

**Texas Gulf Region Cooperative Weed Management Area: Controlling the  
Brazilian Peppertree  
20-062-000-B921**

**Final Report  
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**Prepared By:**

Leigh Perry, Project Manager  
Coastal Bend Bays & Estuaries Program  
615 North Upper Broadway, Suite 1200  
Corpus Christi, TX 78401  
lperry@cbbep.org  
361-336-0310

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## **Project Background:**

Brazilian peppertree is an invasive, noxious, and prohibited species within Texas that negatively impacts property access, coastal prairie habitats, and shorelines. Through rapid and aggressive growth, as well as allopathic chemicals, the species quickly modifies habitats and degrades the quality of natural systems. To address this issue, the Texas Gulf Region Cooperative Weed Management Area (TGR-CWMA) was established in 2014. CWMA's are local, non-regulatory, invasive plant management organizations that are led by steering committees and organized through formal agreements between interested public and private partners. The mission of the Texas Gulf Region CWMA is to address invasive Brazilian peppertree from Port O'Connor to Packery Channel on the Texas Gulf Coast.

The TGR-CWMA Management Plan was approved in February 2016 and includes a monitoring component for invasive species in the TGR-CWMA. To date, the TGR-CWMA has successfully reached over 3,000 landowners within the CWMA boundary; completed thirteen volunteer work days consisting of the removal of Brazilian peppertree at Port Aransas Nature Preserve at Charlie's Pasture, Paradise Pond, IB Magee Beach Park, and Mustang Island State Park; removed Brazilian peppertree from over 200 acres; and improved land management practices on over 9,000 acres of public and managed lands.

Funding for this project was used specifically for Brazilian peppertree control on public lands within the TGR-CWMA boundary. The TGR-CWMA members determined the project location and preferred treatment by looking at a variety of factors, such as land usage, tree density, accessibility, proximity to water, and level of impact.

Another goal of the TGR-CWMA effort is to educate the community on the importance of the natural habitats within our ecosystem and promote stewardship of our resources. Therefore, a small amount of funding was used to support the purchase of supplies needed for community workdays and educational efforts and events.

## **Task 1 Summary: Contract for Certified Weed Management Area (CWMA) Coordinator**

The TGR-CWMA Steering Committee members chose Hans Landel, with the Lady Bird Johnson Wildflower Center/ UT Austin, to be the next TGR-CWMA Coordinator. The contract was executed on November 21, 2019 between the Coastal Bend Bays & Estuaries Program (CBBEP) and the Lady Bird Johnson Wildflower Center/ UT Austin.

The TGR-CWMA Coordinator duties included the implementation of the management plan, hosting bi-annual meetings, coordinating workdays and community events, leading monthly Steering Committee telecommunications, and producing outreach materials. The Coordinator was also responsible for uploading the meeting agendas and minutes on the Texas Invasive website ([www.texasinvasives.org/professionals/gulfregion.php](http://www.texasinvasives.org/professionals/gulfregion.php)).

## **Task 2 Summary: Meeting Facilitation, Outreach and Community Events**

Meeting Facilitation – A total of 10 Steering Committee meetings were held throughout the duration of the project. TGR-CWMA members discussed the status of current Brazilian peppertree removal projects, new project opportunities along with funding opportunities, planned workdays and outreach events and discussed future goals of the TGR-CWMA. The meeting agendas and minutes can be found on the Texas Invasive website.

### Workday Event – February 18, 2020

On February 18, 2020, CWMA members and volunteers gathered to treat an area in Port Aransas, Texas. The group removed Brazilian Peppertree with chainsaws and treated the cut stumps with herbicide containing triclopyr. The group consisted of approximately 23 volunteers and the work was done on UTMSI property off Beach St. and Charlie's Pasture. An estimated total of 0.15 acres of Brazilian Peppertree was removed.

Below are some pictures showing location and techniques used during the event:



Figure 1. Map showing area of Charlies Pasture (27.8349, -97.083) where volunteers took down five Brazilian peppertrees.

