



STATE EXPENDITURE PLAN TEXAS - July 2018



Submitted by: Toby Baker, Commissioner
Texas Commission on Environmental Quality



Bryan W. Shaw, Ph.D., P.E., *Chairman*
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 11, 2018

Mr. Ben Scaggs, Executive Director
RESTORE Council
500 Poydras Street, Suite #1117
New Orleans, Louisiana 70113

Dear Mr. Scaggs,

As Texas Governor Greg Abbott's designee responsible for implementation of the RESTORE Act in Texas I am submitting Texas' State Expenditure Plan (TxSEP).

The requirement to submit a TxSEP and my authority to submit it on behalf of the Governor of Texas is authorized under Section 2, 33 U.S.C., section 1321(t)(3)(B)(iii) of the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE).

The TxSEP has been prepared in accordance with the requirements outlined in the *Oil Spill Impact Component: State Expenditure Plan Guidelines*, along with the Updated (2016) Comprehensive Plan. Our point of contact for the TxSEP is:

Diane Mazuca, Special Projects Coordinator
Office of Legal Services/Texas Commission on Environmental Quality
diane.mazuca@tceq.texas.gov
512.239.3504

I want to express my thanks for the assistance your staff has provided in preparing this document. We appreciate your consideration and are available to respond to any questions.

Respectfully,

A handwritten signature in black ink, appearing to read "Toby Baker".

Toby Baker
Commissioner

Texas STATE EXPENDITURE PLAN
Submitted Pursuant to the
Spill Impact Component of the RESTORE Act
33 U.S.C § 1321(T)(3)

Table of Contents

I.	State Certification.....	1
II.	Public Participation Statement	2
III.	Financial Integrity.....	3
IV.	Consistency with Goals and Objectives of the Comprehensive Plan	4
V.	Proposed Projects, Programs and Activities	5
	Appendix A: Nature-Based Tourism.....	6
	Appendix B: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways to Improve Water Quality	10
	Appendix C: Restoration: Water Quality and Quantity.....	15
	Appendix D: Shoreline and Beach Restoration	19

Section 1: State Certification

I hereby certify that the Texas State Expenditure Plan (SEP) is consistent with the goals and objectives of the current Comprehensive Plan adopted by the Council in December 2016. All program components and activities included in the SEP are eligible activities as defined by the RESTORE Act, and contribute to the overall economic and ecological recovery of the Gulf Coast. This SEP addresses the effects of Hurricane Harvey, focusing on hurricane recovery, ecological and economic, as well as resiliency-related programs eligible under the Spill Impact Component of the RESTORE Act (Bucket 3). The programmatic areas in the SEP were developed in consultation with the Office of Governor, as well as the Commission to Rebuild Texas (CRT) established by the Governor to oversee the state’s response to Hurricane Harvey. Upon approval of the SEP, the selection of projects to implement the programmatic areas will be based on discussions and exchanges with federal, state and local elected officials, as well as the public, in particular those involved in the responding to the challenges faced by the Texas coastal region and its efforts to rebuild after the hurricane. This discussion will continue to include the CRT. The Texas programmatic SEP will further a comprehensive, collaborative, ecological and economic recovery for those areas affected by Hurricane Harvey.

I also hereby certify that all projects, programs and activities will be based on the Best Available Science (BAS) as defined in the RESTORE Act, when applicable; and, meet the 25% infrastructure limitation.

Signature of Authorized Senior Official:

Name:

Title: _____

Organization: _____

Date: _____

Section II. Public Participation Statement

In accordance with 31 CFR § 34.503(g), the draft Texas State Expenditure Plan (SEP) will be posted for a 45-day public comment period on the Texas [RESTORE website](#) and notification will be sent to those who have signed up to receive updates on that web site. In addition, a press statement will be released to media outlets in the eligible areas. Letters will be sent to elected officials representing the eligible areas, as well as the state elected Leadership. Commissioner Toby Baker will continue to share information as he performs his public duties as TCEQ Commissioner and the Governor's appointee to the RESTORE Council.

Updates on activities related to the development and now publication of the draft SEP, including the administrative update submitted to the Council in December 2017, have been posted on the Texas [RESTORE website](#). With the posting of the draft SEP, the public will have an opportunity to comment on the Texas programmatic SEP that has been developed to address the devastating and long-range effects of Hurricane Harvey. Commissioner Baker, in consultation with Governor Abbott and the Governor-established Commission to Rebuild Texas (CRT), will consider comments received prior to finalizing the SEP for submission.

Section III. Financial Integrity

On behalf of Commissioner Toby Baker, Texas Governor's appointee to the RESTORE Council, in June 2018 TCEQ submitted to the U.S. Treasury Department the required 2018 Organizational Self-Assessment (OSA). The OSA includes all financial management information required as part of section 3 of the SEP application. That document will be uploaded in the Council's electronic grants management system, RAAMS, when the SEP is submitted to the RESTORE Council. In addition, TCEQ's document entitled "Policy to Safeguard against Conflicts of Interest" will also be uploaded in RAAMS.

