occur with GLO and/or networked agencies. TXSTATE will inform the GLO of intent to communicate with agencies prior to doing so. The GLO will have the opportunity to participate in all meetings related to implementing the scope of work. All documents, data, and resources will be made available in an electronic format for draft and final deliverables unless otherwise approved by the GLO. Materials and resources developed under this contract will not be used for any other purpose without the written consent and approval of the GLO. TXSTATE is responsible for obtaining all documents, data, and resources needed to complete project tasks. TXSTATE will prepare and submit all reports, deliverables, and requests for reimbursement as required in the contract, to CMPReceipts@GLO.TEXAS.GOV. Quarterly progress reports and requests for reimbursement are due to CMPReceipts@GLO.TEXAS.GOV on the 10th day of every quarter of the year starting with January 10, 2022. TXSTATE will prepare a Final Report at the completion of this project. The report will include a summary of project deliverables, key findings, and recommended next steps.

DELIVERABLES

- Quarterly progress reports and reimbursement requests.
- Draft final report (60 days prior to completion of contract)
- Final report

CORPUS CHRISTI ©VICKIE KLINKHAMMER, FLICKR

RESULTS

Task 1: Module Refinement

OBSERVATIONS

WaterPR received a subgrant from TXSTATE to develop three online modules based on the "Guidance for Sustainable Stormwater Drainage on the Texas Coast" manual developed by the GLO in a previous iteration of this project. The goal of these modules was to provide a succinct and general overview of the manual for industry professionals, city officials, academics, or concerned citizens. The original modules were approved for use by the GLO but required further refinement and editing to ensure the content was consistent with the manual and offered a user-friendly experience. An internal review of the module content was conducted by TXSTATE staff and sent back to WaterPR for minor revisions. Most changes were small grammatical fixes, suggestions to change images and graphics, adding image descriptions to increase accessibility, and changes to the layout of the modules to improve the overall flow of information. Edits were also made to the quizzes embedded in the modules, as well as a platform change to make sure that the quiz would be accessible by TXSTATE staff after WaterPR completed the final edits and the end of the contract period.

A goal defined in the project scope of work was to provide continuing education units (CEUs) for industry professionals who complete the modules and the quizzes. TXSTATE staff worked to identify professional organizations and CEU-granting entities whose members would benefit from the content presented in the manual and modules. The following organizations and entities were identified, and inquiries on their processes on how they award CEUs were made to ensure that the modules would most likely be accepted: The Texas Board of Professional Engineers and Land Surveyors, the American Planning Association, Texas Master Naturalists, and the Texas Floodplain Management Association.

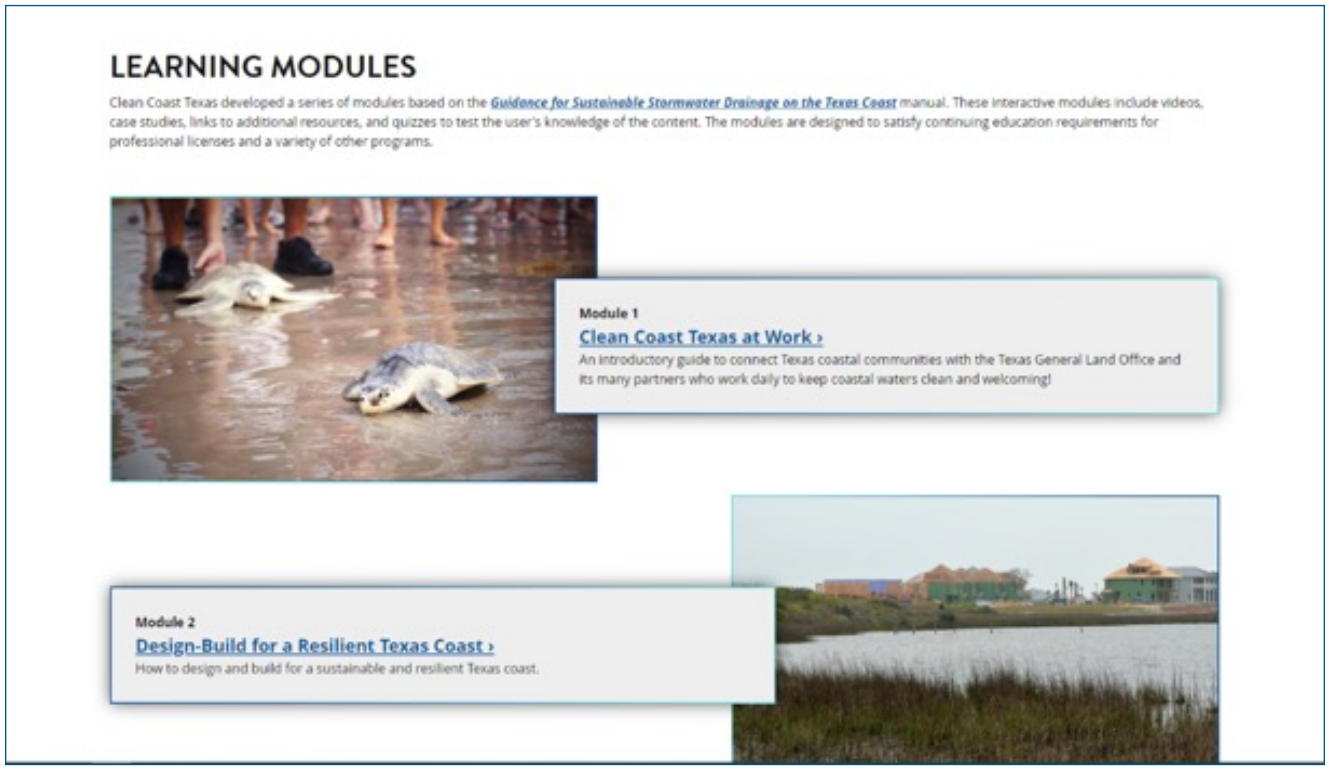


FIGURE 1: THE LANDING PAGE ON THE NEW "LEARN" SECTION OF THE CLEAN COAST TEXAS SITE

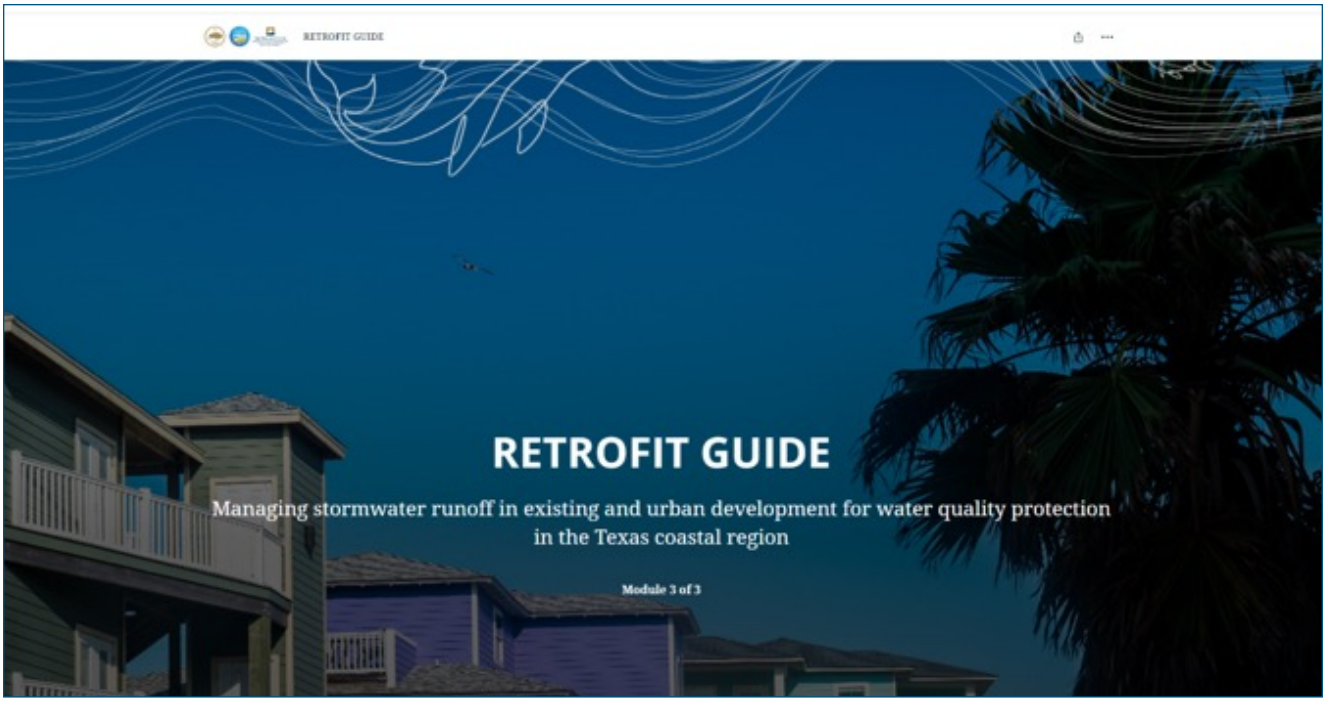


FIGURE 2: THE BEGINNING OF MODULE 3, "RETROFIT GUIDE"

The modules were advertised via direct email to select engineers for feedback, and a newsletter announcement was distributed to the coastal email list (Appendix B) The iterative process of module refinement exceeded our time expectations as extenuating circumstances delayed WaterPR. Though modules were released prior to the contract closing, there are currently no records of the entire module series being completed by an individual. We anticipate that, with time, the modules will be completed, and continuing education credits will be issued. To that end, TXSTATE has created a system to track the total number of views the modules have received and the individuals who completed all of the quizzes embedded within the modules. The links to the modules are below.

- Module 1: Clean Coast Texas at Work
- Module 2: Design-Build for a Resilient Texas Coast
- Module 3: Retrofit Guide

Task 2: Education and Outreach

INFORMATIONAL FORM

The Informational Form described in Task 2 was developed as an online survey that was distributed to local leaders along the Texas Coast. The survey's purpose was to gain perspective on issues surrounding coastal water quality, local barriers to improving water quality, and how important information is typically distributed to both residents and visitors in their communities. The survey was also designed with the intent to use the data collected as guidance for the educational signage (deliverable in Task 2) to ensure that relevant information would be communicated.

After an individual completed the survey, a follow-up meeting was scheduled to further discuss water quality issues that existed within their communities. Other topics discussed in the meetings included what types of communication (social media, emails, print media, etc.) received the greatest amount of interaction and positive feedback, the overall culture of their community, and the differences in concerns over water quality between permanent residents and seasonal visitors. During these meetings,

TXSTATE had the opportunity to ask if the survey respondent would be interested in participating in the educational videos by providing a video interview. A summary of survey results follows.

Survey results showed that stakeholders' top concerns were stormwater runoff, impacts from development, and bacteria or septic system pollution (Figure 3).

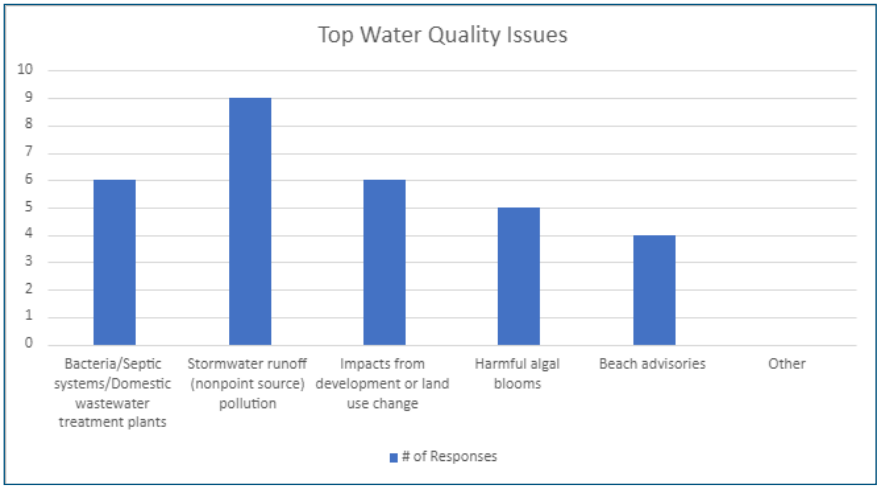


FIGURE 3: MOST RELEVANT WATER QUALITY ISSUES

We asked participants what barriers may exist to improve water quality in their community (Question 7 – Appendix C). Respondents identified lack of funding, lack of public awareness, and lack of technical expertise as major barriers to improving water quality (Figure 4).

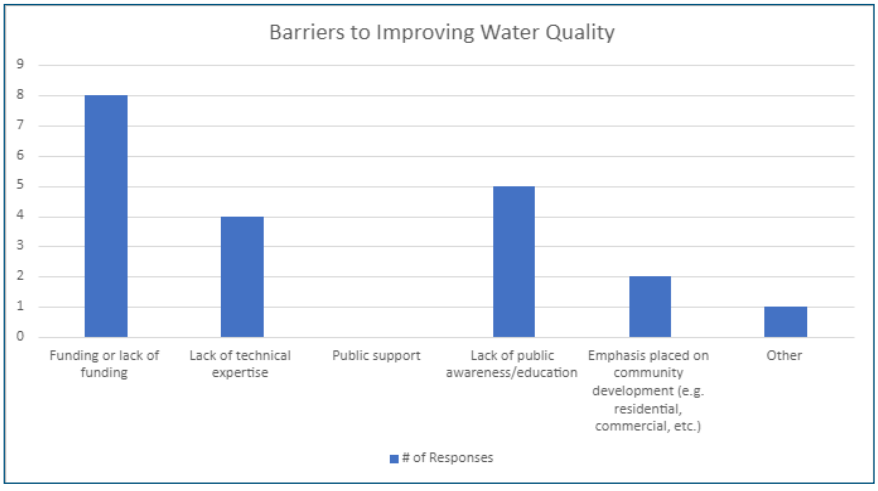


FIGURE 4: BARRIERS TO IMPROVING WATER QUALITY

One respondent chose the "Other" option and stated the lack of municipal interest was one of the main barriers to improving water quality.