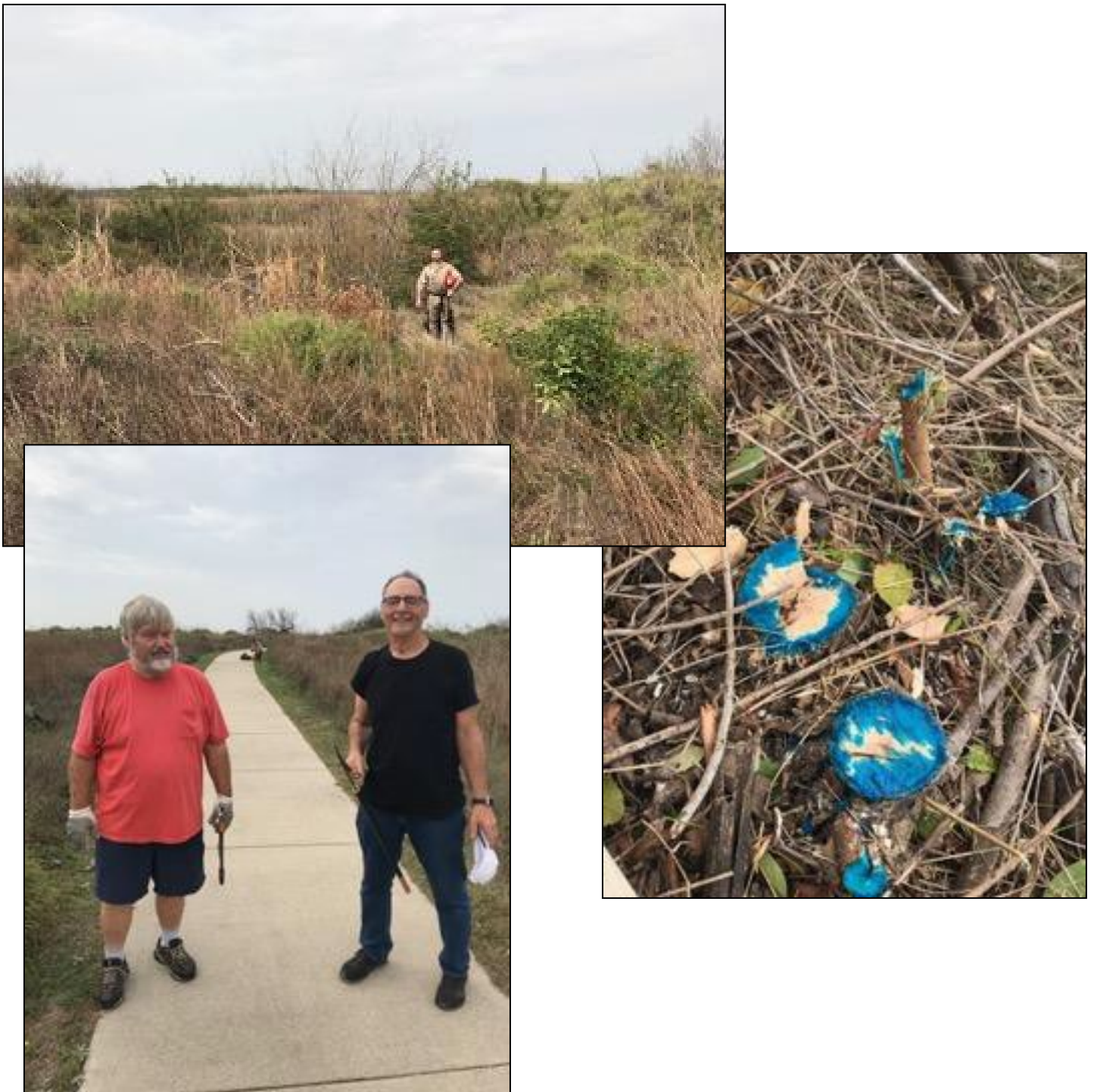


Figure 2. Volunteers removing Brazilian Peppertree and treating stumps with herbicide at Charlies Pasture in Port Aransas, TX on February 18, 2020. Five Brazilian Peppertrees were removed from this site.



Figure 3. Map showing location (red polygon) of UTMSI property off Beach St, Port Aransas where a second site was chosen for the Spring CWMA workday event.



