

Background

From 1936 to 1980, Kerr-McGee Chemical Corporation operated a creosote-based wood treatment plant in Navassa, North Carolina. In 2010, the Kerr-McGee site was placed on the EPA's National Priorities List due to contaminated soil and groundwater, resulting from the hazardous practices of the corporation. The Environmental Protection Agency (EPA) recently allotted funding to the clean-up and restoration of the Kerr-McGee Superfund site in Navassa, involving many local, state, and federal stakeholders. These stakeholders include the Multistate Environmental Response Trust, United States Fish & Wildlife Service, National Oceanographic and Atmospheric Administration (NOAA), EPA, and North Carolina Division of Environmental Quality. University of North Carolina Wilmington graduate students are involved through a long-term partnership supported by EPA's College/Underserved Community Partnership (CUPP). This involvement provides an opportunity for collaborative problem solving between the town and students. The goal of this report is to describe a framework for identifying and evaluating Superfund and brownfield redevelopment options that provide a means of maintaining ecosystem services and generate economic growth for the Town of Navassa, while preserving the Gullah Geechee heritage.

This report details the first step in completing a policy analysis for Superfund and brownfield redevelopment options in the Town of Navassa. Policy analysis is a policy development tool for assessing the merit and feasibility of policy alternatives before the formal policy formation phase begins. If done well, a policy analysis will increase the likelihood of adoption of the proposed legislation. The goal of a policy analysis is to provide an unbiased assessment of the effectiveness of policy alternatives to produce opportunities based on specific evaluative criteria deemed appropriate based on larger issue concerns (i.e. economic, ecological, cultural). As is the first step in policy formation, the first step in a policy analysis is to assess and define the problem. The lens through which we see the problem often dictates how we envision the solution. As such, this is a critical step and often involves several renditions as analysts' knowledge of the problem deepens.

The second step is to identify and evaluate policy alternatives. This step includes qualitative and quantitative data collection in order to evaluate solutions in the context of larger issue concerns related to political, economic, social and environmental conditions. Evidence is generated through the synthesis of measured indicators in the context of these integrated systems.

Once generated, the evidence is used to project outcomes resulting from each policy alternative. These projected outcomes or scenarios are then evaluated by the criteria of concern (e.g. economic, cultural, and ecological) expressed by stakeholder groups to understand the impacts on these inter-related systems. The final step is to recommend a course of action based on the analytic findings that best addresses the problem defined and/or progresses towards desired outcomes. This typically involves a detailed implementation plan with funding mechanisms, performance indicators, and timelines.

This report takes the first step to assess and define the problem through the various lenses or perspectives and develop an evaluative framework to be used in the second step of evaluating policy alternatives or opportunities. Through our assessment, we present an evaluative framework that integrates three primary concerns- economic, ecological, and cultural- as measurable criteria. Economic criteria is measured by financial feasibility, meaning that alternatives are cost-effective and provide economic returns to Navassa. The cultural perspective is addressed in terms of social acceptability. It is necessary to assess whether alternatives benefit and expand the Gullah-Geechee heritage in the town. Lastly, the ecological perspective is measured by environmental viability. With restoration efforts from the EPA, it is important that the future of Navassa incorporate alternatives that address environmental concerns regarding land use.

The evaluative framework seeks to empower the community with a decision-making tool to help them shape the future of their town in light of their own goals and vision. Often times, economic goals trump social and environmental goals, despite the fact that ultimately one cannot be sustained without the other. The integrated nature of this framework provides specific factors to consider from all three perspectives: economic, cultural and ecological. By considering these factors together when approached with a development proposal, the Town is positioned to make a decision that maximizes community benefits and reduces negative impacts.

Economic Perspective Introduction

The Kerr-McGee Superfund site in Navassa, North Carolina presents a unique economic challenge. Given a clean bill of the health for the brownfield, residents of the Town of Navassa must decide how best to manage future economic growth and development. In the end, achieving economic success in redevelopment of the site is crucial to lowering employment rates, driving higher incomes, and increasing property and sales tax bases. Figure 1 displays an example of a successful brownfield redevelopment, a former chemical Superfund site in Clayton, New York, now a thriving hotel along the St. Lawrence River. The sections below depict economic objectives, criteria and measurement, and proposed policy opportunities for evaluation that may provide a roadmap for growth and sustainability in the Town of Navassa.