We asked participants to identify which activities members of their community participate in the most frequently (Question 10 – Appendix C). Fishing and recreational swimming were the most popular among the respondents (Figure 5). The respondents selected "Other" as an option to emphasize that their community participates in all of the activities listed and uses greenbelts along streams.

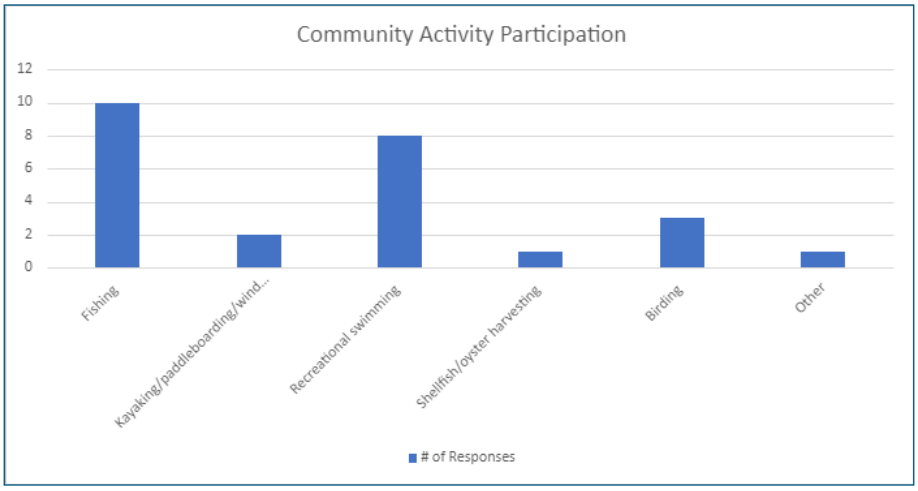


FIGURE 5: ACTIVITIES COMMUNITIES PARTICIPATE IN FROM THE INFORMATIONAL FORM

Finally, we asked how information is best received (Question 11 – Appendix C) and distributed by members of their community (Question 12 – Appendix C). Results showed that local environmental/water quality news is mostly received by community members via social media, local newspapers, or other print media, and signage (Figure 6), while distribution of environmental/water quality news is primarily through social media (Figure 7). The respondent that selected "Other" stated reports published by the Hart Research Institute at Texas A&M Corpus Christi and the Coastal Bend Bays and Estuaries Program are well received by the public and contain important information regarding water quality.

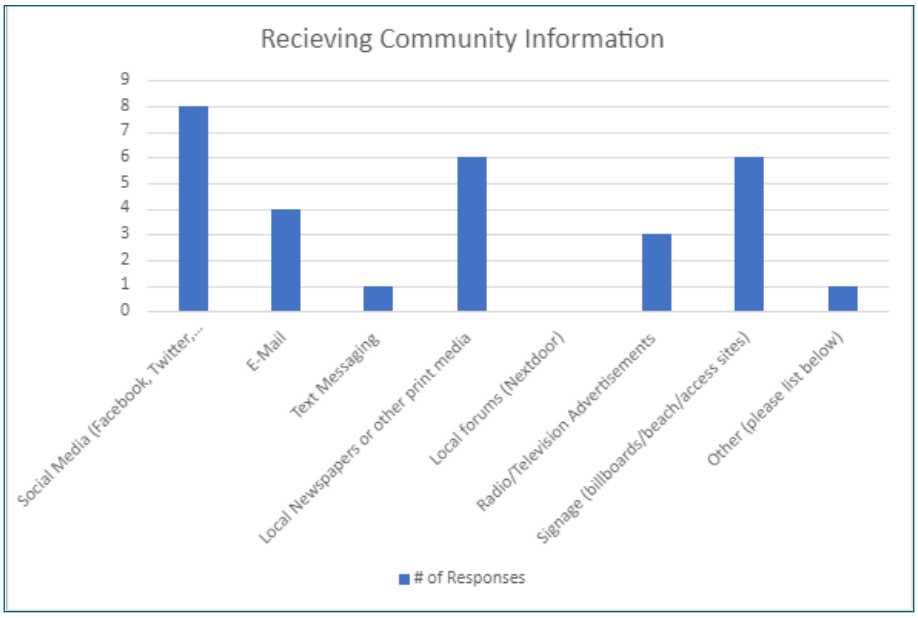


FIGURE 6: HOW INFORMATION IS BEST RECEIVED BY COMMUNITY

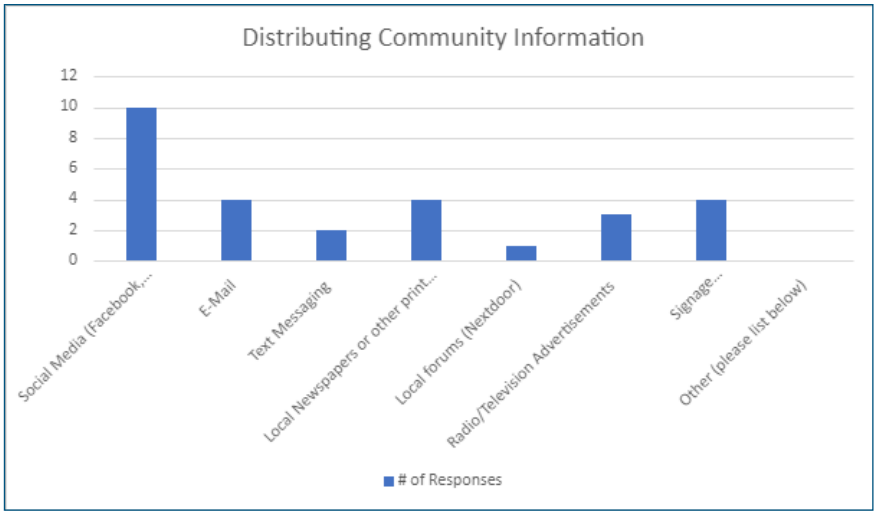


FIGURE 7: HOW INFORMATION IS BEST DISTRIBUTED IN COMMUNITY

ARANSAS PASS ©B.HEACKER, FLICKR

EDUCATIONAL VIDEOS

WaterPR was also contracted to produce three educational videos, which aim to showcase the different components of water quality issues along the Texas Coast (Figure 8). After brainstorming how to best present the information succinctly and compellingly, it was decided the three videos would tell a "story" about the Texas Coast told by prominent local leaders and subject experts. The three videos include an introduction and background to the Coast, salient challenges and threats, and possible mitigation and resiliency solutions. The video aimed to capture representatives from across the geographic regions of the Texas Coast and feature a variety of leaders. Interviewees included city council members, representatives from the Nueces River Authority, the Harte Research Institute, the Coastal Bend Bays and Estuaries Program, and a county judge.

WaterPR conducted interviews and filming in early August and editing continued taking place throughout September. The three videos were completed in early October and will be distributed via the Meadows Center's social media outlets. A distribution plan will be developed to ensure that videos reach their target audience as well as the general public. The three videos are linked below.

- Video 1: An Economic Engine
- Video 2: Threats to Water Quality
- Video 3: A Shared Responsibility

FIGURE 8: OPENING GRAPHIC FOR VIDEO SERIES

EDUCATIONAL SIGNAGE

Results from the survey and follow-up meetings with respondents guided educational sign content. In each survey and meeting, the most prevalent issue was concerned for bacteria and litter. Presenting bacteria and litter in a captivating and compelling manner—while also providing meaningful and relevant information—proved to be difficult. Staff from TXSTATE and the GLO worked closely together to refine content that would be educational, eye-catching, and easily accessible for any individual to understand.

With the challenging nature of the content, it took more time than anticipated to reach a consensus on how to communicate different types of pollution that occur (point source and nonpoint source) to a general audience, who are unlikely to be familiar with the concept of runoff pollution affecting water quality. After several detailed discussions involving iterations of sign content (text and imagery), it

was decided that two signs would be developed and offered as a paired set to communities along the coast. To better educate the public on the differences between point source and nonpoint source pollution without the technical jargon, we selected the themes “pollution you CAN see” and “pollution you CAN’T see.” Designers at the GLO created the final designs (Figures 9 and 10); while staff at the Meadows Center collaborated with the GLO to decide what materials the “online companion” (QR code) should feature.

TXSTATE contacted coastal communities to obtain feedback on the signs and information regarding placement and installation (Appendix E). The sign designs were sent to leaders in Coastal Communities for their feedback and to ensure that the messages of the signs aligned with their water quality goals and priorities. The opportunity was taken at this time to offer the signs to leaders to install within their community at highly visible public access points. It is expected that TXSTATE staff will deliver the signs to these communities and assist them in planning the installation process, but the communities themselves will be responsible for coordinating with the appropriate offices and individuals to complete the final installations.

Some slight changes were made to the dimensions of the signs and the total amount that was ordered. After reviewing proofs of the signs at the dimensions that were listed in the grant language (12”x18 ” and 24”x36”), we found that those signs were too small to be viewed from a great distance and would be very small compared to other beach signage. The signs are meant to be eye-catching and able to be read in a “drive-by” or “walk-by” scenario where an individual could read the content quickly. The executive decision was made to remove the small option altogether and instead offer the signs at 24”x36” and 36”x48”. The decision to offer the larger sign option led to a constraint on how many signs could be ordered due to the increase in cost. The total number of signs ordered is the following: ten (10) 24”x36” signs and twenty (20) 36”x48” signs.

STAKEHOLDER COMMUNICATIONS AND SMARTPHONE APPLICATION

The stakeholder communications database (updated as a spreadsheet) was regularly updated throughout the contract period as new connections were made and submitted to the GLO as attachments in quarterly reports.

Project partners recognized the need for a different way to quickly distribute information and announcements to stakeholders in conjunction with mass email announcements. REMIND, a messaging application, was chosen as the platform. Four different REMIND groups were created by coastal regions to ensure only information relevant to their geographic area was received. A QR code was created for stakeholders to scan at meetings where a Clean Coast Texas representative was present, which would take them to an online form where they could provide contact information and consent to receive text messages from REMIND.

The REMIND app did not receive the attention it needed for it to serve its intended purpose. The work to set up the REMIND campaign was assigned to WaterPR, however, due to most of their time being spent on the educational videos and modules updates they did not complete the work. A budget amendment was submitted to the GLO to remove the funds allocated to the REMIND campaign from WaterPR’s subgrant, and the funds were moved to cover more educational signs. Because of these limitations, the REMIND app was underutilized, though a few messages were sent (Table 1). At the end of the contract reporting period, 17 individuals signed up to receive updates via REMIND. REMIND functions like several other messaging services, where the end-user must confirm that they consent to receive updates via text messaging. Several individuals did not complete the last step to consent to receive messages.

FIGURE 9: POLLUTION YOU CAN SEE EDUCATIONAL SIGN

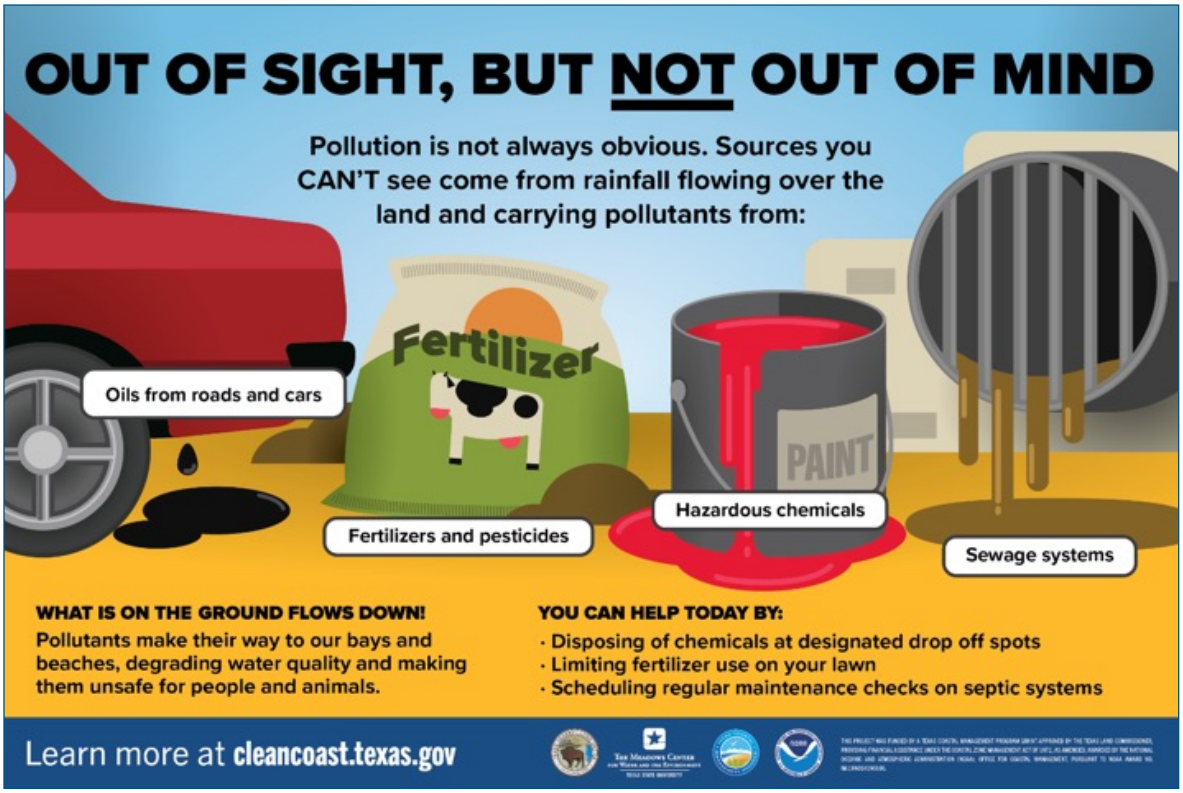


FIGURE 10: POLLUTION YOU CAN'T SEE EDUCATIONAL SIGN

TABLE 1: REMIND MESSAGES SENT DURING THE PROJECT PERIOD

DATE	MESSAGE SENT
5/19/2022	"Thank you for signing up to receive updates from Clean Coast Texas. Stay tuned for updates!"
5/25/2022	"Miss this month's Lunch & Learn? A recording of Katie Swanson's presentation on Sea Level Rise is now available! https://mailchi.mp/glo/glo-cleancoasttx-may-4
6/30/2022	Join us on July 21 at 11 am for our next Lunch & Learn! Follow this link to RSVP: https://www.eventbrite.com/e/july-lunch-learn-with-clean-coast-texas-registration-373337200617
8/16/2022	Learn more about Sustainable Stormwater Design on the Texas Coast by taking our new interactive learning modules! https://cleancoast.texas.gov/learn/index.html

TASK 3: REPORTING

Observations

TXSTATE was in constant communication with the GLO throughout the contract implementation period. Update meetings with the GLO and WaterPR occurred bi-weekly to discuss project progress, any potential delays or issues, and collaborate on deliverables. All project files and documents were maintained in a Microsoft Teams Team Channel where they were made available to project partners. TXSTATE provided quarterly progress reports to the GLO on time. The progress reports provided general project updates, any expected delays or concerns, and specific progress updates on individual deliverables. Deliverables that were complete and ready for GLO review were submitted as attachments with the reports.