Section IV. Consistency with Goals and Objectives

The Texas SEP is consistent with the eligibility requirements in the federal RESTORE Act. The RESTORE Act outlines programs and projects eligible to receive Spill Impact/Bucket 3 grant funds. To that end, Texas had developed four programmatic areas for this SEP. The programmatic areas comply with the eligibility requirements in the Spill Component of the RESTORE Act (33 U.S.C., section 1321(t)(1)(B)(i)(III) and the Council's Comprehensive Plan, revised in December 2016. These programmatic areas are consistent with the following goals and objectives:

Goals

- Restore & Revitalize the Gulf Economy
- Water Quality & Quantity
- Replenish and Protect Living Coastal and Marine Resources
- Enhance Community Resilience
- Restore & Conserve Habitat

Objectives

- Promote Natural Stewardship and Environmental Education
- Restore and Enhance Natural Processes & Shoreline;
- Promote Community Resilience
- Restore, Improve and Protect Water Resources

Upon approval by the Council of the Texas SEP, specific projects consistent with those programs will be selected by Commissioner Baker in consultation with the Governor's Office and the Commission to Rebuild Texas, for implementation.

V.

Texas State Expenditure Plan							
Applicant Name:		Toby Baker, Commissioner, Texas Commission on Environmental Quality					
	Program Title	Estimated Cost	Infrastructure (yes/no)	Start Date	End Date	Primary Eligible Activity [number(s) 1-11; see section 4.1.1 of Submittal Guidelines]	Informed by Best Available Science (yes/no)
A	Nature-Based Tourism	\$7,830,000	No	09/01/18	08/31/22	10	Yes
B	Removal of Debris and/or Associated Sediment from Creeks Bayous and Other Waterways	\$7,830,000	No	09/01/18	08/31/22	2	Yes
C	Water Quality and Quantity	\$7,830,000	No	09/01/18	08/31/22	1	Yes
D	Shoreline and Beach Restoration	\$7,830,000	No	09/01/18	08/31/22	1	Yes
ESTIMATED TOTAL FUNDING CONTRIBUTIONS FOR PROGRAMS		\$31,320,000					

Appendix A: Nature-Based Tourism

1. Program: Nature-Based Tourism

- A. **Description/Summary:** This proposed program will support promotion of tourism in the Gulf Coast region. Working with the Governor-established Commission to Rebuild Texas, the program will identify projects that will provide nature based tourism and restoration benefits to the local community while providing environmental and ecosystem education and recreation that will encourage action toward a healthier coast.

Activities within this program would focus on providing nature-based tourism educational exhibits, repairing public facilities and conducting debris clean-up to rebuild nature-based tourism. Projects selected under this program may include the restoration of piers, docks, bird viewing towers, eco-tourism, as well as the development of public marinas, boat ramps and park amenities. These projects would benefit both the environment and economy by protecting natural resources in the affected areas, resulting in a positive impact to nature-based tourism

Need: Hurricane recovery has become a priority as a response to the devastating impacts of Hurricane Harvey which hit the Texas coast on August 25, 2017. As nature-based tourism is one of the largest economic drivers for Texas coastal communities, the rebuilding of tourism is imperative to improving the economy while benefiting the environment. Parks have been severely, and in many cases, completely demolished. Access for recreational fishing has been limited due to destruction of piers, public access points, boat ramps and floating and fixed docks. Where historically birders would travel every year to visit the habitat and viewing places have been destroyed. Critical habitat land, birding towers, kiosks, boat ramps, nature trails, pavilions and recreational amenities that usually support the economy of coastal towns are no longer thriving and the need for a robust tourist economy is essential to these coastal communities.

Purpose/Objective: The purpose and objective of this program is to identify and address nature-based tourism needs in the areas where hurricane impacts have negatively affected this once thriving industry. There is a significant need to repair or replace nature-based tourism areas to restore and revitalize the economy and to protect natural resources along the coast.

Location: The selected programs will be in counties that are eligible to receive RESTORE funds and are included in the Hurricane Harvey federal Disaster Declaration for Texas. The counties eligible to receive funds for this program: Aransas, Brazoria, Calhoun, Chambers, Galveston, Harris, Jackson, Jefferson, Matagorda, Nueces, Orange, Refugio, San Patricio and Victoria.

Timeline: Work on this program will begin September 1, 2018 and will end on August 31, 2022. The program will be administered by TCEQ. Components of individual projects within the program will be implemented by eligible subrecipients.

Appendix A: Nature-Based Tourism

Additional Information/Eligible Applicants: The following entities are eligible:

- State Agencies
- Political Subdivisions:
 - City
 - County
 - Navigation Districts
- Public Institutions of Higher Education

- B. The Nature-Based Tourism Program, and the projects that will be implemented under this program, is focused on the overall economy of the Texas coast. This program will provide funds for projects that will promote tourism, thereby benefiting the overall economy. This program and the implemented projects will address environmental and ecological considerations.