Figure 1. Former Superfund site in Clayton, New York along edge of St. Lawrence River. Photo: 1000islandsharborhotel.com

Objectives

1. Diversify the local economic base by attracting new retail stores, manufacturing firms.
2. Encourage and facilitate the expansion of existing firms in the community.
3. Increase the number of locally owned stores and businesses in the community.
4. Optimize the amount of productive/usable acres available after superfund clean-up and restoration.

Evaluative Criteria

1. Criteria #1-Economic Feasibility: In terms of framework, this criterion relates to the objectives listed above in that it aims to assess and analyze the economic impact of a policy opportunity driven by the diversification of the economic base and the optimization of the amount of productive/usable acres after superfund cleanup and restoration (objectives one

and four). As these objectives are accomplished, it is expected that there will be improvements in the measurements below:

- 1) Measurement #1- Median earnings per worker
- 2) Measurement #2- Median household income
- 3) Measurement #3- Unemployment rate
- 4) Measurement #4- Median home values
- 5) Measurement #5- Public revenues

2. Criteria #2-Social Acceptability: In terms of framework, this criterion relates to the objectives listed above in that it aims to assess and analyze the social impact of a policy opportunity driven by the growth of locally-owned businesses and expansion of existing firms (objectives two and three). As these objectives are accomplished, it is expected that there will be improvements in the measurements below:

- 1) Measurement #1- Percent of citizens who work/live in same city
- 2) Measurement #2- Percent of locally owned businesses (self-employed)
- 3) Measurement #3- Gini index of income inequality

3. Criteria #3-Environmental Viability: In terms of framework, this criterion relates to the objectives listed above in that it aims to assess and analyze the environmental impact of a policy opportunity driven by the optimization of the amount of productive/usable acres after superfund cleanup and restoration (objective four). As this objective is accomplished, it is expected that there will be improvements in the measurements below:

- 1) Measurement #1- Rating (environmental) on firms that move to Navassa
- 2) Measurement #2- Number of productive/usable acres after restoration

Proposed Policy Opportunities

1. Use the existing land-use and zoning plan to direct future development of Navassa.
2. The Town of Navassa may purchase a portion of the site for recreational / environmental / cultural uses for preservation of the land.

3. Utilize a mixed-use development strategy to optimize the amount of land that is allocated toward each type of development (commercial, residential, recreational / environmental / cultural, and green space).
4. The Town of Navassa may hire a professional brownfield consultant to assess highest and best use for the land.

Opportunity #1 – Use the existing land-use / zoning plan to direct future development of Navassa

This proposed policy opportunity may be a viable option as it is designed to foster economic growth, both at the Kerr-McGee Superfund site and in the Town of Navassa as a whole. The town withholds the right to designate/enforce zoning and in doing so, drive the direction in which its economy grows into the future. Zoning is relatively easy to implement, and will be regardless of who controls the Kerr-McGee Superfund site. One of the issues arising with this policy opportunity is the need for more information and research to fully determine the economic impact of the existing land-use / zoning plan. The current plan does not take into account specific needs or strategies as they pertain to brownfield redevelopment, specifically the Kerr-McGee Superfund site. Knowing the full effect of existing land-use / zoning plans will lead to a clearer picture for future development.

Opportunity #2 – Town of Navassa purchases a portion of the site for recreational / environmental / cultural uses for preservation of the land

This proposed policy opportunity may be a viable option as it is designed to allow the Town of Navassa to jump start economic activity on the Kerr-McGee Superfund site and in the town as a whole. Purchase / acquisition of acreage on the site may allow for implementation of a cultural project there, both providing job opportunities and preserving cultural heritage of the region. One of the issues arising with this policy opportunity is the cost of implementation. It is not yet known what the cost will be to purchase a portion of the Kerr-McGee Superfund site, once cleaning is complete. Town leaders will need to weigh the cost of purchasing land on the site versus purchasing elsewhere, which potential purchase will lead to the most economic gain while preserving cultural heritage of the region.

