



Good Projects Checklist

Important Elements for Gulf
Restoration Projects



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Good Projects Checklist: Important Elements for Gulf Restoration Projects.

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Introduction

In the coming decades, billions of dollars will go to Gulf of Mexico restoration projects through processes set up after the *Deepwater Horizon* (DWH) oil spill. Hundreds of projects have already been approved, and many more are on the way. As the deluge of projects begins, it's essential to take a step back and ask a simple question: What makes for a "good" restoration project?

While the question is simple, the answer is complex. Project types are immensely varied. Moreover, not all projects of the same type are created equal. And what may be even more important than the project type is the process that leads to a project being selected. Because a project may have a myriad of intended and unintended impacts, a robust process can help lead to successful restoration outcomes across many different project types.

This "Good Projects Checklist" is intended to help members of the public figure out whether a given project is good or not. It does this by considering certain elements of the project, distilling each element into basic questions in order to determine whether the project adequately includes that element. The seven elements on the Checklist are:

- Positive Ecological Benefit**
- Needs of Communities Taken into Account**
- Coordination and Leveraging**
- Robust Monitoring and Adaptive Management**
- Meaningful Public Participation in Project Selection and Implementation**
- Robust Scientific Foundation**
- Positive Economic Impact**

A project that scores well on this checklist may not be perfect, but it will usually (though not always) be good.

Methodology

To determine what makes up a good restoration project, our first step was to review various materials. We started by determining what elements have been included in approved projects: we reviewed 75 approved projects across the three main Gulf funding processes – the Natural Resource Damage Assessment (NRDA) process, the RESTORE Act, and the National Fish & Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund—noting the elements included. We also reviewed reports and other resources from organizations working on Gulf restoration. From a review of these materials, we initially identified eight elements that cut across projects and were seen as priorities by organizations working on Gulf restoration.

Next, we created a non-scientific survey that listed the eight elements, asking respondents to rank them in order of importance and to identify other elements that were not included. The elements were randomly sorted for each survey participant. We sent the survey to our listserv, and several recipients forwarded it more broadly. Our intent was to keep the sample relatively small in order to focus on the opinions of our partners and collaborators (at least to start). As of August 1, 2016, we had received 137 responses to the survey.

After conducting the survey, we decided to combine two elements that had substantial overlap (Integration with Regional Goals and Objectives, and Coordination with Other Projects and Programs), for a total of seven. We also modified two of the elements. The final elements selected are presented below in order of their importance, as determined by the results of the survey.¹ The questions included for each element are derived from reports and other materials by organizations working on Gulf restoration, the survey responses, other feedback from our partners and collaborators, and our own expertise.

At the end of each section, we provide guidance for applying each element; an example of a project that satisfies the element is also included. Publicly available project documents, available in our [Restoration Projects Database](#), can be used to help score each project.

The Checklist is designed as a qualitative, partially subjective guide for broad application. Thus, different people may score projects in a slightly different way. Rather than yield a definitive ranking of projects, the Checklist is intended to provide a framework for considering proposed and actual projects, with the goal of helping the public determine which projects optimize the chances for successful restoration outcomes.

¹ When the two elements were combined, they were weighted more heavily.

ELEMENT #1: POSITIVE ECOLOGICAL BENEFIT

Does the project:

- aim to restore or conserve habitat;
- aim to replenish and protect living coastal and marine resources;
- aim to restore water quality and/or quantity; and/or
- aim to address and reduce a documented ecosystem stressor that could affect the sustainability of the Gulf ecosystem at large?

According to the DWH Programmatic Damage Assessment and Restoration Plan and Programmatic Environmental Impact Statement, “the ecological scope of impacts from the [DWH oil spill] was unprecedented, with injuries affecting a wide array of linked resources across the northern Gulf ecosystem.”² This included injuries to marshes, beaches, birds, and sea turtles.³ In addition to injuries from the spill, the Gulf environment has been injured by “chronic and acute harm caused by other past and on-going human actions.”⁴ Environmental restoration and protection will therefore be essential to achieving a healthy Gulf.