FUNDING

Project Budget is detailed in Table 2.

TABLE 2. PROJECT BUDGET

CATEGORY	TOTAL
Salary	$34,000.00
Fringe	$10,00.00
Travel	$2,500.00
Supplies	$3,856.00
Equipment	$0.00
Contractual	$64,500.00
Subtotal	$115,056.00
Indirect Costs	$19,644.00
TOTAL	**$134,700.00**

DISCUSSIONS

Key Findings

The following are key findings from the results of this project:

- Although each surveyed community has its unique water quality issues, there is some overlap amongst the collective. The most prominent issue, which was reiterated multiple times, concerned bacteria levels and litter on beaches. It became clearer throughout the interview processes how little the general public, and sometimes even elected officials, know about water pollution and its sources. Nonetheless, they all feel a great deal of responsibility to be good stewards of their bays and beaches, recognizing the major role they play in the economic and cultural vitalities of their communities. The array of knowledge and concern over water quality issues across the Texas Coastal Zone displays the need for a greater cohesive and comprehensive baseline education program aimed at the project's target audience, as well as a continuation of the efforts started by this project.
- There is no "one size fits all" way to communicate water quality news and concerns with stakeholders, residents, and tourists. Cities and counties along the coast are vastly different, just like cities throughout the state. Some are more rural and rely on print media to distribute news to residents, while others are experiencing population booms that put a strain on their resources and ecosystems. The growing communities found that utilizing social media to spread awareness and information was very effective.
- A phrase that was mentioned by several different individuals when it came to how residents typically respond to water quality news and issues was: "it's not a problem until it's a problem." This can be interpreted as water quality is not at the forefront of everybody's mind until there is a newsworthy problem.

SHRIMP TRAWLER AT ARANSAS BAY ©STEVE MILLER, FLICKR

LESSONS LEARNED AND LIMITATIONS

- There were several lessons learned throughout the implementation of the project and the development of deliverables.
- There were several delays in the distribution of the Informational Form/Survey, which resulted in additional delays in the development of subsequent deliverables. Once distributed, survey respondents were slow to complete the survey or did not complete the survey at all. Respondents were difficult to contact after completing the survey to schedule follow-up meetings. This slow and low response rate mainly impacted the production of educational videos and development of educational signage materials. For future surveys, instead of sending them to select individuals, sending it to a wider, but still relevant, audience would allow for more data and more chances to schedule follow-up interviews.
- TXSTATE staff were limited in choices for messaging apps due to their university-wide IT Security plan, which dictates what services and providers are supported by the University and pass their vetting process that determines whether the external service poses a potential security threat. REMIND was already an approved service by the IT Security plan, which significantly influenced the decision on what service would be used. REMIND is a service designed for schools and teachers to communicate with parents and students, however, the flow of communication provided by REMIND and ability to quickly update subscribers on news and events were anticipated to make this messaging app a desirable choice for this project. A significant drawback to REMIND is that posts are limited by a very small character count, which made sending messages difficult especially when links were sent out to external RSVP sites or websites. Additional messaging platforms for future projects should be researched and considered with Texas State University's IT security department.
- Paring down the content of the educational signage to effectively and engagingly convey water quality issues proved challenging. Further, it became evident that project partners held different expectations for graphic design in educational signs. To create consensus, the graphics team at GLO was tasked with creating unique visuals, which complemented the carefully crafted text. Though this was decided by TXSTATE and GLO as the most appropriate path forward, the addition of the GLO graphics team extended the turnaround time for the sign creation by nature of more feedback and wait times in their queue. Despite these delays, the signs are complete, and all project partners believe the two signs will be beneficial educational tools for coastal communities.
- Deliverable expectations and timelines: When developing future language or initial conversations about deliverables, TXSTATE would like to ensure all project partners share a vision for the product. Adaptive management efforts to ensure GLO approval of the survey and educational signage served to deliver better products, but strained timelines. Standards and/or parameters for creative tools and products could have been better established in initial meetings to improve project efficiency. Limiting review iterations and ensuring final approval further in advance of deliverable due dates should be considered to ensure a steadier flow of progress in future projects. In all, this project showed the dedication to making sure that GLO receives quality deliverables—and some time management lessons were learned along the way.
- There were also a few technical issues that delayed the completion of the modules. The quizzes were originally input into SurveyMonkey by WaterPR, but TXSTATE no longer includes SurveyMonkey in their IT Security Plan. The quizzes had to be transferred to a different platform for TXSTATE to track completed quizzes after the subcontract with WaterPR ended. The quizzes were transferred to Qualtrics, TXSTATE's preferred surveying platform. There was also a period when WaterPR staff was locked out of StoryMaps, the platform in which the modules were created. TXSTATE staff troubleshot and helped them regain access to their accounts, but it caused a significant delay in finishing the last few edits to the modules. As a result of this, TXSTATE staff took steps to ensure that multiple people from both WaterPR and TXSTATE would be able to access the modules and edit them after the contract period ends.

RECOMMENDED NEXT STEPS

The following are recommended next steps to complete after the contract period ends:

1. Continue to promote and advertise the modules to a wide audience along the coast.
2. Continue to coordinate with coastal communities to implement the educational materials produced through this project and the Clean Coast Texas program.
3. Continue to support the Clean Coast Texas program.
4. Develop a scope of work for a new round of funding from the GLO that will continue to enhance the products created in this contract period.

POWDERHORN LAKE IN CALHOUN COUNTY ©JEROD FOSTER

APPENDIX A: WATERPR MODULE REFINEMENT AND VIDEO PRODUCTION SUBGRANT

FDP Cost Reimbursement Subaward

Federal Awarding Agency: Other [Type in Agency] | General Land Office

Pass-Through Entity (PTE):	**Subrecipient:**
Texas State University	WaterPR, LLC
PTE PI: David Dornak	Sub PI: Karen Ford
PTE Federal Award No: 22-121-000-D371 (GLO)	Subaward No: 22017-83890-1
Project Title: Developing Implementation Resources of the Coastal NPS Pollution Control Program for the Texas Coastal Management Program	
Subaward Budget Period: Start: 01/01/2022 End: 09/30/2022	Amount Funded This Action (USD): $ 64,500.00
Estimated Period of Performance: Start: 01/01/2022 End: 09/30/2023	Incrementally Estimated Total (USD): $

Terms and Conditions

1. PTE hereby awards a cost reimbursable subaward, (as determined by 2 CFR 200.331), to Subrecipient. The Statement of Work and budget for this Subaward are as shown in Attachment 5. In its performance of Subaward work, Subrecipient shall be an independent entity and not an employee or agent of PTE.

2. Subrecipient shall submit invoices not more often than monthly and not less frequently than quarterly for allowable costs incurred. Upon the receipt of proper invoices, the PTE agrees to process payments in accordance with this Subaward and 2 CFR 200.305. All invoices shall be submitted using Subrecipient's standard invoice, but at a minimum shall include current and cumulative costs (including cost sharing), breakdown by major cost category, Subaward number, and certification, as required in 2 CFR 200.415(a). Invoices that do not reference PTE Subaward number shall be returned to Subrecipient. Invoices and questions concerning invoice receipt or payments shall be directed to the party's Financial Contact, shown in Attachment 3A.

3. A final statement of cumulative costs incurred, including cost sharing, marked "FINAL" must be submitted to PTE's Financial Contact, as shown in Attachment 3A, not later than 60 days after the final Budget Period end date. The final statement of costs shall constitute Subrecipient's final financial report.

4. All payments shall be considered provisional and are subject to adjustment within the total estimated cost in the event such adjustment is necessary as a result of an adverse audit finding against the Subrecipient.

5. Matters concerning the technical performance of this Subaward shall be directed to the appropriate party's Principal Investigator as shown in Attachments 3A and 3B. Technical reports are required as shown in Attachment 4.

6. Matters concerning the request or negotiation of any changes in the terms, conditions, or amounts cited in this Subaward, and any changes requiring prior approval, shall be directed to the PTE's Authorized Official Contact and the Subrecipient's Authorized Official Contact shown in Attachments 3A and 3B. Any such change made to this Subaward requires the written approval of each party's Authorized Official as shown in Attachments 3A and 3B.

7. The PTE may issue non-substantive changes to the Budget Period(s) and Budget Unilaterally. Unilateral modification shall be considered valid 14 days after receipt unless otherwise indicated by Subrecipient when sent to Subrecipient's Authorized Official Contact, as shown in Attachment 3B.

8. Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law.

9. Either party may terminate this Subaward with 30 days written notice. Notwithstanding, if the Awarding Agency terminates the Federal Award, PTE will terminate in accordance with Awarding Agency requirements. PTE notice shall be directed to the Authorized Official Contact, and Subrecipient notice shall be directed to the Authorized Official Contact as shown in Attachments 3A and 3B. PTE shall pay Subrecipient for termination costs as allowable under Uniform Guidance, 2 CFR 200, or 45 CFR Part 75 Appendix IX, as applicable

10. By signing this Subaward, including the attachments hereto which are hereby incorporated by reference, Subrecipient certifies that it will perform the Statement of Work in accordance with the terms and conditions of this Subaward and the applicable terms of the Federal Award, including the appropriate Research Terms and Conditions ("RTCs") of the Federal Awarding Agency, as referenced in Attachment 2. The parties further agree that they intend this subaward to comply with all applicable laws, regulations, and requirements.

By an Authorized Official of the PTE:	By an Authorized Official of the Subrecipient:
Name: Dr. Michael Blanda	Name: Karen Ford
Title: Interim Associate Vice President for Research & Federal Relations	Title: WaterPR, Principal
Date: Feb 24, 2022	Date: 02/24/2022

Attachment 1
Certifications and Assurances

Subaward Number: 22017-83890-1

Certification Regarding Lobbying (2 CFR 200.450)
By signing this Subaward, the Subrecipient Authorized Official certifies, to the best of his/her knowledge and belief, that no Federal appropriated funds have been paid or will be paid, by or on behalf of the Subrecipient, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement in accordance with 2 CFR 200.450.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or intending to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Subrecipient shall complete and submit Standard Form -LLL, "Disclosure Form to Report Lobbying," to the PTE.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Debarment, Suspension, and Other Responsibility Matters (2 CFR 200.214 and 2 CFR 180)
By signing this Subaward, the Subrecipient Authorized Official certifies, to the best of his/her knowledge and belief that neither the Subrecipient nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency, in accordance with 2 CFR 200.213 and 2 CFR 180.

Audit and Access to Records
Subrecipient certifies that it will provide PTE with notice of any adverse findings which impact this Subaward. Subrecipient certifies compliance with applicable provisions of 2 CFR 200.501-200.521. If Subrecipient is not required to have a Single Audit as defined by 200.501, Awarding Agency requirements, or the Single Audit Act, then Subrecipient will provide notice of the completion of any required audits and will provide access to such audits upon request. Subrecipient will provide access to records as required by parts 2 CFR 200.337 and 200.338 as applicable.

Program for Enhancement of Contractor Employee Protections (41 U.S.C 4712)
Subrecipient is hereby notified that they are required to: inform their employees working on any federal award that they are subject to the whistleblower rights and remedies of the program; inform their employees in writing of employee whistleblower protections under 41 U.S.C §4712 in the predominant native language of the workforce; and include such requirements in any agreement made with a subcontractor or subgrantee.

The Subrecipient shall require that the language of the certifications above in this Attachment 1 be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

Use of Name
Neither party shall use the other party's name, trademarks, or other logos in any publicity, advertising, or news release without the prior written approval of an authorized representative of that party. The parties agree that each party may use factual information regarding the existence and purpose of the relationship that is the subject of this Subaward for legitimate business purposes, to satisfy any reporting and funding obligations, or as required by applicable law or regulation without written permission from the other party. In any such statement, the relationship of the parties shall be accurately and appropriately described.

Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment
Pursuant to 2 CFR 200.216, Subrecipient will not obligate or expend funds received under this Subaward to: (1) procure or obtain; (2) extend or renew a contract to procure or obtain; or (3) enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services (as described in Public Law 115-232, section 889) as a substantial or essential component of any system, or as a critical technology as part of any system.

Attachment 2
Federal Award Terms and Conditions

Subaward Number: 22017-83890-1

Required Data Elements

The data elements required by Uniform Guidance are incorporated in the attached Federal Award.

Awarding Agency Institute (If Applicable):

Federal Award Issue Date	FAIN	Assistance Listing No.
		11.419

Assistance Listing Program Title (ALPT): COASTAL ZONE MANAGEMENT ADMINISTRATION AWARDS

Key Personnel Per NOA:

This Subaward Is:

- [x] Research & Development
- [ ] Subject to FFATA

General Terms and Conditions

By signing this Subaward, Subrecipient agrees to the following:

1. To abide by the conditions on activities and restrictions on expenditure of federal funds in appropriations acts that are applicable to this Subaward to the extent those restrictions are pertinent. This includes any recent legislation noted on the Federal Awarding Agency's website:
2. 2 CFR 200
3. The Federal Awarding Agency's grants policy guidance, including addenda in effect as of the beginning date of the period of performance or as amended found at:
4. Research Terms and Conditions, including any Federal Awarding Agency's Specific Requirements found at: except for the following :
   a. No-cost extensions require the written approval of the PTE. Any requests for a no-cost extension shall be directed to the Administrative Contact shown in Attachment 3A, not less than 30 days prior to the desired effective date of the requested change.
   b. Any payment mechanisms and financial reporting requirements described in the applicable Federal Awarding Agency Terms and Conditions and Agency-Specific Requirements are replaced with Terms and Conditions (1) through (4) of this Subaward; and
   c. Any prior approvals are to be sought from the PTE and not the Federal Awarding Agency.
   d. Title to equipment as defined in 2 CFR 200.1 that is purchased or fabricated with research funds or Subrecipient cost sharing funds, as direct costs of the project or program, shall vest in the Subrecipient subject to the conditions specified in 2 CFR 200.313.
   e. Prior approval must be sought for a change in Subrecipient PI or change in Key Personnel (defined as listed on the NOA).
5. Treatment of program income: Additive

Special Terms and Conditions:

Data Sharing and Access:
Subrecipient agrees to comply with the Federal Awarding Agency's data sharing and/or access requirements as reflected in the NOA or the Federal Awarding Agency's standard terms and conditions as referenced in General Terms and Conditions 1-4 above.