Figure 4. Recently cut Brazilian Peppertree debris pile being moved at the UTMSI Beach St. property.



Figure 5. Volunteers removing Brazilian Peppertree with chainsaws and treating the cut stumps with herbicide at the UTMSI Beach St. property in Port Aransas, TX on February 18, 2020.

Community Event – February 20-23, 2020

The TGR-CWMA hosted their Spring Community Event on February 20-23, 2020 in conjunction with the 2020 Whopping Crane Festival held in Port Aransas, TX. The 2020 Whopping Crane Festival had approximately 850 registrants. All registrants passed through the Port Aransas Civic Center to pick up their registration packets. This is where the CWMA positioned one of its informational booths. The table was staffed with 1-2 volunteers throughout the event (Thursday- Saturday). The total volunteer hours for the table was 50 hours. The volunteers talked to the public about the invasive Brazilian Peppertree: what it looks like, why it should be removed, techniques in removing the tree, and what to plant in its place. The CWMA also placed a banner at Paradise Pond, Port Aransas, TX where several volunteers were staffed throughout the weekend. Volunteers discussed the invasive Brazilian Peppertree and were able to show areas around Paradise Pond that have had Brazilian Peppertrees removed, allowing native plant species to fill in the area. Total volunteer hours for this location was 51 hours, total visitors to Paradise Pond was 296.

Pictures of the event can be seen below:



Figure 6. Hans Landel (far left), TGR-CWMA Coordinator, discusses the invasive Brazilian Peppertree with visitors to Paradise Pond on February 21, 2020.



Figure 7. Volunteers at the TGR-CWMA booth, located at the Civic Center in Port Aransas, TX, spoke to the public about the invasive Brazilian Peppertree.





Figure 8. Attendees of the Whooping Crane Festival visited Paradise Pond and learned about the invasive Brazilian peppertree and were able to see areas around Paradise Pond that have had Brazilian peppertrees removed. Paradise Pond had 296 visitors during the period of February 20-23, 2020.

### **Task 3 Summary: Execute Contractual Agreement with Vegetation Management Firm**

American Conservation Experience (ACE) was selected as the winning bidder and the contract was executed on December 31, 2019. ACE started removing Brazilian peppertree at the worksite on January 27, 2020. ACE crews finished the initial treatment of BP removal for Zones 1, 2 and 3 on February 6, 2020 and spent a week in June treating regrowth of Brazilian Peppertree at the worksite (Zones 1-3). ACE's final report along with maps of the areas treated and before and after photos of the treatment sites can be found below:



## **Summary Report for the Treatment and Re-treatment of Brazilian Peppertree in Port, Aransas, TX; Using American Conservation Experience (ACE)**

### **Summary**

The Brazilian peppertree has cost the United States of America over \$100 Billion. It is the #1 invasive woody species plant in Florida and Hawaii. With climate change altering weather patterns, known established populations of BP tree are growing at an exponential rate just within the last decade. Aerial imagery also shows this developing at an alarming rate on unmanaged tracts of land in Port Aransas, Texas.

American Conservation Experience (ACE), an Americorps based environmentally focused non-profit was contracted by the Coastal Bend Bays & Estuaries Program (CBBEP), funded by The Coastal Management Program to gain control of the non-native invasive species, Brazilian peppertree (BP) at IB Magee Beach, Port Aransas TX. ACE's vision is to provide transferrable professional experience to young adults interested in pursuing careers in environmental protection, resource management and invasive plant management. All members are trained in chainsaw operation, safe & legal pesticide mixing and handling, plant ID, integrated pest management, reforestation, forest management, and professional development. After completion of a six-month term, Americorps members are awarded an education award of \$2,900.00 and given special non-compete hiring status for federal jobs. Many ACE crew member graduates pursue master's degrees or jobs with the National Park Service, Forest Service, USFWS, or other state, city and non-profit land management agencies. These experiences and references are critical for anyone interested pursuing careers in the oversaturated industry of resource management.

ACE was hired by the CBBEP in 2018 to make 1 initial and 2 follow up treatments in zones 1 and 2. A total of 6.81 acres of infested area was treated over the course of 8 months in 2018/2019. In 2020, ACE was hired again to perform 2 follow up treatments in zones 1 and 2, and 1 initial & 1 follow up treatment in zone 3.

