



NFWF

Final Programmatic Report Narrative

Instructions: Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages; do not delete the text provided below. Once complete, upload this document into the on-line final programmatic report task as instructed.

1. Summary of Accomplishments

In four to five sentences, provide a brief summary of the project's key accomplishments and outcomes that were observed or measured.

A total of twelve trash capture devices known as Watergoats were installed at ten sites in May 2022. In total, 26,616 pounds of trash have been collected from the Village Creek-Lake Arlington (VCLA) watershed and the City of Fort Worth waterways. 14,010 pounds of trash have been collected from the Watergoat locations as of June 23rd and 12,606 pounds of trash have been collected through litter cleanup events. 13 litter surveys have been completed at each site for a total of 130 surveys. Multiple social media posts and newsletters were sent out to our stakeholders, reaching a total of 9,882 people. Workshops, Demonstrations, Presentations were held throughout the year and involved 1,828 people. The participating organizations worked together to directly engage 558 community members in seven (7) litter cleanups at or near Watergoat sites. Our project was published in the [Fort Worth Report](#) in July 2022. The City of Fort Worth expanded their contract with UpSpire and will be maintaining the Watergoats after this project concludes. Their Watergoat storymap can be found [HERE](#).

2. Project Activities & Outcomes

Activities

- *Describe and quantify (using the approved metrics referenced in your grant agreement) the primary activities conducted during this grant.*

Trinity River Authority of Texas (TRA), UpSpire, Tarrant Regional Water District (TRWD), University of Texas at Arlington (UTA), and Dorris Family Foundation met monthly and contributed services to our goals since February 2022. The City of Fort Worth Keep Fort Worth Beautiful (KFWB) joined our monthly meetings and began assisting with maintenance of the Watergoats, organizing and conducting litter cleanups at or near Watergoat locations, and published information about our Watergoat project on their social media platforms. In total, six (6) organizations contributed to the goals of this project.

Twelve trash capture devices known as Watergoats were installed at ten sites in May 2022 and impacted more than 21,935 acres in the Village Creek-Lake Arlington (VCLA) watershed and City of Fort Worth Parks. Sites one (1) through five (5) are located within the VCLA watershed and impact 91,419.26 acres. Sites six (6), seven (7), and eight (8) are located within the Sycamore Creek watershed and impact 23,684.15 acres. Sites nine (9) and ten (10) are located within the Marine Creek – West Fork Trinity River watershed and impact 21,021.82 acres. In total, the trash capture devices impact 136,125.23 acres. To date, 14,010 pounds of trash have been collected from the Watergoat locations and 12,606 pounds have been collected through litter cleanup events.

Signage was installed at six (6) Watergoat locations. The signs were imprinted with TRA, UpSpire, the City of Fort Worth and/or Dorris Family Foundation logos as well as a QR code that leads the user to the City of Fort Worth's Watergoat story map. The six (6) sites where signs can be found are Site 5 Rosedale, Site 6 Cobb Park, Site 7 Echo Lake, Site 8 Krauss Baker Park, Site 9 Trail Drivers Park, and Site 10 Stockyards.

[Litter and Trash Surveys](#) (LATS) have been conducted at each site 13 times for a total of 130 completed surveys. Four sites are considered Critical due to habitual dumping as well as a significant homeless population. Three sites are considered Moderate to Significant due to type and amount of floatables found within the waterbody. The remaining sites have Minimal impact from litter. In addition to the monthly LATS, UpSpire monitored the sites bi-weekly and at least three days after a rainfall event.

TRA, UTA, and the City of Fort Worth KFWB worked together to engage 1,828 people through 15 workshops, classes or other demonstrations. The minimum amount of attendees at a given event was 30 and the maximum was 500. In addition, TRA hosted a booth at the [EarthX](#) event at Fair Park Dallas between April 21st - April 23rd 2023. The EarthX administrators estimate the event reached 60,000 attendees.

TRA, UTA, and UpSpire published and emailed five (5) newsletters throughout the project period and reached 14,105 people. In July 2022, the [Fort Worth Report](#) published a story about our Watergoat project.

TRA, UTA, UpSpire, TRWD, and the City of Fort Worth KFWB collectively posted 64 social media posts on Facebook, Instagram, and LinkedIn. In total, these posts reached 9,882 people.

TRA, UTA, TRWD, and the City of Fort Worth KFWB worked together to directly engage 558 community members in 7 litter cleanups at or near Watergoat sites.

- *Briefly explain discrepancies between the activities conducted during the grant and the activities agreed upon in your grant agreement.*

There were no discrepancies between activities conducted during the grant and activities agreed upon in our grant agreement. All activities and deliverables were completed.