Opportunity #3 – Utilize a mixed-use development strategy to optimize the amount of land that is allocated toward each type of development (commercial, residential, recreational / environmental / cultural, and green space)

This proposed policy opportunity may be a viable option as it is designed to attract new retail and manufacturing firms to the Town of Navassa. Mixed-use developments allow residential, commercial, and recreational uses for a piece of property to co-exist, one driving the other by allowing residents to live within walking distance of where they work and shop. One of the issues arising with this policy opportunity is the potential challenge that comes with implementing successful mixed-use zoning. Those who develop the land may do so in a way that, when all is said and done, is not conducive to attracting new retail and manufacturing firms. How development takes place is equally as important as the type of development. A second issue arising with this policy opportunity is that development may not be optimal from an environmental point of view. While the local economy may gain as a result of mixed-use development, the environment may suffer from increased pollution, an abscess of trash brought into the area, and overpopulation.

Opportunity #4 – The Town of Navassa may hire a professional brownfield consultant to assess highest and best use for the land

The proposed policy opportunity may be a viable option as it is designed to better meet the objectives specific to issues of brownfield cleanup and redevelopment. Hiring a brownfield consultant to assess the highest and best use for the land will better ensure that redevelopment is done right, the first time. Both the economic and environmental impacts should be positively affected as a result of hiring the consultant. One of the issues arising with this policy opportunity is that it may prove costly. Consultants working at this magnitude will not come cheap. Also, the process of assessing the brownfield will be time consuming, potentially slowing down the redevelopment process.

Economic Perspective Conclusion

Achieving economic success in the redevelopment of Navassa’s Kerr-McGee Superfund site is crucial to lowering employment rates, driving higher incomes, and increasing property and sales tax bases. The stated economic objectives, criteria and measurement, and proposed policy opportunities for evaluation work to provide a roadmap for growth and sustainability at the Kerr-

McGee site. A final decision as to which step is next taken lies with the Town of Navassa leadership, the Environmental Protection Agency, and the Multistate Environmental Response Trust, current owner of the Kerr-McGee Superfund site.

Ecological Perspective Introduction

The Kerr-McGee Superfund site is located adjacent to Brunswick River and Sturgeon Creek. The eastern and southern portion of the Superfund site is primarily composed of wetlands (Figure 2). Wetlands have a natural ability to provide nonmarket ecosystem services, which are goods and services that ecosystems naturally provide to benefit humankind (Adusumilli 2015). These ecosystem services include storm water abatement, filtration, groundwater recharge and discharge, and erosion control. These systems also provide habitat to juvenile and adult marine species, which in return enhances both recreational and commercial fisheries. In addition, twenty-two endemic species have been identified within Navassa and the Cape Fear region. The eastern marshes of Navassa contain the only known population of Carolina Bishop Weed (*Aegopodium podagraria*) in the state, while the southern marshes support Cypress Knee Sedge (*Carex decomposita*), which is a rare plant species. The ecological perspective of the evaluative framework aims to reduce future land use in order to minimize habitat and water quality degradation. Environmental restoration of the Kerr-McGee site should also provide a means of generating revenues for the town, while preserving the heritage of citizens.



Figure 2. Outlined image of Kerr-McGee Superfund site. Wetlands are located on the eastern and southern portion of the site (green).

Objectives

The following objectives are proposed to reduce future land use to minimize habitat and water quality degradation:

1. Restore the function of wetlands in order to recreate ecosystem services offered by this habitat.
2. Monitor water quality of Brunswick River, Sturgeon Creek, and adjacent wetlands.

3. Meet standards to restore designated uses of groundwater for consumption.

Evaluative criteria

Established evaluative criteria will be used to assess the environmental viability, financial feasibility, and social acceptability of each proposed opportunity. These evaluative criteria are aligned with the overall ecological objectives and provide measurements for each opportunity.