We based the criteria for this element on suggestions made in a letter sent to the RESTORE Council in 2016 from numerous groups working in the Gulf. Among other things, that letter provided a possible approach to “operationalize the [four] priority criteria outlined in the RESTORE Act so they can be used” in evaluating and prioritizing proposed projects.⁵ The above criteria are adapted from the letter’s section addressing how to operationalize one of the four priority criteria: “Projects that are projected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.”⁶

² NRDA Trustees, Final Programmatic Damage Assessment and Restoration Plan (PDARP) and Final Programmatic Environmental Impact Statement (PEIS), 1-15 (2016).

³ *Id.*

⁴ RESTORE Council, Comprehensive Plan Update 5 (2016).

⁵ Letter from various groups working in the Gulf to the RESTORE Council, dated April 20, 2016, at 2.

⁶ *Id.* at Appendix B.

Guidance for Applying the “Positive Ecological Benefit” Element

Quantifying positive ecological benefit has numerous complexities that require project-specific inquiries. As we framed it here, this element does not require making a scientific judgment on actual project outcomes. Instead, projects with a stated goal of providing positive ecological benefits satisfy this element for purposes of the Checklist.⁷

Projects that will likely satisfy the “Positive Ecological Benefit” element include those related to barrier islands, benthic resources, birds, coral, dunes, invasive species, land acquisition for conservation, living shorelines, marine mammals, oysters, pollution prevention, sea turtles, seagrass, water quality, water quantity, wetlands, and other habitat.

An example of a project that satisfies this element is the “Habitat Restoration and Conservation in Turkey Creek – Phase I” project in Mississippi, approved for funding from the NFWF Gulf Environmental Benefit Fund in 2015. According to the project fact sheet, “[t]his project seeks to conserve important habitat and enhance water quality in the 30,000-acre Turkey Creek watershed through habitat and stream conservation and restoration.”⁸ Its stated goals meet at least two of the criteria listed under this element.



⁷ For more guidance, see *e.g.*, Ocean Conservancy, Restoring the Gulf of Mexico (November 2011), www.oceanconservancy.org/places/gulf-of-mexico/restoring-the-gulf-of-mexico.pdf; NOAA, A Strategy for a Healthy Gulf of Mexico (April 2015), www.habitat.noaa.gov/pdf/healthy_gulf_of_mexico_april2015.pdf; National Wildlife Federation, Five Years and Counting (April 2015), www.nwf.org/~media/PDFs/water/2015/Gulf-Wildlife-In-the-Aftermath-of-the-Deepwater-Horizon-Disaster_Five-Years-and-Counting.pdf.

⁸ Habitat Restoration and Conservation in Turkey Creek – Phase I, NFWF (2015), www.nfwf.org/gulf/Documents/ms-turkey%20creek-15.pdf.

ELEMENT #2:

NEEDS OF COMMUNITIES TAKEN INTO ACCOUNT

Does the project:

- prioritize local hires or workforce development;
- benefit communities directly by providing ecological, social, cultural, or other benefits; and/or
- provide a community educational component?

Gulf restoration provides an opportunity to integrate the needs of communities into project and program design. Projects and programs can address community needs in different ways. One way is by prioritizing local hires. Another is by focusing on workforce development. In 2015, The Nature Conservancy, Oxfam America, The Corps Network, and BFA Environmental Consultants released a report that “provide[d]...an overview of promising models and key steps for incorporating local training and hiring into restoration.”⁹ The report made a number of recommendations, including: “[w]ork with community partners to identify those most in need of economic opportunity, and go where they are to help overcome barriers.”¹⁰

There are other ways community needs can be addressed. For example, they can be addressed by projects and programs that increase community resilience; these include ones that “[b]uild and sustain Gulf Coast communities’ capacity to adapt to short-and long-term natural and man-made hazards...”¹¹ Projects and programs that provide social benefits can also address community needs. Some examples of these include projects that focus on cultural protection and community education.