2. Eligibility: The primary eligible activity for the proposed activities is Promotion of Tourism in the Gulf Coast region, including recreational fishing. Texas will work with the Commission to Rebuild Texas, established by Texas Governor Greg Abbott, to identify projects that address this eligible activity. This program and all projects identified for implementation will address nature-based tourism needs and comply with the eligibility requirements in the Spill Component of the RESTORE Act (33 U.S.C., section 1321(t)(1)(B)(i)(III) and the Council’s Comprehensive Plan.

3. Comprehensive Plan Goals and Objectives: This program aligns with the Comprehensive Plan’s goal to Restore and Revitalize the Gulf Economy. The program supports the objective to Promote Natural Stewardship and Environmental Education.

4. Major Milestones:

- 1) Based on approved SEP, develop and submit federal applications to the RESTORE Council for each program area.
- 2) Receive grant awards from the Council.
- 3) Working with Commission to Rebuild Texas identify projects to be funded through the program grant awards.
- 4) Develop and submit work plans for identified projects within each program grant.
- 5) Develop grant contracts with project recipients that include activities addressed in the Council-approved project workplans, such as reporting and monitoring requirements, as well as deliverables and timelines.
- 6) TCEQ management and oversight of all projects workplans, including compliance with all federal and state grant requirements.

Appendix A: Nature-Based Tourism

5. Success Criteria/Metrics/Outcome: Additional anticipated success criteria and outcomes will be based on the specifics appropriate to each implemented project but general success criteria and outcomes include:

Outcome: Enhanced public access to natural resources for recreational use.
Anticipated Project Success Criteria: The number of recreational access areas restored or developed

Outcome: Increase in visitors to the local community
Anticipated Project Success Criteria: Increase in hotel/motel occupancy

Outcome: Increase in environmental awareness in the community
Anticipated Project Success Criteria: Number of people reached through environmental activities or publications

6. Monitoring and Evaluation: All implemented projects will be monitored by the success criteria described in this appendix for their effectiveness in improving the economy through the rehabilitation, repair and/or replacement of nature-based tourism areas. Future workplans for individual projects will include the mechanisms subrecipients will employ to monitor individual project outcomes.

7. Best Available Science: Outstanding fishing, birding and waterfowl hunting opportunities, as well as family outings to the beach, make the coast the second most popular tourist destination in Texas, keeping the economy strong and creating jobs for both coastal residents and inland workers. Tourists visiting the Texas coast in 2014 spent \$19.7 billion traveling in this region, over \$10.4 million at hotels and motels alone. The Texas coast hosts hundreds of miles of nature tourism opportunities. Through conservation management and nature tourism, coastal communities gain economically while protecting their valued coastal resources. An excellent example of nature tourism, or avitourism, is the Great Texas Coastal Birding Trail, the largest nature trail in the nation, with over 300 birding sites available along the Texas Coast.¹ In a study done in 2013, more than 3,000 fish species have been identified on the Texas coastline. Tourists spend more than \$7.5 billion annually for beaches, bird watching, and fishing². Wildlife tourism generates over \$19 billion in annual spending in the Gulf coast. Recreational fishing counts for the largest share with wildlife watching and hunting following respectively. Texas alone generates over \$5 billion in wildlife tourism.³

Associated best available science will be used to develop each of the project workplans and will be implemented throughout the life of individual projects.

¹ Texas General Land Office. (2016), Shoring up the Future for the Texas Gulf Coast Report.

² Gulf Intracoastal Waterway. (2013) Texas Freight Advisory Committee.

³ Stokes, Shawn, Marcy Lowe. (2013) Wildlife Tourism and the Gulf Coast Economy., The Environmental Defense Fund.

Appendix A: Nature-Based Tourism

8. Budget and Funding: Estimated cost of the program activities and amount to be requested from the Oil Spill Impact Component:

Estimated Funds: \$7,830,000

The amount of funds to be allocated for each project will be detailed in the budget in the workplan for that project and submitted to the RESTORE Council for approval.

Of the amount of available funds, approximately 10% will be for planning activities and 90% for implementation.

9. Partnerships: TCEQ staff will work with the Office of the Governor (OOG) and the Commission to Rebuild Texas to identify projects that promote nature-based tourism in the stated eligible counties and through the stated eligible applicants. The Commission to Rebuild Texas has been working with the local communities affected by Hurricane Harvey. Their on-going efforts will help ensure that the damage caused by the hurricane to the nature-based tourism industry are appropriately identified. This partnership will enable the selection of projects that can best address the economic and environmental impacts.

10. Leveraged Resources: Leverage resources will be dependent on the individual programs and/or projects; however, TCEQ will take advantage any all opportunities to leverage the RESTORE grant funds. Any leveraged funds available for a project will be identified in that project's workplan.

11. Funds Used as Non-Federal Match: Funds used as a non-federal match will be dependent on the individual implemented projects and will be included in that project's workplan. In all opportunities, TCEQ will look to leverage restoration funding available through other federal funds, as well as grants funds available as a result of the Deepwater Horizon Oil Spill.