Outcomes

- *Describe and quantify progress towards achieving the project outcomes described in your grant agreement. (Quantify using the approved metrics referenced in your grant agreement or by using more relevant metrics not included in the application.)*

Building institutional capacity - # of orgs contributing to goals:

Trinity River Authority of Texas (TRA), UpSpire, Tarrant Regional Water District (TRWD), University of Texas at Arlington (UTA), and Dorris Family Foundation met monthly and contributed services to our goals since February 2022. The City of Fort Worth Keep Fort Worth Beautiful (KFWB) joined our monthly meetings and began assisting with the maintenance of the Watergoats, organizing and conducting litter cleanups near Watergoat locations, and publishing information about our Watergoat project on their social media platforms. In total, six (6) organizations contributed to the goals of this project exceeding the target value of five (5).

Monitoring - # sites being monitored:

Ten (10) sites were monitored monthly by TRA, conducting litter and trash assessments based on protocol developed under the VCLA WPP. These sites were also monitored and cleaned biweekly or within 3 days of a rain event by UpSpire. Litter and Trash Surveys (LATS) have been conducted at each site 13 times for a total of 130 completed surveys. Four sites are considered Critical due to habitual dumping as well as a significant homeless population. Three sites are considered Moderate to Significant due to type and amount of floatables found within the waterbody. The remaining sites have Minimal impact from litter. The target value of ten (10) sites being monitored has been met. A few results of the survey show that 88% percent of the litter observed were beverage containers made of varying materials, but most prominently either aluminum, plastic or Styrofoam. 97% percent of the litter observed was basic litter, i.e. small pieces of trash. 40% percent of the time the amount of litter found at a site was less than the size of a trash can and 25% percent of the time between the size of a trash can, but less than a dumpster. 12% percent of the time the amount of trash was greater than the size of a dumpster.

Outreach/Education/Technical Assistance - # of people reached:

TRA, UTA, and the City of Fort Worth KFWB worked together to engage 1,828 people through workshops, classes or other demonstrations. The target value of 1,000 people reached was met. UTA held an Activity Fair Day on January 25, 2023 and reached 70 people. UTA hosted a booth at World Water Day on March 22, 2023 on campus and reached 150 people. KFWB presented at the City of Fort Worth Litter Summit on January 27th, 2023 and reached 30 people. TRA presented at the following conferences, meetings, workshops or events:

- Houston-Galveston Regional Litter and Marine Debris Prevention Workshop on May 11, 2022 and reached 50 people.
- North Central Texas Council of Governments (NCTCOG) Trinity River National Water Trail Meeting on August 9th, 2022 and reached 22 people.
- Texas Riparian and Stream Ecosystem Workshop, October 19, 2022 and reached 50 people.
- Urban Riparian Symposium on February 9, 2023 and reached 50 people.
- City of Fort Worth Parks and Recreation Department Operations team and reached 75 people on February 28th, 2023
- City of Fort Worth KFWB Cowtown Great American Cleanup on March 25th, 2023 and reached 200 people.
- April 1, 2023 at River Legacy Earth Day and reached 400 people.
- April 15th at the City of Grand Prairie Earth Day and reached 500 people.
- UTA Earth Day on April 19th, 2023 and reached 150 people.
- NCTCOG Regional Stormwater Management Coordinating Council on May 18th, 2023 and reached 33 people.
- NCTCOG Pollution Prevention and reached 33 people on June 7, 2023.
- Vital Link Fort Worth Independent School District program on June 15, 2023 and presented on the Watergoat project and toured 15 to different Watergoat sites.
- EarthX event at Fair Park Dallas between April 21st - April 23rd 2023. The EarthX administrators estimate the event hosted 60,000 attendees.

Outreach/Education/Technical Assistance - # of edu signs installed:

Signs were installed at six (6) sites and exceeded the target value of five (5). The signs were imprinted with TRA, UpSpire, the City of Fort Worth and/or Dorris Family Foundation logos as well as a QR code that leads the user to the City of Fort Worth's storymap. The six (6) sites where signs can be found are Site 5 Rosedale, Site 6 Cobb Park, Site 7 Echo Lake, Site 8 Krauss Baker Park, Site 9 Trail Drivers Park, and Site 10 Stockyards.

Outreach/Education/Technical Assistance - # people targeted through emails and newsletters:

TRA published two (2) newsletters, September 2022 and June 2023, and reached 516 and 997 people, respectively. UpSpire published two (2) newsletters, July 2022 and June 2023, and reached 3,795 and 8,717 people respectively. UTA [Regional Center for Expertise for Education on Sustainable Development](#) published a newsletter in Spring 2023 and reached 80 people. 14,105 people were targeted through email and newsletters exceeding the target value of 3,000.