⁹ Oxfam America, The Nature Conservancy, The Corps Network & BFA Environmental Consultants, *Building the Gulf: Recommendations for Ensuring Restoration Benefits for Communities and the Environment*, at 2, available at www.oxfamamerica.org/static/media/files/building_the_gulf_oxfam.pdf.

¹⁰ *Id.* at 7.

¹¹ RESTORE Council Comprehensive Plan Update, *supra* note 4, at 12 (under the Council’s objective to “Promote Community Resilience”).

Guidance for Applying the “Needs of Communities Taken into Account” Element

Projects that will likely satisfy the “Needs of Communities Taken into Account” element include those focused on education, outreach, and workforce development. Depending on the project details, projects that *could* satisfy this element include ecological projects and economic or recreational-use projects (if they provide direct benefits to communities).

One example of a project that satisfies this element is the “Gulf of Mexico Habitat Restoration via Conservation Corps Partnership” project, which is funded under the RESTORE Act. That project “establish[es] a regional workforce-training program to benefit local communities and support long-term Gulf Coast restoration project implementation.”¹²



¹² Gulf of Mexico Habitat Restoration via Conservation Corps Partnerships, RESTORE Council (2015), https://www.restorethegulf.gov/sites/default/files/FPL_FS_K6_GW%20Conservation%20Corps%20v11.17.15.pdf

ELEMENT #3: COORDINATION AND LEVERAGING

Does the project:

- assert to be part of a large-scale, long-term vision or plan (e.g. Louisiana’s Coastal Master Plan);
- involve more than one jurisdiction (e.g., a number of federal, state, and/or local agencies are involved in the project; project has impacts in more than one jurisdiction);¹³
- coordinate with other relevant projects;
- leverage other funding; and/or
- connect with an existing local, state, or federal program?

Oil spill restoration projects are not being implemented in a vacuum, but within an existing framework. This framework includes numerous plans and programs that have been developed over the years, many of which have goals and objectives that overlap with the oil spill restoration and recovery processes. It also includes numerous projects that have been implemented over the years. Given that the Gulf is facing enormous challenges,¹⁴ it is important that these existing plans, programs, and projects are linked with the oil spill processes so that the current influx of funds can have the maximum impact.¹⁵

For these same reasons, the oil spill restoration processes themselves need to be coordinated and leverage funding to the extent possible. As the RESTORE Council noted in its Initial Funded Priorities List: “[e]ffective leveraging of existing resources is critical for maximizing the ‘bang’ for each coastal restoration ‘buck.’”¹⁶

¹³ This criterion is based on one of the sub-criteria that was included in the letter sent to the RESTORE Council in 2016 from numerous groups working in the Gulf. See Letter *supra* note 5, at 12.

¹⁴ The RESTORE Council made a similar statement in its Initial Funded Priorities List (“Neither the Council nor any of its public or private restoration partners have sufficient funds to fully address the vast ecological challenges facing the Gulf”). RESTORE Council, Initial Funded Priorities List 10 (2015).

¹⁵ Environmental Law Institute, Building Bridges: State Programs and Plans (2016), <http://eli-ocean.org/wp-content/blogs.dir/2/files/Full-Report-Final.pdf>; Environmental Law Institute, Building Bridges: Federal Programs (2015), <http://eli-ocean.org/wp-content/blogs.dir/2/files/Building-Bridges-Federal-Report.pdf>.

¹⁶ RESTORE Council, *supra* note 14, at 10.

Guidance for Applying the “Coordination and Leveraging” Element

A project will likely satisfy the “Coordination and Leveraging” element if it references a large-scale, long-term vision or plan, or another program or project, and states how it will link with it. Another indication of coordination is that the project involves more than one jurisdiction (e.g. a number of federal, state, and/or local agencies are involved in the project). A project will also likely satisfy this element if it leverages funds from another source.