Appendix B: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways to Improve Water Quality

1. Program: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways

A. Description/Summary: The primary eligible activity that this program supports is mitigation of damage to fish, wildlife and natural resources. Projects within this program would focus on flooding, erosion, ecological and economic issues. Possible activities could include removal of debris (including vegetative or hard structure) or associated sediment that have caused distress in the waterflow of the channel or flooding in other surrounding areas due to blockage of a waterway. Removal of debris and sediment must be limited to those efforts which would result in improvements to water quality or living coastal and marine resources. Activities will not include removal of debris and associated sediment for navigation or other purposes that do not meet the selected eligible activity of mitigation of damage to fish, wildlife and natural resources.

This program links to the Restore Water Quality and Quantity goal included in the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan ("Plan"). Removal of debris in waterways will assist in improving the region's fresh, estuarine and ultimately marine waters and will also help to reduce flooding in surrounding areas.

The Plan's goal to Replenish and Protect Living Coastal and Marine Resources will also be addressed. Projects would aid in restoring fresh water flows to the Gulf of Mexico that promote a healthy ecosystem and enhance the economy and provide for sustainable living. Activities could address erosion, flooding, freshwater inflows, debris and/or sediment removal, because of lodged debris and changed waterflow, for projects that would result in improvements to water quality or living coastal and marine resources.

Need: Hurricane recovery has become a priority due to the devastating impacts of Hurricane Harvey, which hit the Texas coast on August 25, 2017. In addition to the usual high winds and storm surge of a hurricane, Harvey also caused flooding on a historic level along the Texas coast due to its slow movement and record-breaking rainfall. The massive flooding resulted in the deposition of both natural and man-made debris in waterways throughout the area. This debris can lead to entanglement or toxic exposure for fish and wildlife in these waters. Additionally, such debris can clog waterways causing flooding and hindering fresh water from reaching the Gulf. Removal of the debris would improve ecosystems and mitigate flooding.

Purpose/Objective: The purpose and objective of this program is to identify and address areas where removal of Harvey-related debris and associated sediment in waterways would improve ecosystems and mitigate flooding.

Location: The selected programs will be in counties that are eligible to receive RESTORE funds and are included in the Hurricane Harvey federal

Appendix B: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways to Improve Water Quality

Disaster Declaration for Texas. The counties eligible to receive funds for this program: Aransas, Brazoria, Calhoun, Chambers, Galveston, Harris, Jackson, Jefferson, Matagorda, Nueces, Orange, Refugio, San Patricio and Victoria.

Timeline: Work on this program will begin September 1, 2018 and will end on August 31, 2022. The program will be administered by TCEQ. Components of individual projects within the program will be implemented by eligible subrecipients.

Additional Information/Eligible Applicants: The following entities are eligible:

- State Agencies
 - Political Subdivisions:
 - City
 - County
 - Navigation Districts
 - Public Institutions of Higher Education
- B.** The Debris and Sediment Removal Program, and the associated projects implemented under this program, contributes to both the economic and ecological recovery of the Gulf Coast because removal of debris in waterways will assist in improving the region's fresh, estuarine and ultimately marine waters and will also help to reduce flooding in surrounding areas.
- 2. Eligibility:** The primary eligible activity for this proposed program under the Spill Impact Component of the RESTORE Act is mitigation of damage to fish, wildlife, and natural resources.
- The secondary eligible activities for this proposed program are:
- Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region; and
 - Coastal flood protection and related infrastructure.
- TCEQ will work with the Commission to Rebuild Texas, established by Texas Governor Greg Abbott, to identify projects that address this eligible activity. This program and all projects identified for implementation will address nature-based tourism needs and comply with the eligibility requirements in the Spill Component of the RESTORE Act (33 U.S.C., section 1321(t)(1)(B)(i)(III) and the Council's Comprehensive Plan.
- 3. Comprehensive Plan Goals and Objectives:** This program aligns with the following goals of the Comprehensive Plan:
- Goal 2: Restore Water Quality and Quantity

Appendix B: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways to Improve Water Quality

- Goal 3: Replenish and Protect Living Coastal and Marine Resources; and
- Goal 4: Enhance Community Resilience

Additionally, the program supports the following objectives of the Comprehensive Plan:

- Objective 4: Restore and Enhance Natural Processes and Shorelines; and
- Objective 5: Promote Community Resilience

4. Major Milestones:

- 1) Based on approved SEP, develop and submit federal applications to the RESTORE Council for each program area.
- 2) Receive grant awards from the Council.
- 3) Working with Commission to Rebuild Texas identify projects to be funded through the program grant awards.
- 4) Develop and submit work plans for identified projects within each program grant.
- 5) Develop grant contracts with project recipients that include activities addressed in the Council-approved project workplans, such as reporting and monitoring requirements, as well as deliverables and timelines.
- 6) TCEQ management and oversight of all projects workplans, including compliance with all federal and state grant requirements.

5. Success Criteria/Metrics/Outcome: Additional anticipated success criteria and outcomes will be based on the specifics appropriate to each implemented project but general success criteria and outcomes include:

Outcome: Project scope is completed in timely manner.