No additional requirements

Data Rights:
Subrecipient grants to PTE the right to use data created in the performance of this Subaward solely for the purpose of and only to the extent required to meet PTE's obligations to the Federal Government under its PTE Federal Award.

Copyrights:

Subrecipient Grants to PTE an irrevocable, royalty-free, non-transferable, non-exclusive right and license to use, reproduce, make derivative works, display, and perform publicly any copyrights or copyrighted material (including any computer software and its documentation and/or databases) first developed and delivered under this Subaward solely for the purpose of and only to the extent required to meet PTE's obligations to the Federal Government under its PTE Federal Award.

Subrecipient grants to PTE the right to use any written progress reports and deliverables created under this Subaward solely for the purpose of and only to the extent required to meet PTE's obligations to the Federal Government under its Federal Award.

Promoting Objectivity in Research (COI):
Subrecipient must designate herein which entity's Financial Conflicts of Interest policy (COI) will apply: Subrecipient

If applying its own COI policy, by execution of this Subaward, Subrecipient certifies that its policy complies with the requirements of the relevant Federal Awarding Agency as identified herein: General Land Office

Subrecipient shall report any financial conflict of interest to PTE's Administrative Representative or COI contact, as designated on Attachment 3A. Any financial conflicts of interest identified shall, when applicable, subsequently be reported to Federal Awarding Agency. Such report shall be made before expenditure of funds authorized in this Subaward and within 45 days of any subsequently identified COI.

Work Involving Human or Vertebrate Animals (Select Applicable Options)

☒ No Human or Vertebrate Animals

This section left intentionally blank.

Human Subjects Data (Select One) Not Applicable

This section left intentionally blank

This section left intentionally blank

Additional Terms

By agreeing to this subaward, Institution is certifying they, and their PI, are in good standing with System for Award Management (SAM.gov).

Attachment 3A
Pass-Through Entity (PTE) Contacts

Subaward Number: 22017-83890-1

PTE Information

Entity Name: Texas State University

Legal Address: 601 University Drive
San Marcos, TX 78666-4684

Website: www.txstate.edu

PTE Contacts

Central Email: grants@txstate.edu

Principal Investigator Name: David Dornak

Email: nickdornak@txstate.edu Telephone Number: (512) 245-6697

Administrative Contact Name: Chad Nolte

Email: grants@txstate.edu Telephone Number: 512.245.2102

COI Contact email (if different to above): srubino@txstate.edu

Financial Contact Name: Marivel Alvarez

Email: grants@txstate.edu Telephone Number: 512.245.2102

Email invoices? (●) Yes ( ) No Invoice email (if different):

Authorized Official Name: Dr. Michael Blanda

Email: grants@txstate.edu Telephone Number: 512.245.2102

PI Address:

601 University Drive, SLH 206
ATTN: David Dornak
San Marcos, TX 78666-4684

Administrative Address:

Office of Research and Sponsored Programs
601 University Drive, JCK 420
ATTN: ORSP
San Marcos, TX 78666-4684

Invoice Address:

Office of Research and Sponsored Programs
601 University Drive, JCK 420
ATTN: ORSP
San Marcos, TX 78666-4684

Attachment 3B

Subrecipient Contacts

Subaward Number: 22017-83890-1

Subrecipient Information for FFATA reporting

Entity's DUNS Name: WaterPR, LLC

EIN No.: 20-8964750

Institution Type: For Profit Organization (other than small business)

DUNS: 117945526

Currently registered in SAM.gov: (•) Yes ( ) No

Exempt from reporting executive compensation: (•) Yes ( ) No *(if no, complete 3Bpg2)*

Parent DUNS:

This section for U.S. Entities:

Congressional District: 21

Zip Code Look-up

Zip Code+4: 78667

Place of Performance Address

San Marcos, TX

Subrecipient Contacts

Central Email: kford@waterpr.com

Website: waterpr.com

Principal Investigator Name: Karen Ford

Email: kford@waterpr.com Telephone Number: 512-922-8234

Administrative Contact Name: Karen Ford

Email: kford@waterpr.com Telephone Number: 512-922-8234

Financial Contact Name: Karen Ford

Email: kford@waterpr.com Telephone Number: 512-922-8234

Invoice/Payment Email: Karen Ford

Authorized Official Name:

Email: kford@waterpr.com Telephone Number: 512-922-8234

Legal Address:

WaterPR
P. O. Box 1409
San Marcos, TX 78667

Administrative Address:

WaterPR
P. O. Box 1409
San Marcos, TX 78667

Payment Address:

WaterPR
P. O. Box 1409
San Marcos, TX 78667

Attachment 3B-2

Highest Compensated Officers

Subaward Number: 22017-83890-1

Subrecipient:

Institution Name: WaterPR, LLC

PI Name: Karen Ford

Highest Compensated Officers

The names and total compensation of the five most highly compensated officers of the entity(ies) must be listed if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and $25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1) Internal Revenue Code of 1986.

Officer 1 Name:

Officer 1 Compensation:

Officer 2 Name:

Officer 2 Compensation:

Officer 3 Name:

Officer 3 Compensation:

Officer 4 Name:

Officer 4 Compensation:

Officer 5 Name:

Officer 5 Compensation:

Attachment 4
Reporting and Prior Approval Terms

Subaward Number: 22017-83890-1

Subrecipient agrees to submit the following reports (PTE contacts are identified in Attachment 3A):

Technical Reports:

☐ Monthly technical/progress reports will be submitted to the PTE's Principal Investigator within 30 days of of the end of the month.

☐ Quarterly technical/progress reports will be submitted within 30 days after the end of each project quarter to the PTE's Principal Investigator.

☒ Annual technical / progress reports will be submitted within 60 days prior to the end of each budget period to the PTE's Principal Investigator. Such report shall also include a detailed budget for the next Budget Period, updated other support for key personnel, certification of appropriate education in the conduct of human subject research of any new key personnel, and annual IRB or IACUC approval, if applicable.

☒ A Final technical/progress report will be submitted to the PTE's Principal Investigator within 60 days of the end of the Project Period or after termination of this award, whichever comes first.

☐ Technical/progress reports on the project as may be required by PTE's Principal Investigator in order for the PTE to satisfy its reporting obligations to the Federal Awarding Agency.

Prior Approvals:

Carryover:

Carryover is restricted for this subaward by the: Pass-Through Entity

Carryover instructions and requirements are as stated by the Federal Awarding Agency guidance or as shown below.

Submit carryover requests to the Administrative Contact.

Other Reports:

☐ In accordance with 37 CFR 401.14, Subrecipient agrees to notify both the Federal Awarding Agency via iEdison and PTE's Administrative Contact within 60 days after Subrecipient's inventor discloses invention(s) in writing to Subrecipient's personnel responsible for patent matters. The Subrecipient will submit a final invention report using Federal Awarding Agency specific forms to the PTE's Administrative Contact within 60 days of the end of the Project Period to be included as part of the PTE's final invention report to the Federal Awarding Agency.

A negative report is required:

☐ Property Inventory Report (only when required by Federal Awarding Agency), specific requirements below.

Additional Technical and Reporting Requirements:

Texas State to provide Subrecipient with Purchase Order (PO) Number. This PO Number is to be included on all submitted invoices. Invoices that do not reference the Texas State University PO number and subaward number may be returned to Subrecipient.

Invoices requesting reimbursement may be required to produce appropriate backup documentation at the request of Texas State University before payment is made to Subrecipient.

Attachment 5
Statement of Work, Cost Sharing, Indirects & Budget

Subaward Number: 22017-83890-1

Statement of Work

(●) Below ( ) Attached, [ ] pages

If award is FFATA eligible and SOW exceeds 4000 characters, include a *Subrecipient Federal Award Project Description*

Project Descriptions:
1) Produce three 3 to 5-mnute videos. Develop four concise, captivating videos for distribution to communities throughout the Texas Coastal Zone; made available through the https://cleancoast.texas.gov/ website as well as social media platforms. Videos to be designed for a diverse audience and to encourage community efforts in the three coastal regions (upper, middle, lower). Assume 3 trips to various coastal locations for filming, taping interviews, capturing B-roll.
2) Story Map Refinement and revisions as determine. Assume 1-2 trips to coast for additional information gathering and photography and 40 hours for labor.
3) Remind campaign: Support with strategy and content for text message campaign using Remind application. Assume 20 hours labor.

Timeline: January–August 2022
Client provides:
• Subject matter experts and guidance
• Introductions and access to other entities (partners/NGOs, elected and community leaders, tourism/economic development, residents, visitors.
• Timely response to content drafts and input on design
• Spanish language translation, location and/or editorial support

WaterPR provides:
• Communication strategy and design
• Creative story development, content, writing
• Videography, animation, editorial, graphics, music, audio

Budget Information

Indirect Information Indirect Cost Rate (IDC) Applied: 0 %

Rate Type: Modified Total Direct Costs

Cost Sharing: No

If Yes, include Amount: $

Budget Details

(●) Below ( ) Attached, [ ] pages

1) Three Video Project (3-5 min/each; English)	$55,000
- Project management/executive producer	10,000
- Communication strategy, story design, writing	5,500
- Art direction, graphic design, illustration, simple animation	5,000
- Videography on location, 2-person crew, 10-12 days	12,500
- Editorial and sound recording as needed	14,500
- Interactive programming, coding	2,500
- Travel: 3 coastal trips; 2-3 persons; 8 nights, lodging, per diem/mileage	4,000
- Hard costs: stock photography & video, music, illustrations, map manipulation	1,000
2) Story Map Refinement/Revisions	$7,500
- Labor (est. 40 hours)	4,000
- Additional video editorial (est. 10 hours)	1,000
- Travel, 2 coastal trips, 2 persons, 6 nights, lodging/per diem/mileage	2,500
- Note: Estimate does not include additional on-location videography	
3) Remind Text Campaign	$2,000
- Labor total (est. 20 hours)	

Budget Totals

Direct Costs	$ 64,500.00
Indirect Costs	$
Total Costs	$ 64,500.00

All amounts are in United States Dollars

Subaward Number:
22017-83890-1

Attachment 6

Notice of Award (NOA) and any additional documents

◉ The following pages include the NOA and if applicable any additional documentation referenced throughout this Subaward.

○ Not incorporating the NOA or any additional documentation to this Subaward.

PROJECT PROPOSAL

Client: Meadows Center for Water and the Environment
Contact: Nick Dornak
Project Name: Clean Coast Texas Phase Two
Date: ~~10/20/21;~~ REV 10/21/21-klf

Project Descriptions:

1) **Produce three 3 to 5-mnute videos.** Develop four concise, captivating videos for distribution to communities throughout the Texas Coastal Zone; made available through the https://cleancoast.texas.gov/ website as well as social media platforms. Videos to be designed for a diverse audience and to encourage community efforts in the three coastal regions (upper, middle, lower). Assume 3 trips to various coastal locations for filming, taping interviews, capturing B-roll.
2) **Story Map Refinement** and revisions as determine. Assume 1-2 trips to coast for additional information gathering and photography and 40 hours for labor.
3) **Remind campaign**: Support with strategy and content for text message campaign using Remind application. Assume 20 hours labor.

Timeline: January–August 2022

Client provides:

• Subject matter experts and guidance
• Introductions and access to other entities (partners/NGOs, elected and community leaders, tourism/economic development, residents, visitors.
• Timely response to content drafts and input on design
• Spanish language translation, location and/or editorial support

WaterPR provides:

• Communication strategy and design
• Creative story development, content, writing
• Videography, animation, editorial, graphics, music, audio

Budget Assumptions & Estimates

1)	**Three Video Project (3-5 min/each; English)**	**$ 55,000**
-	Project management/executive producer	10,000
-	Communication strategy, story design, writing	5,500
-	Art direction, graphic design, illustration, simple animation	5,000
-	Videography on location, 2-person crew, 10-12 days	12,500
-	Editorial and sound recording as needed	14,500
-	Interactive programming, coding	2,500
-	Travel: 3 coastal trips; 2-3 persons; 8 nights, lodging, per diem/mileage	4,000
-	Hard costs: stock photography & video, music, illustrations, map manipulation	1,000
2)	**Story Map Refinement/Revisions**	**$ 7,500**
-	Labor (est. 40 hours)	$4,000
-	Additional video editorial (est. 10 hours)	1,000
-	Travel, 2 coastal trips, 2 persons, 6 nights, lodging/per diem/mileage	2,500
-	Note: Estimate does not include additional on-location videography	
3)	**Remind Text Campaign**	**$2,000**
-	Labor total (est. 20 hours)	

###

APPENDIX B: ONLINE MODULE REFINEMENT

Module 1

- Clicked the link and was not sure if I had entered the module
  - Having a label at the top of the page stating which module it is would help with confirmation that someone taking the module is in the right place
  - Building off of the above, this would be best under the "Welcome to this ArcGIS StoryMaps project!..." section, and include something along the lines of "this is the first of three modules meant to..." (include the purpose of the modules, who they're for, etc.)
- **CCT Intro Eng 1:15** (video) starts at the 11 second mark after hitting play
  - Adrianna starts talking at the 9 second mark
  - ((video played from beginning in mod 2)
  - I would change the actual title of the videos of how they show up on YouTube (CCT Intro_Eng_1:15 to Introduction to Clean Coast Texas (English)).
- **Situation**
  - Welcome to the Texas Coast!
  - Tourism is a vital component to the Texas coastal economy. Millions come each year to enjoy the natural beauty, clean coastal waters and beaches, bountiful bay and gulf fishing, bird watching , surfing, sailing, waterfowl hunting and experiencing a special connection to nature, big salt water and dramatic skies.
  - Texas coastal communities are proud of what they have to offer and hold open arms to welcome not only to tourists, but also new residents. Many visitors to the Texas coast are so smitten with the experience they return to raise families or enjoy retirement. This growth trend is predicted to continue on an upward trajectory—because people are attracted to everything the Texas coast has to offer.
  - But with growth come certain challenges for local communities and fragile ecosystems.