An example of a project that satisfies this element is the “Terrebonne Basin Ridge and Marsh Creation Project (Bayou Terrebonne Increment),” which is a Louisiana project funded under the NRDA process.¹⁷ The project involves engineering and design for a project that is intended to “restore approximately 126 acres of earthen ridge and ... dredge sediment from offshore to create approximately 1,370 acres of marsh.” The project is part of the Louisiana Coastal Master Plan, and thus part of a large-scale, long-term plan.



¹⁷ Press Release, CPRA, CPRA Awards E&D Contracts for Deepwater Horizon NRDA Projects (March 3, 2017), http://coastal.la.gov/wp-content/uploads/2017/03/03.03-FINAL_CPRA-Awards-E-D-Contracts-for-Deepwater-Horizon-NRDA-Restoration-Projects.pdf.

ELEMENT #4:

ROBUST MONITORING AND ADAPTIVE MANAGEMENT

Does the project:

- include a monitoring plan(s);
- provide for adaptive management; and/or
- link with other monitoring and/or adaptive management programs?

Robust monitoring and adaptive management are essential for ensuring that restoration projects achieve their intended goals. In a recent report, the National Academy of Sciences addressed monitoring of ecological restoration in the Gulf. More particularly, that report focused on “identify[ing] best practices (i.e., existing, proven, cost-effective approaches) for monitoring and evaluating restoration activities to improve the performance of restoration programs and increase the effectiveness and longevity of restoration projects.”¹⁸

The report made a number of overarching recommendations, including:

- “All restoration...should be accompanied by a strategic, rigorous monitoring effort, described in a monitoring plan, that enables an assessment of progress relative to the restoration goals and objectives articulated by the programs and projects.”
- “Gulf restoration programs should coordinate their efforts to ensure that monitoring data are as consistent and comparable as possible across the Gulf...”
- “Where it is deemed appropriate, all Gulf restoration programs should apply knowledge gained through analysis and synthesis of monitoring data by implementing adaptive management to improve restoration effectiveness.”¹⁹

¹⁸ The National Academies of Sciences, Engineering, and Medicine, *Effective Monitoring to Evaluate Ecological Restoration in the Gulf of Mexico 1* (2017).

¹⁹ *Id.* at 9-10.

We based our criteria for the monitoring and adaptive management element on these recommendations. Our criteria are purposely broad – their main aim is to recognize that “monitoring should be viewed as an integral part of restoration projects...”²⁰ In addition, “[w]hen appropriate, monitoring should also support adaptive management.”²¹

Guidance for Applying the “Robust Monitoring and Adaptive Management” Element

A project will likely satisfy this element if it includes a monitoring plan or monitoring provisions. A project will also likely satisfy this element if it includes an adaptive management plan or provisions (note that monitoring will likely be an important part of any adaptive management plan or provisions). Monitoring and/or adaptive



management plans or provisions that link with or coordinate with other restoration programs are ideal.

An example of a project that satisfies this element is the “Florida Seagrass Recovery” project, which is funded under the NRDA process. The project description includes a section on “Performance Criteria, Monitoring and Maintenance” that states that “monitoring would be conducted to ensure project designs were correctly implemented and to evaluate project effectiveness.” The section includes additional details about the monitoring (e.g. what the monitoring would—and could—include).²²

²⁰ *Id.* at 2.

²¹ *Id.* at 3.

²² NRDA Trustees, Final Programmatic and Phase III Early Restoration Plan and Early Restoration Programmatic Environmental Impact Statement 91-2 (2015), *available at* www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/ERP-PEIS-Part-4-Chapter-12A-C.pdf.

ELEMENT #5:

MEANINGFUL PUBLIC PARTICIPATION IN PROJECT SELECTION AND IMPLEMENTATION

Does the project:

- provide an opportunity for public engagement prior to project approval (e.g. public meeting where the project is discussed in-depth);
- take the needs of disadvantaged and/or vulnerable communities into account (e.g. translated materials are provided);
- explain the process and reasons for selecting the project;
- meaningfully respond to public comments and make changes as necessary; and/or
- involve the community (e.g. include community members in monitoring)?