Anticipated Project Success Criteria: All project milestones are met by required dates including final conclusion of the project.

Outcome: Project scope is completed within budget.

Anticipated Project Success Criteria: The overall expended dollar amount for the project is at or below the budgeted amount while sub-category expenditures are no more than 15% over budgeted amount for that item.

An example of a possible outcome and associated success criteria depending on the project is:

Outcome: Waterways cleared of significant debris.

Anticipated Project Success Criteria: Amount of debris and/or sediment removed from waterways.

6. Monitoring and Evaluation: All implemented projects will be monitored by the success criteria described in this appendix for their effectiveness as well as any specific project appropriate success criteria to ensure results are clearly understood

Appendix B: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways to Improve Water Quality

and evaluated. Future workplans for individual projects will include the mechanisms subrecipients will employ to monitor individual project outcomes.

7. Best Available Science: Debris and sediment are common problems in coastal waterways, especially in the aftermath of a hurricane. Water quality is compromised by debris, as items can restrict circulation and flow, particularly in shallow, narrow tributaries. Furthermore, the possibility of abandoned boats' fuel or oil reservoirs eventually rusting through, rupturing, and spilling their contents into the water is another threat to the ecosystem. Although a small amount of petroleum products may not kill marine organisms, it can affect vision, sense of smell, growth, and reproductive ability of these organisms, all of which threaten marine resources as well as recreational fishing, boating, and related tourism.¹ Additionally, debris blocking waterways can cause water to back up and exacerbate flood conditions.² Furthermore, removing debris and sediment can facilitate delivery of freshwater to the Gulf. The quality, quantity, and timing of freshwater inflow from rivers to the Gulf is important to maintaining the natural salinity, nutrient, and sediment loading regimes which support the unique biological communities of each estuary and ensure healthy ecosystem function.³

Associated best available science will be used to develop each of the project workplans and will be implemented throughout the life of individual projects.

8. Budget and Funding: Estimated cost of the program activities and amount to be requested from the Oil Spill Impact Component:

Estimated Funds: \$7,830,000

The amount of funds to be allocated for each project will be detailed in the budget in the workplan for that project and submitted to the RESTORE Council for approval.

Of the amount of available funds, approximately 10% will be for planning activities and 90% for implementation.

¹ Galveston Bay Foundation. "Marine Debris Removal." Accessed on June 12, 2018. <https://galvbay.org/how-we-protect-the-bay/on-the-ground/marine-debris-removal/>

² Bennett, Adam. KHOU. "Harvey victims worry drainage issues could cause flooding." Accessed on June 12, 2018. <https://www.khou.com/article/news/local/harvey-victims-worry-drainage-issues-could-cause-flooding/285-520732079>

³ Texas Water Development Board. "Freshwater Inflow Needs of Texas Estuaries." Accessed on June 12, 2018. <http://www.twdb.texas.gov/surfacewater/flows/freshwater/index.asp>

Appendix B: Removal of Debris and/or Associated Sediment from Creeks, Bayous and Other Waterways to Improve Water Quality

9. Partnerships: TCEQ staff will work with the Office of the Governor (OOG) and the Commission to Rebuild Texas to identify projects that promote nature-based tourism in the stated eligible counties and through the stated eligible applicants. The Commission to Rebuild Texas has been working with the local communities affected by Hurricane Harvey. Their on-going efforts will help ensure that the damage caused by the hurricane is appropriately identified. This partnership will enable the selection of projects that can best address the economic and environmental impacts.

10. Leveraged Resources: Leverage resources will be dependent on the individual programs and/or projects; however, TCEQ will take advantage any all opportunities to leverage the RESTORE grant funds. Any leveraged funds available for a project will be identified in that project's workplan.

11. Funds Used as Non-Federal Match: Funds used as a non-federal match will be dependent on the individual implemented projects and will be included in that project's workplan. In all opportunities, TCEQ will look to leverage restoration funding available through other federal funds, as well as grants funds available as a result of the Deepwater Horizon Oil Spill.

Appendix C: Restoration: Water Quality and Quantity

1. Program: Restoration: Water Quality and Quantity

A. Description/Summary: The primary eligible activity that this program supports is restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches and coastal wetlands of the Gulf Coast Region. Projects within this program would focus on restoring natural hydrology, freshwater flows, and salinity levels in coastal waterways, thereby directly benefiting ecosystems. Activities may include processes to improve water quality, water quantity, enhance freshwater inflows, restore natural hydrology, and restore salinity levels in coastal waterways and wetlands thereby improving the ecosystem.

This program links to the Restore Water Quality and Quantity goal included in the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan ("Plan"). Restoring and protecting water quality and quantity activities will improve the native coastal prairie, intermediate and brackish wetlands and bottomland hardwoods while allowing the progression of freshwater into the Gulf of Mexico.