What follows is an instructive tale for all coastal communities, told in four video chapters, about one very popular Texas Coastal community who saw change coming, understood the potential consequences, and are working to restore their featured attraction—with the support of Clean Coast Texas.

- **Intro**
  - "developers, engineers and planners"
  - comma after "engineers"
- **Coastal Economy and Growth**
  - Adding alt text to the photos in the section
  - If alt text cannot be added, having a label describing where on the coast the pictures were taken would make the module feel more local
- **Water Quality Threats**
  - "Threats to water quality, coastal habitats, fish and wildlife populations are direct threats to the Gulf Coast economy."
    - Add an "and" before the word "fish" OR add a comma after "fish"
      - Adding "and" will keep "fish and wildlife" one phrase
  - **Nonpoint source pollution**

Commented [TN1]: I agree with this. the videos in all the modules have names formatted in this way and should be changed.

Commented [SA2]: I would include a map showing the TCZ including the counties that CCTx serves

Commented [SA3]: Millions of what? Specify millions of toursists/visitors

Commented [GU4]: These paragraphs seem redundant. Condensing them into one would allow for the Segway of CCTx solutions to be smoother. - Matt

- Nonpoint source pollution is water pollution caused by widely dispersed sources of pollutants that cannot be traced back to a single source. While most nonpoint source pollution problems are associated with pollutants carried by runoff from rain events, other pollutant sources include leaks and spills, atmospheric deposition, and hydrologic modifications. Nonpoint source pollutants affect both groundwater and surface water.
-

- **Solutions**
  - There is not one solution to fit all situations, but there is something that everyone can do to help (?).“Clean Coast Texas and its many partners work with communities up and down the coastal region to educate, support, provide technical guidance and community outreach tools”
    - Add comma after “provide technical guidance”
  - (See Resources section for more)“The Little Bay community came together to seek solutions, support, funding and the help of Clean Coast Texas”
    - Add comma after “funding”
- **County Resources Page/Map**
  - Harris Co
    - Cannot reach the Cedar Bayou Watershed Protection Plan, but *can* reach it under the Chambers Co tab
  - Cameron Co
    - Lower Laguna Madre: Watershed Protection Plan (South) link brings you to the correct page, but to the bottom of the page instead of the top
  - The interactive map worked on Chrome, but not Firefox
- **Funding Resources**
  - The “FNCS funding” link is dead; webpage says it has been archived
- **Credits**
  - “with numerous stakeholders, state and local agencies to protect”
    - “stakeholders, state, and local agencies” is what is written in mods 2 and 3

Module 2

- Before the intro
  - Same as first module, include a brief section about this being the second of three modules...
  - “videos, animation, graphs, charts and interactive quizzes”
    - comma after “charts”
  - “use your mouse to explore, click and discover content”
    - comma after “click”
- Intro
  - “Developers, engineers and planners”
    - comma after “engineers”
- Continuing education units
  - Mentions there would be several short quizzes throughout the module, but there was only one at the end

Commented [SA5]: seems a bit informal/an afterthought

Commented [SA6]: Remove the "-copy" from the layer name

Commented [SA7]: Provide a brief description of each of these resources so people aren't just clicking on links blindly

Also, capitalize the titles

Commented [SA8]: The flow of this module is just a bit clunky, it could definitely be condensed so it doesn't take as long to see the content. It would also benefit from more distinct separations from section to section.

- Mentions that the Final Quiz must be completed and submitted, but doesn't specify who it needs to be sent to.

- Glossary
  - Point Source
    - "landfill leachate collection system, vessel or other floating craft"
      - commas after "vessel"
  - Vegetated swales
    - "would have a shallow slope, dense vegetation and porous soils"
      - comma after "vegetation"
  - Hydromodification
    - "affect hydrology, natural flow patterns and aquatic systems."
      - comma after "patterns"
    - "flow patterns, vegetation and slope"
      - comma after "vegetation"
  - Non-traditional Small MS4
    - "drainage districts, military bases, prisons and universities."
      - comma after "prisons"
- PART 1
  - Soils
    - "prevent erosion, sedimentation and structural problems."
      - comma after "sedimentation"
  - Tital buffers
    - "phosphorous, pesticides, fertilizers and sediments"
      - comma after "fertilizers"
- Conservation Developments
  - "reducing grading, landscaping and the need for expensive stormwater conveyance infrastructure"
    - comma after "landscaping"
- Like in module 1, have alt text on the photos
  - Under Reducing Impervious Cover, there is a picture with a text box descriptor below it. This would be nice to have for all the pictures in addition to the alt text
- Quiz (part 1)
  - at the end, quiz shows the results of those who took the quiz (anonymously) after completion. Do we want this feature?
  - first several questions are on demographics of those taking the module. Should we do that before they enter the mod? It felt strange putting my contact info in when I was supposed to be taking a quiz
    - maybe move contact info to the end of the quiz?
- Part Two: Drainage Design
  - General design guidelines
    - The picture for point 5 is very grainy. When clicking the picture to see why, the picture gets much smaller, a bigger picture may be needed
    - Summary of best management practices (BMPs) for stormwater design
      - Typo, forgot 's' in word 'landscaping'

Commented [SA9]: In general, I think this might flow better if the goals of sustainable site design were presented as a list first, rather than scrolling through them.

I would also provide a general introduction to the steps of sustainable site design as well. The transition from goals to steps is a bit abrupt and would benefit from just a simple "There are x amount of steps to sustainable site design..."

        - Stormwater credits for low impact development
            - Typo, two 'p's in word 'preservation'
        - "structures, filtration and sedimentation areas."
            - comma after "filtration"
- Porous Pavement
    - The last bullet point under "Porous pavement design guidelines" is smaller and the words are indented more so than the other two bullets
- Constructed Wetlands
    - "natural aesthetic qualities, wildlife habitat, erosion control and pollutant removal."
        - comma after "control"
- Soil Amendment and Landscaping
    - "Nutrient, sediment and pollutant adsorption"
        - comma after "sediment"
    - "Water interflow, storage and transmission"
        - comma after "storage"
- Funding Support
    - Link for Houston-Galveston Area Council is dead

Module 3

- Intro
    - "Developers, engineers and planners"
        - comma after "engineers"
- Goals for this Retrofit Guide
    - Is there a way we can get a better quality photo for the "Mitigate flood damage in growing communities along the Texas Gulf Coast" slide?
- Glossary
    - Hydromodification
        - "affect hydrology, natural flow patterns and aquatic systems."
            - comma after "patterns"
        - "flow patterns, vegetation and slope"
            - comma after "vegetation"
        - "**Hydromodification should be avoided if at all practical"**
            - Bolded in mod 3 but not mod 2
    - Non-traditional Small MS4
        - "drainage districts, military bases, prisons and universities."
            - comma after "prisons"
    - Vegetated swales
        - "would have a shallow slope, dense vegetation and porous soils"
            - comma after "vegetation"
- Resilience
    - "Stormwater retrofits can reduce negative impacts and ultimately address the deficiencies from a time before stormwater management was required or modern criteria and community planning practices were well established."

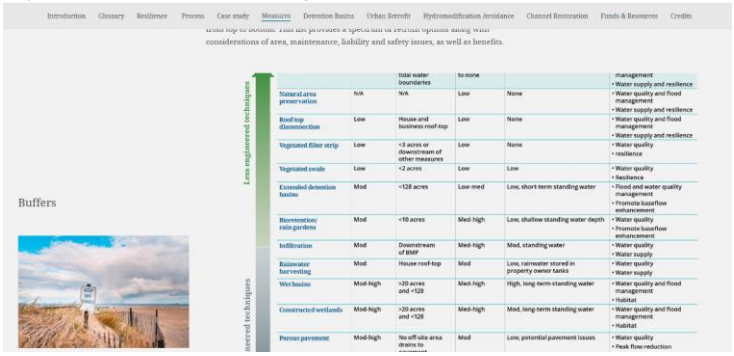
- Retrofits for stormwater management can add resilience and beauty to your community. Here are some examples:
  - "Vegetated swales for streets, sidewalks and other drainage areas"
    - comma after "sidewalks"
  - "Detention basins for recreation, green space and beautification"
    - comma after "green space"
- Retrofit examples:
  - The "after" picture is *very* blurry on all the examples

- Process
  - Step 1: Retrofit Planning
    - "Understand the local water quality challenges, drainage issues and flooding problems."
      - comma after "issues"
    - "to rivers, creeks and tidal waters."
      - comma after "creeks"
    - "Obtain maps, plans and local requirements"
      - comma after "plan"
    - Add in something along the lines of "here are some actions you can take to do this..." before just going straight into the list
  - Step 2: Water quality and flood mitigation assessment
    - Make into a bulleted list like step one for consistency
    - "flood prone, have chronic contamination or a high maintenance burden."
      - comma after "contamination"
    - "streets, rights of way, culverts/outfalls, rooftops or other impervious areas lacking"
      - comma after "rooftops"
  - Step 3: Retrofit inventory & evaluation
    - "transportation improvements, downtown redevelopment, utility upgrades."
      - Add "and" after redevelopment
  - Step 4: Design & permitting
    - "Based on detailed site data to ensure proposed project can be properly constructed and safely function while minimizing maintenance needs."
    - "unique features, floodplains and property boundaries"
      - comma after "floodplains"
    - "Maximize native vegetation, natural materials and landscapes to improve stormwater performance and appearance"
      - comma after "materials"
  - Step 6: Inspection and maintenance
    - "Inspect stormwater measures at least twice a year."
- Quiz
  - Some of the questions have lots of answer choices. It is hard to see all of them in the smaller built-in survey, so I would recommend taking the quizzes full screen
  - Did not have to sign into quiz 3.1 like I did for the previous quizzes
- Measures

Commented [SA10]: link to any external resources as necessary, for example: USACE Galveston, Texas Historical Commission, information about TCEQ's SWPP.

Commented [SA11]: is there an example ranking system that you can provide?

Commented [SA12]: needs more context

    - Section flows weird with the pinned list and the scrolling pictures of examples
    - Top of the list/chart is cut off (might be a Firefox issue)
    - 

    - The highlighter that moves on the chart as you scroll down (to draw attention to which measure you are looking at) is hard to see. I only noticed because I saw something moving on the chart
- Detention Basins
    - Wet ponds and wetlands
        - "fishing, canoeing and picnics"
            - comma after "canoeing"
    - Wet ponds and wetlands example
        - The background picture behind "Chambers County neighborhood" is super blurry
- Urban Retrofit
    - Birds-eye view picture is good but could be made larger. I did not realize the picture was labeled until I saw the stormwater controls had numbers associated with them
    - "permeable pavers" (points 2 and 5) are the only ones on the list without short descriptions as to why they are important/how they work
- Quiz 3.2
    - Like quiz 3.1, opening the quiz up to full screen helps better see all the answer choices
- Hydromodification Avoidance
    - "low water crossings and suburban"
        - comma after "crossings"
    - "flow patterns and aquatic systems."
        - comma after "patterns"
    - Buffer zones and hydromodification
        - "waterways, tidal waters and aquatic resources"
            - comma after "waters"
- Channel Restoration
    - "Subhead here for sliders?"
        - I would call this "Examples of channel restoration"
    - Live Fascines
        - Last sentence states "figure below," but the figure is to the left of the paragraph

- Funds and Resources
    - Houston-Galveston Area Council link is dead
- Quiz 3.3
    - Like both quizzes in mod 2, I had to put my contact info in before the actual quiz began. This is not a problem, but it felt weird. Is there a way to get that information before they open any of the modules?

Overall, the content of the modules was great. The information was presented in a clear, easy to understand way, and was highly organized. Some of the pictures were a bit grainy and hard to see, but most of those pictures were in the background/decorative. Having thumbnails for the pictures would also be helpful. Textboxes under photos were used a lot in mod 3 and it helped define what picture I was looking at. It would be nice to have the pictures in mods 1 and 2 labeled the same way. The graphics were consistent and pleasing to look at. The quizzes in mods 2 and the final quiz in mod 3 asked for my name, email, association, etc before starting the quiz. I think it would be helpful if module users only had to fill that out once. If that is not possible, I think having it at the end of the quiz before results are submitted would be better. The quiz questions were also very easy. Some typos, but not many. The Oxford commas do not necessarily need to be added, but since they are in other places in the modules, I think it would be best to be consistent.

MT: Comments made by Makayla

Ally's edits and comments are in track changes and comments.

Module 2 Part 1 Quiz

Q9: Who Regulates Wetlands on the Texas coast?

MT: I do not think this question is necessary. Maybe could be reworded to "who issues permits on wetlands?", but this is also an easy freebie question

Q10: What types of areas and landscapes should be avoided for sustainable development? OR Why should areas of the landscape such as floodplains, wetlands, riparian areas, and critical habitats be avoided for sustainable development?

MT: easy "all of the above" question. Could break this into 4 questions or pick one of the answer choices to elaborate on. Ex: "why should wetlands be avoided when planning sustainable development?". This is more of a critical question that makes sure the quiz taker understands the content they are reading.

Q11: What types of buffers can be used in Sustainable Development practices in the Texas Coastal Zone?

another "all of the above". Could do something similar to the suggestion for Q10 with this question.

Q12: What are the benefits of depression storage preservation?

MT: definition question, but definition does not match the one given in the module. I'm not sure if we could do this, but if Quadratics allows us to do a "matching" question, this would be a good question for it. There are other definitions provided in the module too, so we could do four or five words

Q13: What types of projects support the goals of the Coastal Resiliency Master Plan?

MT: I do not think this question is relevant

Q14: What is NOT a feature of Conservation Development?