Meaningful public participation is an essential element in any restoration project: it not only provides communities with the opportunity to weigh in on decisions that will affect them, but also has the potential to improve project and program outcomes. As the Gulf Restoration Network stated in its report, “Sunshine on the Gulf II: Transparency & Participation in the RESTORE process”: “[a]llowing the public an opportunity to participate in the planning and implementation of restoration strategies will give decisionmakers a better understanding of the environmental, cultural and economic assets and challenges in a community and will lay a solid foundation for cooperation and support for restoration plans and programs.”²³

It is important to keep in mind that, in order for all groups to meaningfully participate, a number of different outreach approaches may need to be used. The “Sunshine on the Gulf II” report notes that “[i]t is critical that multiple communication strategies are used so that all

²³ Gulf Restoration Network, Sunshine on the Gulf II: Transparency & Participation in the RESTORE Process 15 (2015), available at www.healthygulf.org/sites/healthygulf.org/files/sunshine_on_the_gulf_ii_report.compressed.pdf.

members of the community have access to the information.” The report goes on to note that “[u]sing only internet communication is insufficient, as many members of socially and economically vulnerable communities have limited access to technology.” At the same time, it may be important to translate materials and meetings for some community members: “[n]ot only is it important to provide translated materials in the same timely fashion as English-language documents, but also provide informed and trained translator services at public meetings.”²⁴

Guidance for Applying the “Meaningful Public Participation” Element

In order for a project to satisfy this element, there must be an opportunity for meaningful public participation. Ideally, this opportunity would be available at each stage of the project, starting with project design and selection through implementation and monitoring.²⁵ A project could, however, still satisfy this element even if the public is not involved at each stage. For example, this element could be satisfied if the community is involved in the design of the project (e.g. based on community input, changes are made to the project design). As noted above, it is also important to keep in mind that, in order for all groups to meaningfully participate, various outreach approaches may need to be used.

An example of a project that satisfies this element is the “Florida Gulf Environmental Benefit Fund Restoration Strategy” project, approved in 2015 under the NFWF Gulf Environmental Benefit Fund (GEBF). It “is an integrated planning effort that will serve as an overarching framework for restoring and conserving the natural resources of Florida’s Gulf Coast through the [GEBF].” To this end, the project partners will, among other things, “carry out effective public engagement to aid in the identification of restoration priorities and projects.”²⁶

²⁴ *Id.*

²⁵ As the “Sunshine on the Gulf II” report notes: “[c]ommunity engagement in all phases of the decision-making process regarding recovery, reconstruction and restoration activities is as important as the physical outcomes of that planning.” *Id.*

²⁶ Florida Gulf Environmental Benefit Fund Restoration Strategy, NFWF (2015), www.nfwf.org/gulf/Documents/fl-restoration%20planning-15oc.pdf.

ELEMENT #6: ROBUST SCIENTIFIC FOUNDATION

Does the project:

- incorporate best available science;
- consider climate change impacts (e.g., sea-level rise; more extreme weather events); and/or
- utilize traditional ecological knowledge or citizen science?

Utilizing the best available science optimizes a project’s chances for long-term success.²⁷ Under the RESTORE Act, best available science is defined as science that:

- (a) maximizes the quality, objectivity, and integrity of information, including statistical information;
- (b) uses peer-reviewed and publicly available data; and
- (c) clearly documents and communicates risks and uncertainties in the scientific basis for such projects.²⁸

One significant risk that projects face is climate change. Climate change and sea-level rise are reshaping the coastline along the Gulf of Mexico.²⁹ Across the Gulf Coast, communities are increasingly vulnerable as the seas rise, land subsides, saltwater intrudes, and marshes retreat.³⁰ In the face of such monumental change, a “clear[] and honest[] present[ation]” of climate change impacts is necessary “so that fully informed decisions can be made.”³¹

²⁷ See Puget Sound Nearshore Partnership, Technical Report 2004-01, Application of the “Best Available Science” in Ecosystem Restoration: Lessons Learned from Large-Scale Restoration Project Efforts in the USA (2004), II, available at www.pugetsoundnearshore.org/technical_papers/lessonslearned.pdf (“The [Puget Sound Nearshore Partnership’s Nearshore Science Team] suggests that efficiently and effectively using science as a foundation for making decisions will greatly improve a restoration program’s ability to successfully conceptualize, design, and implement large-scale restoration efforts in the long term”).