ACE was selected for this project due to their light footprint approach towards invasive species control as the treatment area is within the "dune zone"- protected by Texas law to not be disturbed. Although machines such as bulldozers or mulching machines on skid steers would be the most cost efficient option for eliminating BP biomass, their footprint would devastate dune structure and ecology, likely introduce new non-native invasive plants such as guinea grass, and provide opportunity for BP populations to re-sprout. ACE's approach to controlling BP is using a combination of foliar, cut stump, and basal treatments. Different environments and vegetation structures dictate the most effective and productive treatment method. All biomass was left in place to biodegrade.

### **Timeline for Treatments Made in 2020**

A 6 person ACE crew spent 1.5 weeks in February 2020 combing through previous treatment sites in zones 1 and 2. Overall, the treatments made by ACE in 2018/2019 in zones 1 & 2 were surprisingly successful. The crew saw very little BP regrowth, and seed sprout; what was discovered during surveys was chemically treated. Another 1.5 weeks was spent in February making initial treatments to a new half-acre motte of BP in zone 1 and another 2.2 acres in zone 3. All initial treatments were managed by mechanically stumping the trees by chainsaw, physically removing the biomass into another location to ensure total removal, and applying a 25% Remedy Ultra and 1% Milestone herbicide mix onto the cambium layer of the exposed stump surface. This treatment method has a very high success rate if the chemical is applied onto the stump with 2 minutes of the tree being stumped.

With remaining funds, ACE performed their final week of follow up treatments in zones 1, 2 and 3 in June 2020. The follow up surveys in June revealed that initial treatments made in February were ~95% successful, as most of the follow up treatments were focused on treating seed sprouts.

In June, ACE hosted a chainsaw training seminar within the treatment zones and committed another week surveying and chemically treating small satellite BP populations within the 63-acre tract of open coastal prairie in between zones 1, 2 and 3, at no additional cost. By treating the unknown BP populations within the 63-acre tract, there is now a 100-acre corridor of intact coastal prairie devoid of mature BP. ACE is proud of this accomplishment.

The partnership shared between ACE, CBBEP and other cooperating agencies involved with the IB Magee BP removal is overwhelmingly symbiotic. The CBBEP contracted ACE because of their low footprint, expertise and low cost. ACE was able to meet the parameters set by the agreement and donated \$7,000.00 in additional work at no cost. Furthermore, this partnership allowed ACE to use the work sites as a classroom to provide training for new recruits, while other assembled crews on site refined their skills in land management and invasive plant ecology. ACE is in the business of weaponizing the futures of the next generation of conservationists, while providing agency partners resources and solutions to their land management issues.

### Acreage

10.63 Cumulative acres of Brazilian peppertree was treated within the confines of Zones 1, 2 and 3 at IB Magee.

- Zone 1: 0.57 acres of initial treatments. 4.4 acres of follow up treatments.
- Zone 2: 0.25 acres of initial treatments. 0.44 acres of follow up treatments.
- Zone 3: 4.97 acres of initial treatments. 0.0 acres of follow up treatments.

### Herbicide

**6 gallons of foliar applied-** Mixed at 5% Garlon 3A, .5% non-ionic surfactant, 1% blue dye, 93.5% water.

**431 ounces of cut-stump/basal formula applied-** Mixed at 25% Remedy Ultra, 1% Milestone, 74% Elite Premier Blue.



Figure 9. Map of ACE treatment areas.

**Before and After Photos**



Figure 10. American Conservation Experience volunteers removing Brazilian Peppertree in **Zone 1** at the start of treatment on February 05, 2020.



Figure 11. **Zone 1** after photos on July 28, 2020.



Figure 12. **Zone 2** before (top photo) and after (bottom photo).



Figure 13. **Zone 3** before (top photo) and after (bottom photo).



Figure 14. American Conservation Experience volunteers removing Brazilian peppertree in **Zone 3** with chainsaws on February 05, 2020.



**Maps of Zones 1-3**



Figure 15. Map of Zone 1



Figure 16. Map of Zone 2



Figure 17. Map of Zone 3