MT: this question is alright

Q15: What are the benefits of reducing impervious cover?

MT: "all of the above" question, but not a throw away question. More meaningful than the other all of the above questions

Q16: What are methods to disconnect impervious cover?

MT: another "all of the above," but also one of the more meaningful ones.

MT: More than half of the questions were "all of the above" questions that could be broken up and elaborated on

Module 2 part 2 Quiz

Is there a way we can set up the quizzes in a way so they only need to answer these questions once?

Q11: What is NOT considered a permanent best management practice (BMP) for stormwater management?

MT: make the correct answer less obvious, otherwise good question

Q12: Which BMP for stormwater management can handle the largest drainage area:

Q20: Which are examples of natural area conservation?

Module 3 Quiz 1

Q1: Clean Coast Texas is a program of:

Q2: What does Clean Coast Texas do?

Q3: What does retrofit mean within the context of this program?

Q4: Who are Partners with Clean Coast Texas?

Q6: What is the cause of nonpoint source pollution?

Q8: What are retrofits for stormwater management that enhance resiliency along the Texas Coast?

Q9: What is NOT a benefit from stormwater retrofit practices?

Q10: Of the six steps to use when assessing retrofit opportunities, which does NOT belong here?

Module 3 Quiz 2

Q1: What did NOT happen at Tule Creek?

Q2: Of the following stormwater management measures, what is considered a MORE engineered technique?

Q3: Of the following stormwater management measures, which is considered a LESS engineered technique?

Q7: What are features of an urban retrofit?

Module 3 Quiz 3

- Can remove questions 7-9, repeats from quiz 2

Q11: What is a NOT a nature-based solution?

Question worded funny. Take out first “a”.

Q12&Q13: Remove some answer choices

Q14: Who can help communities with water quality and stormwater management issues along the Texas coast?

Q15: Is Hydromodification a good thing or a not-so good thing?

Q16: What is NOT an example of hydromodification?

Q18: What is the minimum width of an undisturbed vegetation buffer for most water bodies?

Q20: Can a stream that has been altered by hydromodification be restored?

Q23: Should erosion in natural areas be prevented?

From: tfma@tfma.org
To: Schlandt, Ally
Subject: RE: Program requirements for CEC's
Date: Thursday, April 7, 2022 11:07:40 AM
Attachments: image002.png
image004.png

Hi Ally,

On out website under the "CFM Information" tab, there is a section that outlines what is acceptable subject matter for a training course as well as what documents would be needed for verification.

Schedule of CEC-Eligible Activities

Activity	Eligible CEC hours	Verification Document Needed
1. ASFPM/TFMA Pre-approved Courses	Varies: 1 whole hour instruction=1 CEC	CEC Certificate; Certificate of Completion; attendance with date, start & end times.
2. Flood-related Courses	Varies: 1 whole hour instruction = 1 CEC	Agenda with date, start & end times; CEC Certificate; Certificate of completion or attendance
3. Flood-related Conferences	Varies: 1 whole hour instruction = 1 CEC	Agenda with date, start 7 end times; CEC Certificate; Certificate of completion or attendance
4. Virtual flood-related educational events	Varies: 1 whole hour instruction = 1 CEC	Agenda with date, start & end times; CEC Certificate; Certificate of Completion or attendance
5. Membership in TFMA	1 CEC	Notation on Summary Verification Form
6. Authoring, co-authoring a peer-reviewed published journal article related to flooding or an ASFPM Technical White Paper	6 CECs per article or whitepaper	Copy of the published article or white paper noting CFM by name as author or co-author.
7. Teaching a flood-related course	Varies: 1 whole hour instruction = 2 CECs	Agenda with date, start & end times, CEC Certificate; Certificate of completion or attendance

Request for Approved Continuing Education Credits

Subject Matter

- Benefit-cost analysis
- Building construction (including Codes)
- Communication Skills
- Conflict Resolution
- Customer Service Skills
- Dam and Levee safety
- Disaster assistance procedures
- Disaster Mitigation Act 2000
- Disaster Response and Recovery
- Elevation certificates
- Emergency management
- Facilitation Skills, Train the Trainer
- Flood hazard mitigation (non-structural and structural)
- Flood insurance
- Flooding and flood hazards
- Floodplain management (non-structural and structural)
- Floodplain management ordinance administration
- Floodplain management regulations
- Floodplain mapping (including GIS, LIDAR etc)
- Floodplains and ecosystems (Section 404)
- Floodproofing
- Hurricane response
- Hydrology and Hydraulics
- Land Use Management (including LID)
- Leadership and Management Skills
- Multi-objective management
- Negotiation Skills
- The National Flood Insurance Program
- The National Flood Insurance Program legislation
- No Adverse Impact Floodplain Management
- Presentation Skills, Public Speaking
- Public information programs
- SkyWarn and Storm Ready
- Stormwater management
- Stream gaging
- Time Management and Organizational Skills
- Water quality programs
- Water resource management
- Watershed management
- Wetlands management

Thank you,

Sasha Espinoza
Texas Floodplain Management Association

2006 S. Bagdad Road, Suite 120
Leander, TX. 78641
PH: 512-260-1366
www.tfma.org

From: Schlandt, Ally <allyschlandt@txstate.edu>
Sent: Thursday, April 7, 2022 10:49 AM
To: tfma@tfma.org
Subject: Program requirements for CEC's

Good morning,

I am currently working on a project at the Meadows Center for Water and the Environment where we are developing online educational modules for industry professionals with the hopes of the modules possibly being able to count towards the CFM continuing education requirements. Is there a list of requirements that are needed for courses to qualify as CECs?

Thank you,

From: Debbie Trevino
To: Schlandt, Ally
Subject: RE: Program requirements for CEUs
Date: Thursday, April 7, 2022 10:53:24 AM
Attachments: image003.png
PE CEP Rule 137.17.pdf

Dear Ms. Schlandt,

In response to your email dated today, I offer the following information:

Texas does not preapprove and/or endorse any CEP activity or training. Therefore, the burden of proof lies on engineers to determine if the activity they are going to claim is actually continuing education. The rule states that the activity shall be relevant to a technical profession and may include ethical, educational, technical or managerial content.

If you feel the educational modules falls under this then you can offer continuing edcuation credit. You will need to provide attendees with certification of attendance or sign in sheet, where they can each have a copy for there records in case they are audited.

I have attached Board Rule 137.17 in its entirety for your review. If I can be of any further assistance please do not hesitate to contact me.

Sincerely,

Debbie Trevino
Open Records & Continuing Education Coordinator
Texas Board of Professional Engineers and Land Surveyors

PE LS

512-440-7723 | http://pels.texas.gov
1917 S. Interstate 35, Austin, TX 78741-3702

Please let us know how we are doing by taking a short survey: http://pels.texas.gov/feedback

---

From: Schlandt, Ally <allyschlandt@txstate.edu>
Sent: Thursday, April 7, 2022 10:41 AM
To: Debbie Trevino <Debbie.Trevino@pels.texas.gov>

Subject: Program requirements for CEUs

Good morning,

I am currently working on a project at the Meadows Center for Water and the Environment where we are developing online educational modules for industry professionals, with the hopes of the modules possibly being able to count towards the TBPELS continuing education requirements. Is there a list of requirements that are needed for courses to qualify as approved CEUs?

Thank you,

Ally Schlandt (*she/her/hers)*
Program and Outreach Specialist – Watershed Services
The Meadows Center for Water and the Environment
Texas State University
Phone: (512) 245-4681
Facebook | Twitter
www.meadowscenter.txstate.edu

From: Mary Pearl Meuth
To: Schlandt, Ally; Haggerty, Michelle
Cc: mpmeuth@tamu.edu
Subject: RE: Program requirements for CEUs
Date: Friday, April 8, 2022 10:35:22 AM
Attachments: image001.png

Yes – our chapters use the CMOP – section 5 (page 11-13) to review Advanced Training opportunities. Each chapter is responsible for reviewing them locally and no training is offered with state level approval for AT hours.
https://txmn.tamu.edu/wp-content/uploads/2021/12/CMOP-2021-Nov.pdf

Mary Pearl Meuth
Texas Master Naturalist Program Assistant State Coordinator
Texas A&M AgriLife Extension Service
E-mail: mpmeuth@tamu.edu
Cell: (727) 366-1144

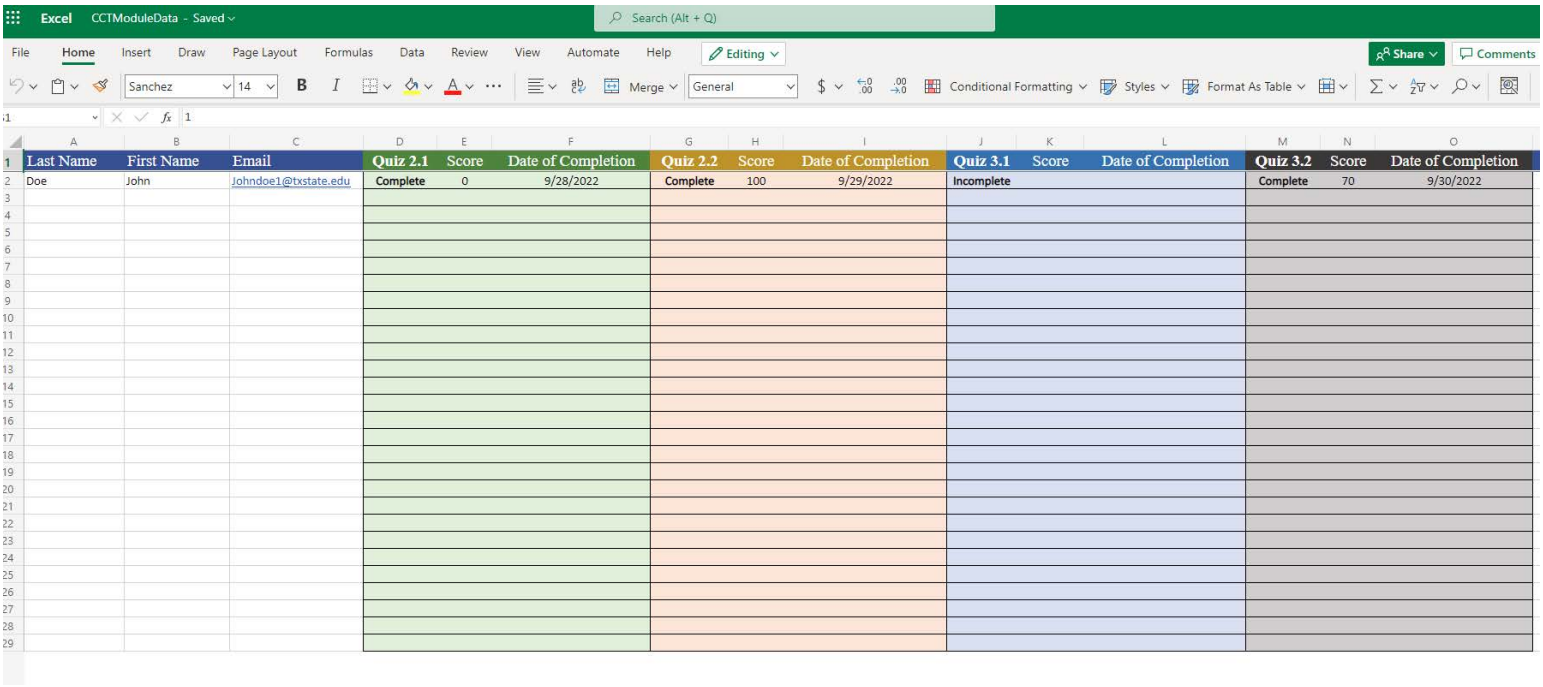
From: Schlandt, Ally <allyschlandt@txstate.edu>
Sent: Thursday, April 7, 2022 10:43 AM
To: Haggerty, Michelle <Mmhaggerty@tamu.edu>
Cc: mpmeuth@tamu.edu
Subject: Program requirements for CEUs

Good morning,

I am currently working on a project at the Meadows Center for Water and the Environment where we are developing online educational modules with the hopes of the modules possibly being able to count towards the Master Naturalist's continuing education requirements. Is there a list of requirements that are needed for courses to qualify as CEUs?

Thank you,

Ally Schlandt (*she/her/hers*)
Program and Outreach Specialist – Watershed Services
The Meadows Center for Water and the Environment
Texas State University
Phone: (512) 245-4681
Facebook | **Twitter**
www.meadowscenter.txstate.edu



Excel CCTModuleData - Saved

Last Name	First Name	Email	Quiz 2.1	Score	Date of Completion	Quiz 2.2	Score	Date of Completion	Quiz 3.1	Score	Date of Completion	Quiz 3.2	Score	Date of Completion
Doe	John	Johndoe1@txstate.edu	Complete	0	9/28/2022	Complete	100	9/29/2022	Incomplete			Complete	70	9/30/2022

CCTX Modules POST survey

1) Please list your affiliation
2) What was your reasoning for completing the modules?
3) How would you rate your overall learning experience?
4) On a scale of 1 – 10, how much did you know about sustainable drainage design prior to completing the modules?
5) On a scale of 1 – 10, how much did your knowledge about sustainable drainage design improve after completing the modules?
6) On a scale of 1 – 10, how likely are you to recommend these modules to a colleague, friend, or place of work?
7) How likely are you to implement the tools and techniques you have learned from the modules?
8) How can we improve the delivery of these modules?
9) Please leave any additional feedback about the modules' content, design, and quizzes.

From: Dornak, Nick
To: Lopez, Christina W
Subject: Fw: New Clean Coast Texas Modules: Requesting feedback
Date: Thursday, October 6, 2022 10:20:40 AM
Attachments: Outlook-sf1qj4r3.png
Outlook-qv41qqtq.png

I sent similar emails to six engineers separately.

Nick Dornak

Director of Watershed Services
The Meadows Center for Water and the Environment – Texas State University
Office [512.245.6697] | **Mobile** [512.213.7389] | www.MeadowsWater.org | **Facebook** | **Twitter**

Inspiring research and leadership that ensure clean, abundant water for the environment and all humanity.

Spring Lake is open daily to the public. To learn more about our COVID-19 guidelines, please visit http://COVID-19Updates.MeadowsWater.org.