²⁸ RESTORE Act Sec. 1603.

²⁹ Cindy A. Thatcher, John C. Brock & Elizabeth A. Pendleton, *Economic Vulnerability to Sea-Level Rise along the Northern U.S. Gulf Coast*, 63. J. OF COASTAL RESEARCH 234, 234 (2013).

³⁰ *Id.* at 241–44.

³¹ Gulf Restoration Network, *supra* note 23, at 10.

At the same time, traditional ecological knowledge (TEK) and citizen science could play an important role in restoration projects. As noted in the Sunshine on the Gulf II report, utilizing TEK “could provide a greater understanding of the biological and cultural value of [a] specific site; potential ecosystem benefits; and, critically, a greater understanding of traditional cultural practices that can help maintain a healthy ecosystem.”³² Similarly, citizen science could benefit restoration projects. For example, “[l]ow-cost, engaging monitoring techniques...can assist interested agencies and stakeholders in fulfilling key monitoring and engagement objectives of projects and programs.”³³

Guidance for Applying the “Robust Scientific Foundation” Element

A project can satisfy the “Robust Scientific Foundation” element if it incorporates the best available science. One indication that the best available science is being incorporated is the use of external scientific review (i.e. the project proposal is reviewed by scientists outside of the relevant process).³⁴ Another indication is the relevant scientific literature is cited. A project can also satisfy this element if it addresses the anticipated impacts of climate change. Where relevant, a project should also incorporate TEK and the use of citizen science.

An example of a project that satisfies this element is the “Jean Lafitte Canal Backfilling” project, which is funded under the RESTORE Act. This project is designed “to restore [] freshwater wetland and shallow water habitat by leveling spoil banks into canalways” over 16.5 miles.³⁵ In addition to having external scientific review, it is intended to, among other things, “improve resiliency of ecosystems in the face of subsidence and climate change impacts...”³⁶

³² *Id.*

³³ *Id.* at 14.

³⁴ Note that the RESTORE Council has used external scientific review “to ensure that [project] proposals [were], per the RESTORE Act, conducted using the Best Available Science.” See Council-Selected Restoration Component Proposals and Context Reports, RESTORE Council, www.restorethegulf.gov/release/2015/03/12/council-selected-restoration-component-proposals-and-context-reports.

³⁵ RESTORE Council, *supra* note 14, at 64, www.restorethegulf.gov/sites/default/files/FPL_forDec9Vote_Errata_04-07-2016.pdf.

³⁶ *Id.*

ELEMENT #7: POSITIVE ECONOMIC IMPACT*

Does the project:

- create local jobs;
- improve infrastructure;
- increase tourism; and/or
- enhance natural resources so as to provide economic benefits?

** Note that certain oil spill funding cannot be used for economic projects. It is also important to note that ecological projects can also have positive economic impacts.*

Oil spill restoration and recovery funding provides “a remarkable opportunity” not only “to restore the Gulf,” but also “to strengthen its traditional industries, spur innovation, accelerate emerging markets centered on environmental restoration, and promote new prosperity.”³⁷

Numerous activities make “the Gulf of Mexico [] a powerful economic engine both regionally and nationally.”³⁸ Oil spill funding can bolster many of these activities, including tourism, transportation, and recreational activities.³⁹ At the same time, ecological restoration also provides important economic benefits, from creating local jobs to restoring natural resources that are an important part of the Gulf economy (e.g. fisheries, beaches)⁴⁰ to “reducing risk from natural disasters.”⁴¹ This should be kept in mind in reviewing any ecological project.

³⁷ Oxfam & The Nature Conservancy, *Rebuilding Our Economy; Restoring Our Environment 1*, available at www.oxfamamerica.org/static/media/files/rebuilding-our-economy-restoring-our-environment.pdf.