The Plan's goal to Restore and Revitalize the Gulf Economy will also be addressed. Projects would support water quality and quantity initiatives designed to benefit the ecosystem. Activities could assist in revitalizing a Gulf economy that relies on the seafood industry. Projects allowing freshwater inflows through inland areas and/or wildlife management areas that ultimately benefit habitat and water quality to marshes and wetlands may be examples of projects undertaken.

Need: Hurricane recovery has become a priority due to the devastating impacts of Hurricane Harvey, which hit the Texas coast on August 25, 2017. Sensitive ecological areas were damaged or destroyed by seawater inundation and other impacts from the hurricane.

Purpose/Objective: The purpose and objective of this program is to identify and address areas where restoration activities involving water quality and quantity can help support healthy ecosystems as well as economic interests.

Location: The selected programs will be in counties that are eligible to receive RESTORE funds and are included in the Hurricane Harvey federal Disaster Declaration for Texas. The counties eligible to receive funds for this program: Aransas, Brazoria, Calhoun, Chambers, Galveston, Harris, Jackson, Jefferson, Matagorda, Nueces, Orange, Refugio, San Patricio and Victoria.

Timeline: Work on this program will begin September 1, 2018 and will end on August 31, 2022. The program will be administered by TCEQ. Components of individual projects within the program will be implemented by eligible subrecipients.

Eligible Applicants: The following entities are eligible:

Appendix C: Restoration: Water Quality and Quantity

- State Agencies
- Political Subdivisions:
 - City
 - County
 - Navigation Districts
- Public Institutions of Higher Education

B. The Restore Water Quality and Quantity Program, and the associated projects implemented under this program, contributes to both the economic and ecological recovery of the Gulf Coast because water quality and quantity is closely tied to ecosystem health which, in turn, is closely tied to the Gulf's multimillion dollar seafood industry as well as recreational fishing.

2. Eligibility: The primary eligible activity for this proposed program under the Spill Impact Component of the RESTORE Act is:

- restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.

A secondary eligible activity is:

- mitigation of damage to fish, wildlife, and natural resources.

TCEQ will work with the Commission to Rebuild Texas, established by Texas Governor Greg Abbott, to identify projects that address these eligible activities. This program and all projects identified for implementation will comply with the eligibility requirements in the Spill Impact Component of the RESTORE Act (33 U.S.C., Section 1321(t)(1)(B)(i)) and the Council's Comprehensive Plan.

3. Comprehensive Plan Goals and Objectives: This program aligns with the following goals of the Comprehensive Plan:

- Goal 2: Restore Water Quality and Quantity; and
- Goal 5: Restore and Revitalize the Gulf Economy.

Additionally, the program supports the following objective of the Comprehensive Plan:

- Objective 2: Restore, Improve, and Protect Water Resources.

4. Major Milestones:

- 1) Based on approved SEP, develop and submit federal applications to the RESTORE Council for each program area.
- 2) Receive grant awards from the Council.
- 3) Working with Commission to Rebuild Texas, identify projects to be funded through the program grant awards.

Appendix C: Restoration: Water Quality and Quantity

- 4) Develop and submit work plans for identified projects within each program grant.
- 5) Develop grant contracts with project recipients that include activities addressed in the Council-approved project workplans, such as reporting and monitoring requirements, as well as deliverables and timelines.
- 6) TCEQ management and oversight of all project workplans, including compliance with all federal and state grant requirements.

5. Success Criteria/Metrics/Outcome: Additional anticipated success criteria and outcomes will be based on the specifics appropriate to each implemented project but general success criteria and outcomes include:

Outcome: Project scope is completed in timely manner.

Anticipated Project Success Criteria: All project milestones are met by required dates including final conclusion of the project.

Outcome: Project scope is completed within budget.

Anticipated Project Success Criteria: The overall expended dollar amount for the project is at or below the budgeted amount while sub-category expenditures are no more than 15% over budgeted amount for that item.

An example of a possible outcome and associated success criteria depending on the project is:

Outcome: Improved water quality in specific water body.

Anticipated Project Success Criteria: Water sampling taken during course of project improves in 3 of 5 areas of focus.

6. Monitoring and Evaluation: All implemented projects will be monitored by the success criteria described in this appendix for their effectiveness as well as any specific project appropriate success criteria to ensure results are clearly understood and evaluated. Future workplans for individual projects will include the mechanisms subrecipients will employ to monitor individual project outcomes.

7. Best Available Science: The beneficial role of healthy watersheds can be far-reaching and include ecosystem services and economic benefits.¹ Freshwater ecosystems are among the most degraded by worsening water quality and quantity.² In addition to the constant natural and man-made stressors to ecosystems, Hurricane Harvey placed additional pressure on coastal ecosystems in Texas. Besides impacts to

¹ United States Environmental Protection Agency. "Benefits of Healthy Watersheds." Accessed on June 8, 2018. <https://www.epa.gov/hwp/benefits-healthy-watersheds>

² The Economics of Ecosystems and Biodiversity. "Water quality is as important for ecosystems as for people." Accessed on June 8, 2018. <http://www.teebweb.org/water-quality-is-as-important-for-ecosystems-as-for-people/>

Appendix C: Restoration: Water Quality and Quantity

individuals, homes and communities, hurricanes also have a profound effect on the environment, especially estuarine and coastal habitats.³ There is an abundance of possible projects in Texas to restore or protect ecosystems by focusing on improving water quality and quantity.