From: Dornak, Nick
Sent: Monday, September 19, 2022 2:55 PM
To: Duke Altman <daltman@doucetengineers.com>
Cc: Schlandt, Ally <allyschlandt@txstate.edu>; Tom Hegemier <thegemier@doucetengineers.com>
Subject: New Clean Coast Texas Modules: Requesting feedback

Duke,

It would be great if we could get some feedback on the modules from Doucet Engineers! Link to access below. (Note: These are CEU eligible, but we have not done a formal release just yet.)

Thanks!

Nick

Clean Coast Texas has developed and just launched a series of learning modules based on the Guidance for Sustainable Stormwater Drainage on the Texas Coast manual. These modules are designed to provide a general overview of the manual and its content through interactive materials, videos, case studies, and quizzes to test the user's knowledge of the subject. We invite you to participate in taking these modules and welcome any feedback or comments on the content and overall presentation of information.

You can access the modules by following the link below:
https://cleancoast.texas.gov/learn/index.html

These modules are designed to satisfy continuing education requirements for licenses and professional programs, and we will be confirming the eligibility of CEUs very soon.

Please let us know if you have any questions, we look forward to hearing from you!

Nick Dornak

Director of Watershed Services
The Meadows Center for Water and the Environment – Texas State University
Office [512.245.6697] | **Mobile** [512.213.7389] | www.MeadowsWater.org | **Facebook** | **Twitter**

Inspiring research and leadership that ensure clean, abundant water for the environment and all humanity.

Spring Lake is open daily to the public. To learn more about our COVID-19 guidelines, please visit http://COVID-19Updates.MeadowsWater.org.

Managing stormwater and reducing water pollution are growing challenges for urban areas across the Texas coast. Clean water and clean beaches are essential elements that fuel a powerful Gulf Coast economy. Development that incorporates green stormwater infrastructure can enhance community resiliency, improve water quality, and reduce flooding.

Clean Coast Texas released **new learning modules** that provide the knowledge and tools to promote and implement green stormwater infrastructure projects in new and existing development. Participants will be armed to work collaboratively across departments and partnerships to enhance their community resilience with green stormwater infrastructure.

Course Overview

The learning modules provide participants with the foundation to successfully implement a green stormwater infrastructure project — from planning to evaluation and every step in between. Each module includes real case studies and quizzes to test the user's knowledge of the content. The online modules are designed for the working professional in mind and can be completed in small parts, whether you have 10 minutes or an hour.

By completing all three modules and quizzes, participants can submit a certificate of completion for Continuing Education Units/Credits from the Texas Board of Professional Engineers and Land Surveyors or the Texas Floodplain Management Association. We are working on additional CEU opportunities and provide updates as they become available.

Who Should Enroll?

Staff and officials from municipalities, counties, non-governmental organizations, councils of government, river authorities, bay and estuary programs, developers, engineers, and others operating within the **Texas Coastal Zone Boundary**, which includes all or part of 18 counties along the Gulf of Mexico.

LEARN MORE

How Can We Help Your Coastal Community?

Clean Coast Texas and its partners are seeking input from coastal residents to learn how we can best support efforts to combat water pollution and improve water quality. Please take a **quick survey** to inform future workshops and

TAKE THE SURVEY

Help us spread the word!

Share Tweet Forward to a Friend

LEARN ABOUT CLEAN COAST TEXAS

APPENDIX C: INFORMATIONAL FORM

Form responses are available here.

Informational Form

Based on feedback from coastal managers, The Texas General Land Office's Clean Coast Texas program seeks your feedback to help in developing educational resources to aid communities in communicating coastal water quality information. Information that you provide will help us understand the most critical issues of your communities and produce educational materials to be distributed.

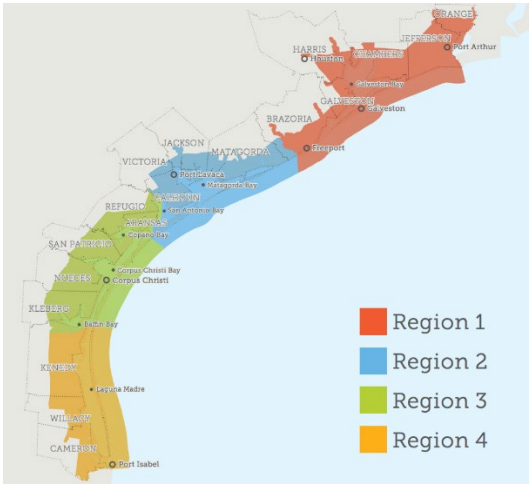
This survey should take approximately 15 minutes to complete.

Please share your name and contact information:

Name:

Email:

1) Please indicate which region of the Texas Coast Zone you are located:



- Region 1 (Orange, Jefferson, Chambers, Harris, Galveston, Brazoria counties)
- Region 2 (Matagorda, Jackson, Victoria, Calhoun counties)
- Region 3 (Aransas, Refugio, San Patricio, Nueces, Kleberg counties)
- Region 4 (Kenedy, Willacy, Cameron counties)

2) In your own words, please define water quality.

3) **In your own words, please describe good water quality.**
4) **In your own words, please describe bad water quality.**
5) **How does water quality impact your community?**

6) **Of the following options, please select the top three issues concerning water quality in your community:**
- Bacteria/Septic systems/Domestic wastewater treatment plants
- Stormwater runoff (nonpoint source) pollution
- Impacts from development or land use change
- Harmful algal blooms
- Beach advisories

  Other _____

7) **Of the following options, please select the two greatest barriers to improving water quality in your community.**
- Funding or lack of funding
- Lack of technical expertise
- Public support
- Lack of public awareness/education
- Emphasis placed on community development (e.g. residential, commercial, etc.)

  Other

8) **Does ecotourism and/or outdoor activities play a role in attracting visitors to your community?**
   a. Yes
   b. No
   c. I don't know

9) **Which type of beach are the members of your community more likely to use?**
   A. Gulfside
   B. Bayside
   C. I don't know

10) **Of the following, which activities do you see members of your community participating in most often (Please select the top two).**
- Fishing
- Kayaking/paddleboarding/wind surfing
- Recreational swimming
- Shellfish/oyster harvesting
- Birding
- Other_____

11) **Of the following, please select the top three primary methods of communication that members of your community receive local environmental/water quality news and information? (Select all that apply)**

- Social Media (Facebook, Twitter, Instagram, etc.,)
- E-Mail
- Text Messaging
- Local Newspapers or other print media
- Local forums (Nextdoor)
- Radio/Television Advertisements
- Signage (billboards/beach/access sites)
- Other (please list below)

12) **Of the following, please select the top three primary methods of communication that members of your community distribute local environmental/water quality news and information? (Select all that apply)**

- Social Media (Facebook, Twitter, Instagram, etc.,)
- E-Mail
- Text Messaging
- Local Newspapers or other print media
- Local forums (Nextdoor)
- Radio/Television Advertisements
- Signage (billboards/beach/access sites)
- Other (please list below)
-

13) **Where would be the best places to install educational signage in your community?**

Thank you for your participation and we look forward to following up with you soon!

Coastal Contacts invited to participate:

First Name	Last Name	Organization	Position	Phone	Email
Kelly	de Shaun	Galveston Island Park Board	Chief Executive Officer	409-797-5000	info@galvestonparkboard.org
Larry	Jackson	Galveston Island Park Board	Operations Manager	409-797-5105	ljackson@galvestonparkboard.org
Michael	Woody	Galveston Island Park Board	Chief Tourism Officer	409-797-5163	mwoody@galvestoncvb.com
Craig	Brown	City of Galveston	Mayor	409-797-3500	craigbrown@galvestontx.gov
Brian	Maxwell	City of Galveston	City Manager	409-797-3520	citymanager@galvestontx.gov
Brian	Frazier	Brazoria County	Parks Director	979-864-1114	bryanf@brazoria-county.com
Donald "Dude"	Payne	Brazoria County	County Commissioner	979-265-3953	dudep@brazoria-county.com
Gregg	Bisso	Surfside Beach	Mayor	713-419-1595	gbisso@aol.com
Nate	McDonald	Matagorda County	County Judge	979-244-7605	cojudge@co.matagorda.tx.us
David	Parsons	Port Aransas	City Manager	361-749-4111 ext 224	davidparsons@cityofportaransas.org
Malcolm	Dieckow	ACND	Commissioner Chairman		texjarman@sbcglobal.net
Keith	Barrett	ACND	Harbor Master		aransasnav1@yahoo.com
Patrick "Pat"	Rios	Rockport	Mayor	361-729-2213 ext 221	mayor@cityofrockport.com
Scott	Cross	Nueces County	Parks Director	361-949-8122	
Paulette	Guajardo	Corpus Christi	Mayor	361-826-3100	paulette.guajardo@cctexas.com
Eddie, Jr	Treviño	Cameron County	County Judge	956-544-0830	etrevino@co.cameron.tx.us
Patrick	McNutly	South Padre Island	Mayor	956-761-8109	pmcnulty@myspi.org
Tim	Tiete	City of Galveston	Director of Dev Services	409-797-3668	planningcounter@galvestontx.gov
Brandon	Hill	City of Galveston	Coastal Resources Manager	409-766-0817	BHill@galvestontx.gov
Travis	Pruski	Nueces River Authority	Director of Planning	210-710-0617	tpruski@nueces-ra.org
Sam	Sugarek	Nueces River Authority	Director of Water Quality Programs	361-653-2110	ssugarek@nueces-ra.org
Joan	Holt	City of Port Aransas	City Council Member	361-749-4111	joanholt@cityofportaransas.org
Todd	Running	H-GAC	CRP Manager	713-983-8318	todd.running@h-gac.com
Brandon	Cook	City of Galveston	Assistant City Manager	409-797-3520	bcook@cityofgalveston.org
Kristina	Boburka	City of South Padre Island	Shoreline Director	956-761-3837	kboburka@myspi.org
Kiersten	Stanzel	Coastal Bend Bays and Estuaries Program	Director of Partnerships	361-336-0315	kstanzel@cbbep.org
Andrea	Hattman	City of Rockport	City Council Member	361-230-4210	andreahattman@gmail.com
Rick	Sallier	Galveston	Local Stakeholder	409-944-8886	
Martin	Ornelas	Jim Wells County	Local Stakeholder	361-668-3158	
Christopher	Anderson	Jim Wells County	Local Stakeholder	361-219-9133	
Kobby	Agyekum	Kleberg County	Local Stakeholder	361-219-9325	
MJ	Jones	Nueces County	Local Stakeholder	361-877-1386	
Tushar	Sinha	Kleberg County	Local Stakeholder	765-409-5761	
Miranda	Delagarza	Nueces County	Local Stakeholder	361-474-0450	
Scott	Harris	Nueces County	Local Stakeholder	361-876-6395	
Pepe	Martinez	Kleberg County	Local Stakeholder	361-944-4597	
Patrick	Larkin	Nueces County	Local Stakeholder	210-865-5406	

APPENDIX D: WATERPR VIDEO BRIEF

WaterPR
We talk water.

VIDEO PROJECT BRIEF

Client:	Meadows Center for Water and the Environment
Contact(s):	Nick Dornak, Ally Schlandt
Project Name:	Three Videos for Clean Coast Texas
Date:	~~April 5, 2022,~~ REV April 18, 2022

Project Description: Produce three 3- to 5-minute videos as a series to bring awareness to diverse audiences about water quality challenges and solutions in the rapidly growing Texas Coastal Zone.

Purpose & Project Goals: Raise awareness and provide a discussion stimulator.
- communication and outreach tool for local partners
- catalyst for local action programs

Audiences:
1) General public through civic and professional organizations, churches, schools
2) Local elected leaders and city/county staff, chambers of commerce other local govt entities
   Non-profit organizations who focus on economy, tourism, resource protection, environment, including watershed protection planning groups

Distribution:
- Website (CleanCoastTexas.gov)
- Social media platforms
- Partners

Video Content & Messages

Video #1: Situation
Texas Coastal Zone role in Texas economy, fishing, tourism, eco-tourism, wildlife; water system, river outfalls, tidal streams, bays, estuaries, freshwater/marine water,

Video #2: Problems/Challenges/Threats
Growth, development, construction, people, non-point source pollution, stormwater management, climate change, rising seawaters, wastewater treatment, litter/illegal dumping

Video #3: Solutions/Calls to Action
Residential: landscape, septic maintenance, rainwater collection
Community: cleanups, awareness campaigns, dune protection, estuaries, wetland protection,
Government: building codes and guidance, guidance for road/bridge/highway building guidance

Approach
Three interviews at each production location, ideally (1) a local elected or key city or county staff member, (2) non-profit leader or teacher, and (3) biologist or content expert. Expect that interview subjects will come out of the stakeholder interviews.

Schedule:

April-May	Pre-production planning:
May/June/July	Production: - Region 1: Galveston/Brazoria/Surfside - Region 3: Corpus Christi/Port A/Rockport/Nueces County - Region 4: South Padre/Brownsville - Region 2: Matagorda/Jackson/Victoria(?)
July/August/September	Post-production

Approved by: Nick Dornak **Date:** 4/19/2022

VIDEO PROJECT BRIEF

Client:	Meadows Center for Water and the Environment
Contact(s):	Nick Dornak, Ally Schlandt
Project Name:	Three Videos for Clean Coast Texas
Date:	April 5, 2022

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   Non-profit organizations who focus on economy, tourism, resource protection, environment, including watershed protection planning groups

Commented [SA1]: We're just moving this group to the top because they are the target outreach group for these videos.