Outreach/Education/Technical Assistance - # social media posts:

TRA posted or reshared on Facebook, Instagram and/or LinkedIn seven (7) times and reached 3,227 people. UpSpire posted on Facebook, Instagram, and LinkedIn a combined total of 22 times and reached 4,412 people. TRWD posted on Facebook and Instagram one time each and reached 904 people. The City of Fort Worth KFWB posted on Facebook six (6) times and shared partners posts 19 times. Their platforms collectively reach 66,600 people. UTA posted a total of eight (8) social media posts on Facebook and Instagram and reached an average of 200 people. In total, 64 social media posts were published exceeding the target value of 18 social media posts.

Volunteer participation - # volunteers participating:

TRA, UTA, TRWD, and the City of Fort Worth KFWB worked together to directly engage 558 community members in 7 litter cleanups at or near Watergoat sites. The City of Fort Worth KFWB held a Neighborhood Litter Stomp on October 16, 2022 at Watergoat Site 5 in Eugene McCray Park. 33 Volunteers cleaned up 760 pounds (lbs.) of debris. The City of

Fort Worth KFWB Cowtown Great American Cleanup was held on March 26, 2022 and 77 volunteers cleaned up 2,300 lbs. of debris at Watergoat Site 5 Eugene McCray Park. Throughout the year, 61 volunteers routinely cleaned up Eugene McCray Park and collected 1,176 lbs. of debris. UTA held a cleanup for World Water Day on March 25, 2023 and 10 volunteers collected 270 lbs. of trash. This cleanup was conducted at Watergoat Site 3 Wildcat Branch. TRA hosted a cleanup at Watergoat Site 6 cobb park and six (6) volunteers participated. The City of Fort Worth KFWB hosted the annual Cowtown Great American Cleanup on March 25, 2023 where 241 volunteers cleaned up 3,310lbs of trash and debris. On April 22, 2023 UTA-The Big Event held a cleanup event at Watergoat Site 3 Wildcat Branch where 120 volunteers, plus 8 site leaders and 2 TRA leaders attended and collected 1,200 lbs. of trash. TRWD administered Adopt-A-River and Trash Bash media and programs throughout 2022 and 2023. In total, 558 volunteers participated exceeding the target value of 500 volunteers.

BMP implementation for stormwater runoff – Acres with BMPs and Improved Management practices – Acres under improved management:

Twelve (12) trash capture devices known as Watergoats were installed at ten (10) sites in May 2022 and impacted more than 21,935 acres in the Village Creek-Lake Arlington (VCLA) watershed and City of Fort Worth Parks. Sites one (1) through five (5) are located within the VCLA watershed and impact 91,419.26 acres. Sites six (6), seven (7), and eight (8) are located within the Sycamore Creek watershed and impact 23,684.15 acres. Sites nine (9) and ten (10) are located within the Marine Creek – West Fork Trinity River watershed and impact 21,021.82 acres. In total, the trash capture devices impact 136,125.23 acres. To date, 14,010 pounds of trash have been collected from the Watergoat locations and 12,606 pounds have been collected through litter cleanup events.

- *Briefly explain discrepancies between what actually happened compared to what was anticipated to happen.*

In June 2022, Site 9 was vandalized and removed for repairs. In July 2022, a storm with severe precipitation, high velocity, and stormwater runoff tangled Site 6. It was removed for repairs and reinstalled farther downstream. In August 2022, another severe storm caused Site 1 and Site 2 to separate from the banks. Site 1 and 2 have been reinstalled farther upstream. Site 5 was removed in August 2022 due to lack of trash. In October 2022, Site 5 and Site 9 were relocated and installed at E Rosedale Plaza and Trail Drivers Park, respectively. The unprecedented rainfall as well as prolonged dry periods have been unexpected. Since October 2022, there have been multiple severe storms that have dislodged the Watergoats through high flow velocity and heavy woody debris entanglement. The Watergoats had to be removed, repaired, and replaced often. This was not anticipated and thus increased the amount of in-kind contributions from our partner organizations.

The City of Fort Worth submitted a letter of support for this project, but were not an original contributor to the project goals. However, they ended up becoming a vital contributor to achieving our goals. They published multiple social media posts, hosted multiple litter cleanups at or near Watergoat sites, and assisted UpSpire with Watergoat Maintenance. In January 2023, they expanded their contract with UpSpire and will be managing the Watergoats going forward.