Associated best available science will be used to develop each of the project workplans and will be implemented throughout the life of individual projects.

8. Budget and Funding: Estimated cost of the program activities and amount to be requested from the Oil Spill Impact Component:

Estimated Funds: \$7,830,000

The amount of funds to be allocated for each project will be detailed in the budget in the workplan for that project and submitted to the RESTORE Council for approval.

Of the amount of available funds, approximately 10% will be for planning activities and 90% for implementation.

9. Partnerships: TCEQ staff will work with the Office of the Governor (OOG) and the Commission to Rebuild Texas to identify projects that support water quality and quantity initiatives in the stated eligible counties and through the stated eligible applicants. The Commission to Rebuild Texas has been working with the local communities affected by Hurricane Harvey. Their on-going efforts will help ensure that the damage caused by the hurricane to water quality and quantity as well as related ecosystems and economies are appropriately identified. This partnership will enable the selection of projects that can best address the economic and environmental impacts.

10. Leveraged Resources: Leverage resources will be dependent on the individual programs and/or projects; however, TCEQ will take advantage any all opportunities to leverage the RESTORE grant funds. Any leveraged funds available for a project will be identified in that project's workplan.

11. Funds Used as Non-Federal Match: Funds used as a non-federal match will be dependent on the individual implemented projects and will be included in that project's workplan. In all opportunities, TCEQ will look to leverage restoration funding available through other federal funds, as well as grants funds available as a result of the Deepwater Horizon Oil Spill.

³ Hurricanes: Science and Society. "Ecosystem Perspective: What can a hurricane due to the environment?" Accessed on June 8, 2018.

<http://www.hurricanesociety.org/society/impacts/environmentalimpacts/>

Appendix D: Shoreline and Beach Restoration

1. Program: Shoreline and Beach Restoration

A. Description/Summary: The primary eligible activity that this program supports is restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches and coastal wetlands of the Gulf Coast Region. Projects within this program would focus on erosion, habitat restoration and economic vitality.

This program links to the Restore and Conserve Habitat goal included in the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan ("Plan"). Projects would restore and conserve habitats and support healthy ecosystems through activities such as the restoration of dunes, beaches, marine habitats, living shorelines, shoreline stabilization and the enhancement of wetlands.

The Plan's goal to Restore and Revitalize the Gulf Economy will also be addressed. Projects would support tourism and economic interests and could include activities such as the restoration and conservation of marine habitats for recreational fishing or seafood industry purposes, restoration and enhancement of beaches and dunes, shoreline stabilization for erosion protection and the protection and enhancement of wetlands to enhance the sustainability and resiliency of the Gulf economy.

Need: Hurricane recovery has become a priority due to the devastating impacts of Hurricane Harvey, which hit the Texas coast on August 25, 2017. The average erosion rate along the Texas coast is 4.1 feet per year and this loss was exacerbated by the recent hurricane. Additionally, dunes and other natural barriers that protect both structures (e.g., homes and industry) and sensitive ecological areas from seawater inundation were also damaged or destroyed in the hurricane.

Purpose/Objective: The purpose and objective of this program is to identify and address areas where beach and shoreline restoration can help support healthy ecosystems as well as economic interests.

Location: The selected programs will be in counties that are eligible to receive RESTORE funds and are included in the Hurricane Harvey federal Disaster Declaration for Texas. The counties eligible to receive funds for this program: Aransas, Brazoria, Calhoun, Chambers, Galveston, Harris, Jackson, Jefferson, Matagorda, Nueces, Orange, Refugio, San Patricio and Victoria.

Timeline: Work on this program will begin September 1, 2018 and will end on August 31, 2022. The program will be administered by TCEQ. Components of individual projects within the program will be implemented by eligible subrecipients.

Appendix D: Shoreline and Beach Restoration

Eligible Applicants: The following entities are eligible:

- State Agencies
- Political Subdivisions:
 - City
 - County
 - Navigation Districts
- Public Institutions of Higher Education

B. The Restore Shoreline and Beach Restoration Program, and the associated projects implemented under this program, contributes to both the ecological and economic recovery of the Gulf Coast. Texas has hundreds of miles of coastline on the Gulf with significant population and industry. Restoration of beaches and shoreline can increase the health of those ecosystems, promote tourism, and provide important barriers to protect established development.

2. Eligibility: The two primary eligible activities for this proposed program under the Spill Impact Component of the RESTORE Act are:

- restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region; and
- coastal flood protection and related infrastructure.

TCEQ will work with the Commission to Rebuild Texas, established by Texas Governor Greg Abbott, to identify projects that address these eligible activities. This program and all projects identified for implementation will comply with the eligibility requirements in the Spill Impact Component of the RESTORE Act (33 U.S.C., Section 1321(t)(1)(B)(i)) and the Council's Comprehensive Plan.