Distribution:
- Website (CleanCoastTexas.gov)
- Social media platforms
- Partners

Video Content & Messages

Video #1: Situation

Texas Coastal Zone role in Texas economy, fishing, tourism, eco-tourism, wildlife; water system, river outfalls, tidal streams, bays, estuaries, freshwater/marine water,

Video #2: Problems/Challenges/Threats

Growth, development, construction, people, non-point source pollution, stormwater management, climate change, rising seawaters, wastewater treatment, litter/illegal dumping

Video #3: Solutions/Calls to Action

Residential: landscape, septic maintenance, rainwater collection
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July/August/September	Post-production

Clean Coast Texas Video Travel & Production Plan
July 29, 2022

CONTACTS

WPR	Karen Ford	512-922-8234	kford@waterpr.com
	Jim Canning	512-779-4389	jim@jim-canning.com
Meadows			
GLO			

LOCATIONS/INTERVIEWEES (potential)

Region 1: Houston/Galveston/Brazoria/Surfside

- John Anderson, Rice University??
- Kelly de Schaun, CEO, Galveston Parks Board (meeting)
- Mayor Gregg Bisso, Surfside Beach, TX (713-419-1595)

Region 3: Corpus Christi/Port Aransas/Rockport

- Andrea Hattman, Rockport City Council ??
- Judge Barbara Canales, Nueces County Judge
  - Contact Tim Richardson, 202-352-1269; trpr51@gmail.com
- David Read, Aransas County Engineer (solutions, Rockport) ??
- Michael Wetz, Harte Research Institute, Corpus Christi
- Travis Pruski, Director of Planning, Nueces River Authority

Region 4: South Padre/Brownsville

Region 2: Matagorda

- Bill Balboa??, Palacias

DRAFT SCHEDULE

Week of August 1, 2022

8/1, Mon
Travel to Houston
Interview at Rice University
Travel to Galveston

8/2, Tues
Galveston interview:
Surfside Beach interview:
B-roll Galveston
Travel to Rockport

8/3, Wed
Rockport interview:
??
Travel to Corpus Christi
Interview: Michael Wetz, Harte Research Institute; 361.825.2132
Michael.Wetz@tamucc.edu
https://www.harte.org/people/michael-wetz

Interview: Nueces River Authority

	B-roll Corpus Christi
	Overnight Corpus Christi
8/4, Thur	Travel to S Padre
	Interview 1
	Interview 2
	B-roll S Padre, Brownsville
	Overnight Port Isabell or Brownsville
8/5, Fri	B-roll S. Padre and Brownsville
	Travel home

APPENDIX E: EDUCATIONAL SIGNS

Drafts and Community Interest Form

Your pet's business is also YOUR business

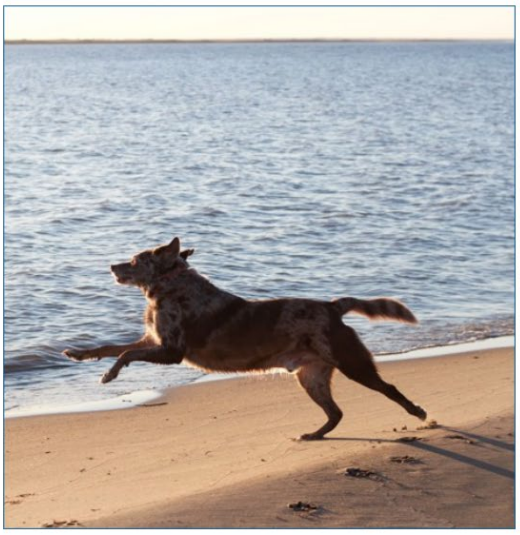
Did you know one of the largest sources of bacteria pollution in water bodies comes from pet and animal waste?

High amounts of bacteria in our bays and beaches can harm human and aquatic health, making it unsafe to enjoy our local beaches and waterways. Bacteria, such as E.coli, can also come from sources such as sewage leaks, agricultural practices, and even our pets!

YOU can make a difference!

While pet waste is a common source of bacteria, it is also the most preventable! You can help prevent bacteria pollution by:

- Always bringing a bag
- Cleaning up after your pet every single time
- Disposing of pet waste properly, either in a trash can or flushing down the toilet

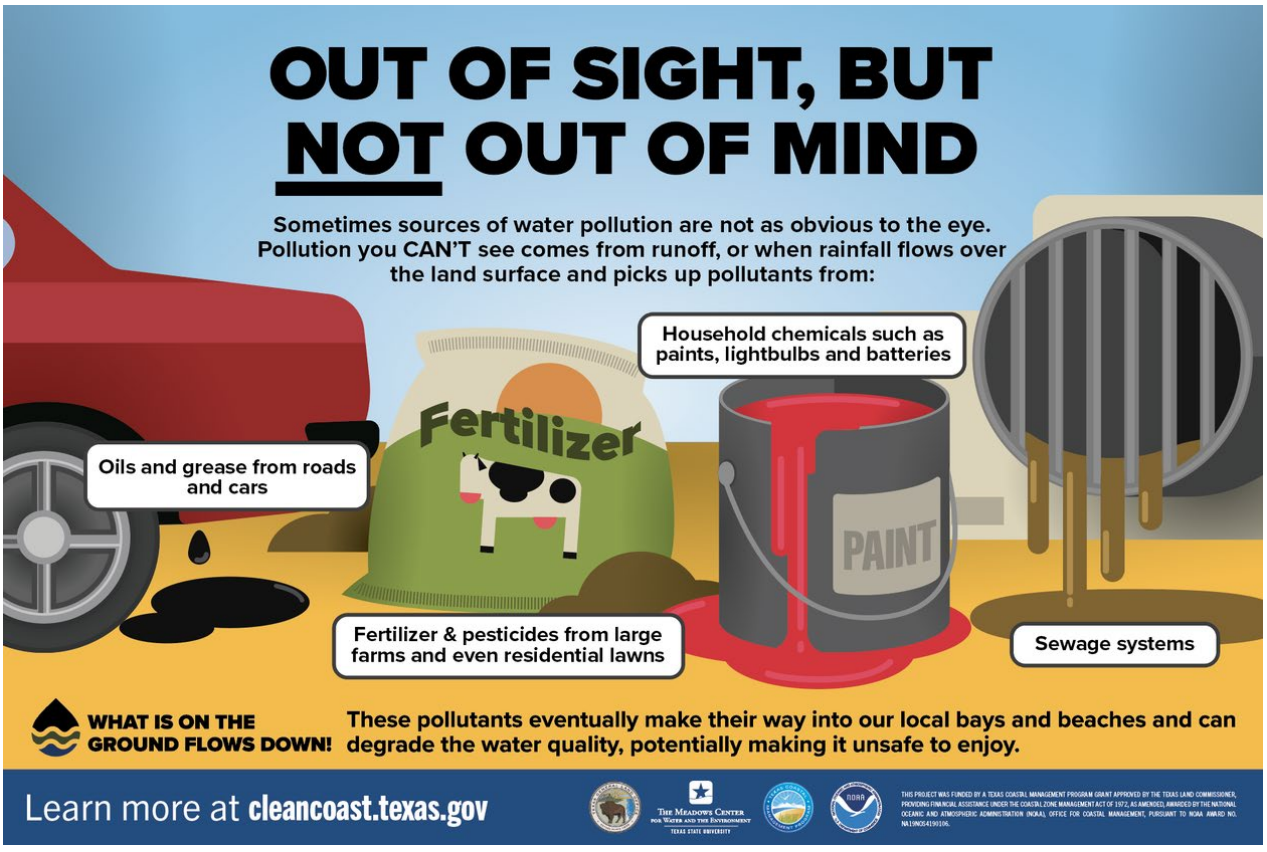


Learn more about how Clean Coast Texas is making a difference in your community by visiting: cleancoast.tx.gov or scanning the QR code.

SCAN ME

The Meadows Center for Water and the Environment
Texas State University


HAVE YOU SEEN THESE POLLUTERS?
CLEAN COAST TEXAS
ANIMAL WASTE
CLEAN COAST TEXAS
HUMAN LITTER
CLEAN COAST TEXAS
LIVE STOCK
CLEAN COAST TEXAS
HUMAN LITTER
TOO MUCH BACTERIA AND LITTER CREATE UNSAFE BEACHES
Animal Waste Not only smelly — it contains harmful bacteria. If not picked up, that bacteria end ups in our beaches and bays.
Litter Trash, especially plastics, hurts wildlife and water quality. Wildlife can mistake trash for food. Trash, like glass, is a safety hazard.
YOU CAN HELP PREVENT THESE COMMON TYPES OF POLLUTION BY:
•Properly disposing of trash and fishing line, even if it isn't yours
•Picking up after your pet
•Packing drinks and snacks in reusable bags and containers
Learn more at cleancoast.texas.gov
THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY


OUT OF SIGHT, BUT NOT OUT OF MIND
Sometimes sources of water pollution are not as obvious to the eye. Pollution you CAN'T see comes from runoff, or when rainfall flows over the land surface and picks up pollutants from:
Household chemicals such as paints, lightbulbs and batteries
Fertilizer
PAINT
Oils and grease from roads and cars
Fertilizer & pesticides from large farms and even residential lawns
Sewage systems
WHAT IS ON THE GROUND FLOWS DOWN!
These pollutants eventually make their way into our local bays and beaches and can degrade the water quality, potentially making it unsafe to enjoy.
Learn more at cleancoast.texas.gov
THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

Coastal Water Quality Educational Signage - Feedback and Placement Interest

We've got signs for you!

Clean Coast Texas has crafted two signs and for public spaces in your community. The two signs are paired by complementary themes: the pollution you **can** see and the pollution you **can't** see. We are offering printed signs in sizes 24" X 36" or 36" X 48". These signs will be printed on materials compatible for long-term, outdoor display.

We have 30 signs to offer coastal communities — and we would like to help bring them to yours. Please complete the short form below to provide feedback on the signs and how they could best serve your community.

* Required

Feedback on Two Signs

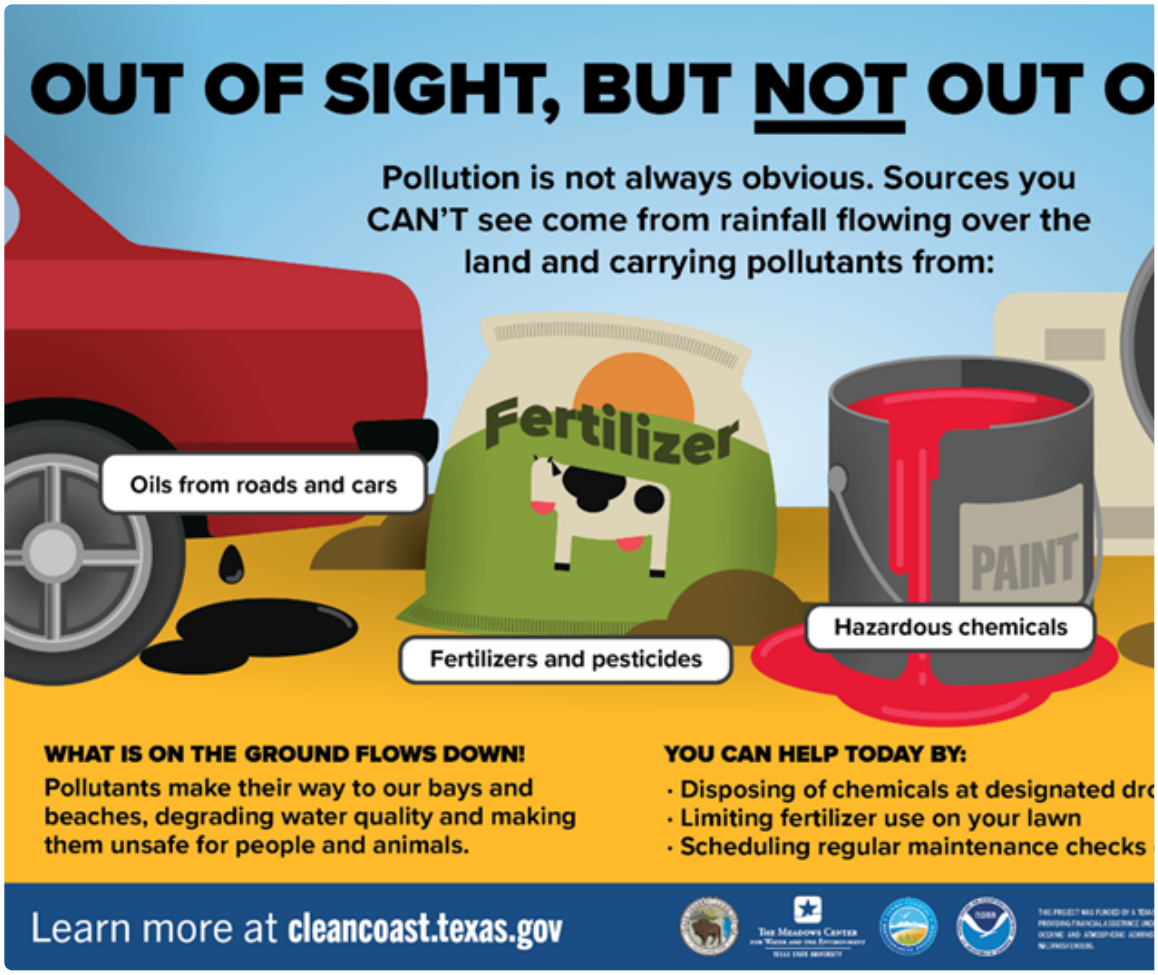
We've created two themes around water quality: the pollution you **can** see and the pollution you **can't** see. Please let us know what feedback, if any, you have on the two designs below.

1

Sign 1 - Pollution You **Can** See

2

Sign 2 - Pollution You **Can't** See



Sign Placement and Installation

Could your community benefit from these signs? Please complete the questions below.

3

Would you like the pair of signs delivered to your community?

- ◯ Yes
- ◯ No
- ◯ Maybe in the future

4

What size would you like?

- ◯ 12″ X 18″
- ◯ 24″ X 36″
- ◯ [LARGER]

5

What is a good location to deliver the signs? (Please provide an address)

6

At which public location(s) do you think the signs should be placed? (please provide a brief written description of locations in your community)

7

Will your community need help installing the signs? Clean Coast Texas may be able to offer financial assistance.

- Yes
- No
- Maybe

8

Is there a need for the materials to be translated into Spanish for your community?

- Yes
- No
- Maybe

9

Please provide your name and organization:

10

Please provide your email address:

11

Are you the best person to continue coordinating installation efforts in your community? *

- Yes
- No

12

Who is the best person to contact regarding coordinating installation? (Please provide name, organization, and email) *

Thank You!

We appreciate your feedback and interest in the educational signage. Clean Coast Texas will be in touch with you soon.

The Meadows Center
for Water and the Environment
Texas State University

601 University Drive, San Marcos Texas 78666
512.245.9200 | MeadowsCenter@txstate.edu | www.MeadowsWater.org