- *Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.*

No further information.

3. Lessons Learned

Describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project's methods, monitoring, or results. How could other conservation organizations adapt their projects to build upon some of these key lessons about what worked best and what did not?

Watergoats installed in woody habitat were prone to continuous damage by woody debris. If the woody debris was large enough, it would dislodge and tangle the Watergoat downstream. It took considerable effort to find and remove the Watergoat for repair. Repairment of the Watergoat is relatively easy albeit tedious. Watergoats are now installed downstream or upstream of heavily wooded streams to reduce damage to the asset. High flows are also not conducive to Watergoat operation. Although the Watergoat was designed to function in varying flows, it will become dislodged during those higher flows. It was determined that low flows or no flow drainage channels were the most successful. Signage

should have been installed prior or at the same time as Watergoat install. Vandalism did occur at a location prior to a sign being installed. Water depth and ease of access to Watergoat should also be considered.

The Watergoats work very well under the right conditions. It is an excellent visual for education and outreach and assists local government entities in meeting their stormwater management plan and/or watershed protection plan goals. The LATS narrowed in on habitual illegal dumping locations. The locations identified were then cleaned up in a short time frame. The LATS will support TRA's involvement in reducing illegal dumping and litter accumulation throughout our watersheds.

4. Dissemination

Briefly identify any dissemination of lessons learned or other project results to external audiences, such as the public or other conservation organizations.

The lessons learned from this project were presented to the City of Fort Worth Parks and Recreation Department (PARD) Operations team on February 28th, 2023 and reached 75 people. The City of Fort Worth PARD is interested in purchasing additional Watergoats to implement in their [programs](#). Currently, the City of Fort Worth [Code Compliance Department](#) has ownership of six (6) Watergoats and will take ownership of the Watergoats used in this project after conclusion. Lessons learned and project results were also presented to the North Central Texas Council of Governments Regional Stormwater Management Coordinating Council on May 18th, 2023 and reached 33 people as well to the Pollution Prevention Committee on Jun 7, 2023 and reached 33 people. The attendees consisted of public and conservation organizations that are interested in implementing this project in their jurisdictions.

5. Project Documents

Include in your final programmatic report, via the Uploads section of this task, the following:

- *2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi and must be accompanied with a legend or caption describing the file name and content of the photos;*
 - a. (1) Installation of Watergoat at Site 6 Cobb Park on May 17, 2022. UpSpire, TRA, City of Fort Worth and Watergoat Staff are depicted carrying the Watergoat on the low water crossing over Sycamore Creek. The Watergoat was moved farther downstream in August 2022 after a severe rainfall event. Then moved again in March 2023 after woody debris tangled the Watergoat. Credit: Trinity River Authority of Texas.
 - b. (2) Installation of Watergoat at Site 10 Stockyards on May 16, 2022. TRA and Watergoat Staff are depicted. Credit: Trinity River Authority of Texas
 - c. (3) Site 10 Stockyards on May 25, 2022 – First Litter and Trash Survey. Credit: Trinity River Authority of Texas
 - d. (4) Site 6 Cobb Park on June 22, 2022 after first heavy rainfall event. Note woody debris downstream that tangled and dislodged the Watergoat. Credit: Trinity River Authority of Texas
 - e. (5) Installation of Watergoat at Site 9 Trail Drivers Park on October 5 2022. UpSpire and TRA are depicted. Due to vandalism, this Watergoat was removed from the original location on Big Fossil Creek and repaired. Credit: Trinity River Authority of Texas
 - f. (6) Site 9 Trail Drivers Park on November 22 2022. First Litter and Trash Survey. Credit: Trinity River Authority of Texas
 - g. (7) Site 7 Echo Lake Signage taken on December 19, 2022. Credit: Trinity River Authority of Texas
 - h. (8) Site 8 Krauss Baker Park Signage Install taken on December 19, 2022. UpSpire staff are depicted. Credit: UpSpire
 - i. (9) Site 9 Wildcat Branch on April 26, 2023. Credit: Trinity River Authority of Texas
 - j. (10) UTA – The Big Event volunteers conducting a litter cleanup at Site 3 Wildcat Branch on April 22, 2023. The students volunteered on Earth Day and are holding up their “Go Mavericks!” mascot hand sign. 120 volunteers collected 1,200 pounds of trash.
- *report publications, GIS data, brochures, videos, outreach tools, press releases, media coverage;*
- *any project deliverables per the terms of your grant agreement.*

POSTING OF FINAL REPORT: *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected*

from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as "PROTECTED" and provide an explanation and complete citation to the statutory or regulatory source for such protection.