³⁸ *Id.*

³⁹ As the Oxfam & TNC report notes: “From food to energy to recreation, transportation and tourism, the Gulf of Mexico is a powerful economic engine both regionally and nationally.” *Id.*

⁴⁰ *See id.* at 1,3. For example, the report notes that the Gulf’s “lands and waters...[p]roduce 1.3 billion pounds of seafood annually — with a dockside value of \$661 million...” *Id.*

⁴¹ *Id.* at 1. As the report notes: “Healthy wetlands, barrier islands and oyster reefs enhance community resilience, protecting homes and businesses by reducing the impacts of storm surge, flooding and sea level rise.” The report goes on to note: “A FEMA-funded study found that every dollar invested in hazard mitigation results in four dollars of costs savings.” *Id.* at 1,3.

Guidance for Applying the “Positive Economic Impact” Element

A project can satisfy this element if it is intended to increase economic activity (e.g., increase tourism, build infrastructure) or if it provides economic benefits (e.g., oyster reefs that enhance fishing, barrier islands that protect coastal communities, wetlands restoration that enhances water resources).

An example of a project that satisfies this element is the “Ship Reef” project in Texas, which is funded under the NRDA process. The project is intended to “enhance fishing and diving opportunities by sinking a ship to create an artificial reef approximately 67 miles offshore of Galveston.” Among other things, this project is expected to “generate economic returns to local communities.”⁴²



⁴² Artificial Reef Creation Off the Texas Coast, NRDA Trustees, www.gulfspillrestoration.noaa.gov/sites/default/files/wp-content/uploads/TX-Art-ReefsFINAL10_1_14.pdf.

Checklist Summary

For easy reference, below we have compiled a list of the seven elements, along with their related questions.

1. POSITIVE ECOLOGICAL BENEFIT

- Does the Project:**
- aim to restore or conserve habitat;
 - aim to replenish and protect living coastal and marine resources;
 - aim to restore water quality and/or quantity; and/or
 - aim to address and reduce a documented ecosystem stressor that could affect the sustainability of the Gulf ecosystem at large?

2. NEEDS OF COMMUNITIES TAKEN INTO ACCOUNT

- Does the Project:**
- prioritize local hires or workforce development;
 - benefit communities directly by providing ecological, social, cultural, or other benefits; and/or
 - provide a community educational component?

3. COORDINATION AND LEVERAGING

- Does the Project:**
- assert to be part of a large-scale, long-term vision or plan (e.g. Louisiana's Coastal Master Plan);
 - involve more than one jurisdiction (e.g., a number of federal, state, and/or local agencies are involved in the project; project has impacts in more than one jurisdiction);
 - coordinate with other relevant projects;
 - leverage other funding; and/or
 - connect with an existing local, state, or federal program?

4. ROBUST MONITORING AND ADAPTIVE MANAGEMENT

- Does the Project:**
- include a monitoring plan(s);
 - provide for adaptive management; and/or
 - link with other monitoring and/or adaptive management programs?

5. MEANINGFUL PUBLIC PARTICIPATION IN PROJECT SELECTION AND IMPLEMENTATION

- Does the Project:**
- provide an opportunity for public engagement prior to project approval (e.g. public meeting where the project is discussed in-depth);
 - take the needs of disadvantaged and/or vulnerable communities into account (e.g. translated materials are provided);
 - explain the process and reasons for selecting the project;
 - meaningfully respond to public comments and make changes as necessary; and/or
 - involve the community (e.g. include community members in monitoring)?

6. ROBUST SCIENTIFIC FOUNDATION

- Does the Project:**
- incorporate best available science;
 - consider climate change impacts (e.g., sea-level rise; more extreme weather events); and/or
 - utilize traditional ecological knowledge or citizen science?

7. POSITIVE ECONOMIC IMPACT

- Does the Project:**
- create local jobs;
 - improve infrastructure;
 - increase tourism; and/or
 - enhance natural resources so as to provide economic benefits?