3. Comprehensive Plan Goals and Objectives: This program aligns with the following goals of the Comprehensive Plan:

- Goal 3: Replenish and Protect Living Coastal and Marine Resources; and
- Goal 4: Enhance Community Resilience

Additionally, the program supports the following objectives of the Comprehensive Plan:

- Objective 4: Restore and Enhance Natural Processes and Shorelines; and
- Objective 5: Promote Community Resilience

4. Major Milestones:

- 1) Based on approved SEP, develop and submit federal applications to the RESTORE Council for each program area.
- 2) Receive grant awards from the Council.

Appendix D: Shoreline and Beach Restoration

- 3) Working with Commission to Rebuild Texas, identify projects to be funded through the program grant awards.
- 4) Develop and submit work plans for identified projects within each program grant.
- 5) Develop grant contracts with project recipients that include activities addressed in the Council-approved project workplans, such as reporting and monitoring requirements, as well as deliverables and timelines.
- 6) TCEQ management and oversight of all project workplans, including compliance with all federal and state grant requirements.

5. Success Criteria/Metrics/Outcome: Additional anticipated success criteria and outcomes will be based on the specifics appropriate to each implemented project but general success criteria and outcomes include:

Outcome: Project scope is completed in timely manner.

Anticipated Project Success Criteria: All project milestones are met by required dates including final conclusion of the project.

Outcome: Project scope is completed within budget.

Anticipated Project Success Criteria: The overall expended dollar amount for the project is at or below the budgeted amount while sub-category expenditures are no more than 15% over budgeted amount for that item.

An example of a possible outcome and associated success criteria depending on the particular project is:

Outcome: Enhanced coastal flood protection.

Anticipated Project Success Criteria: Size and density of natural or artificial protections constructed to absorb water, limit erosion, or attenuate wave energy.

6. Monitoring and Evaluation: All implemented projects will be monitored by the success criteria described in this appendix for their effectiveness as well as any specific project appropriate success criteria to ensure results are clearly understood and evaluated. Future workplans for individual projects will include the mechanisms subrecipients will employ to monitor individual project outcomes.

7. Best Available Science: The average erosion rate for the 367 miles of Texas coast is 4.1 feet per year and sixty-four percent of the Texas coast is eroding at an average rate of about 6 feet per year, with some locations losing more than 30 feet per year.¹ FEMA estimates that every dollar spent on erosion control and mitigation to preserve wetlands and other natural ecosystems, will provide a return on average of four dollars

¹ The General Land Office. "Coastal Erosion." Accessed on June 8, 2018.

<http://www.glo.texas.gov/coast/coastal-management/coastal-erosion/index.html>

Appendix D: Shoreline and Beach Restoration

in cost-savings for the future.² In addition to the regular environmental and man-made pressures on existing coastal ecosystems and natural structures that protect the coast (e.g., dunes), Hurricane Harvey caused additional and often extensive damage to these same ecosystems and natural structures. In addition to other successful approaches to mitigate such damage, the use and effectiveness of green infrastructure methods to reduce coastal impacts has been well documented.³

Associated best available science will be used to develop each of the project workplans and will be implemented throughout the life of individual projects.

8. Budget and Funding: Estimated cost of the program activities and amount to be requested from the Oil Spill Impact Component:

Estimated Funds: \$7,830,000

The amount of funds to be allocated for each project will be detailed in the budget in the workplan for that project and submitted to the RESTORE Council for approval.

Of the amount of available funds, approximately 10% will be for planning activities and 90% for implementation.

9. Partnerships: TCEQ staff will work with the Office of the Governor (OOG) and the Commission to Rebuild Texas to identify projects that promote nature-based tourism in the stated eligible counties and through the stated eligible applicants. The Commission to Rebuild Texas has been working with the local communities affected by Hurricane Harvey. Their on-going efforts will help ensure that the damage caused by the hurricane to the nature-based tourism industry are appropriately identified. This partnership will enable the selection of projects that can best address the economic and environmental impacts.

10. Leveraged Resources: Leverage resources will be dependent on the individual programs and/or projects; however, TCEQ will take advantage any all opportunities to leverage the RESTORE grant funds. Any leveraged funds available for a project will be identified in that project's workplan.

11. Funds Used as Non-Federal Match: Funds used as a non-federal match will be dependent on the individual implemented projects and will be included in that project's workplan. In all opportunities, TCEQ will look to leverage restoration funding

² The General Land Office. "Coastal Erosion." Accessed on June 8, 2018.

<http://www.glo.texas.gov/coast/coastal-management/coastal-erosion/index.html>

³ NOAA – Office of Coastal Management. "Green Infrastructure Effectiveness Database." Accessed on June 8, 2018. <https://coast.noaa.gov/digitalcoast/training/gi-database.html>

Appendix D: Shoreline and Beach Restoration

available through other federal funds, as well as grants funds available as a result of the Deepwater Horizon Oil Spill.