1. Criteria #1-Environmental viability

- 1) Measurement #1 - Measure water quality parameters (dissolved oxygen, pH, filtration rates, turbidity, etc.) as established by standards of the EPA
- 2) Measurement #2 - Ecosystem services output to determine ecological costs and benefits associated with wetlands and other viable habitat

2. Criteria #2-Financial Feasibility

- 1) Measurement #1 – Determine costs and benefits associated with storm protection services, such as flood prevention
- 2) Measurement #2 – Determine rates of water quality filtration to ensure the safety of public waters
- 3) Measurement #3 –Determine existence value of wetland habitat through contingent valuation surveys

3. Criteria #3-Social Acceptability

- 1) Measurement #1 – Identify public health risk associated with restoration, including ground water contamination and creosote exposure
- 2) Measurement #2 – Survey residents to determined perceived risk of environmental hazards associated with the Kerr-McGee Superfund
- 3) Measurement #3 – Increase communication between citizens and stakeholders through education and outreach

Proposed Policy Opportunities

1. Navassa can further restore land and ecosystem services for conservation as natural habitat.
2. The town can encourage private development of land.
3. The town can encourage development of land with environmental consideration.

4. Navassa can designate land for research/education purposes.

Opportunity #1 – Restore Land and Conserve as Natural Habitat

In this opportunity, the Multistate Trust restores the contaminated areas and Navassa conserves the land as natural habitat. This opportunity allows Navassa to maintain the benefits associated with habitat and wetland conservation and eliminate environmental degradation in the future. Conserving wetlands will produce benefits to towns downstream of Navassa through filtration and enhanced water quality. Adhering to financial feasibility, conserving the restored land provides benefits to the citizens of Navassa through flood and erosion control. The ability of wetlands to control for erosion is so valuable that many states and landowners are restoring wetlands as a means of mitigating coastal erosion. The town will also receive economic benefits as a result of storm water abatement. Navassa is adjacent to multiple watersheds, meaning that in the future of climate change and sea level rise, wetlands may protect many individuals from flooding and storms. Additionally, the ecosystem service values of wetlands per acre per year ranges from \$5,000 to \$70,000 (Adusumilli 2015). This not only includes eliminating costs from flood and erosion control, but also valuation of species and habitat. Survey data can aid in determining these values. However, in conserving the land there are opportunity costs associated with not pursuing development of the area, potentially resulting in low political palatability amongst the town and its citizens. Surveys would assist in determining how knowledgeable citizens are in regards to the function of wetlands and the benefits of conservation and restoration. Data from the EPA should be used to assess the cost and benefits associated with land conservation in the future.

Opportunity #2 – Private Development of Land

Another opportunity following restoration is to build on the land. Building on the land will help increase industry within the Navassa area. This will create jobs, as well as generate additional income through taxes. These increases will assist in decreasing unemployment and improving the median household income. With land development, Navassa could potentially experience negative impacts, including further environmental degradation from companies that have limited environmental policies or work in industries that produce damaging byproducts. Also, developing the land for industrial purposes could create potential challenges for current residents, including

gentrification. One way to combat these problems when introducing industry is through zoning and preferential permits. The town can determine zoning patterns that mitigate negative impacts to the land, wetlands, and adjacent watersheds. Providing preferential permits to companies that have a strong reputation of being “environmentally sound” could enhance the businesses and development that build on the land. The other option would be to put specific regulations in place that prevent certain practices or require a certain area of the land to remain as greenspace. Overall, this opportunity works to benefit economic factors through the introduction of business, while ensuring minimal impacts on the environment and quality of life of the existing residents.

Opportunity #3 – Development with Environmental Consideration

The third opportunity is to build on the land with strong environmental regulation. Buildings will become LEED (Leadership in Energy and Environmental Design) certified. The main purpose of LEED is to reduce use of water, energy, and greenhouse gas emissions, while being cost efficient. There are different certification levels and categories for buildings. LEED project types include building design and construction, interior design, building operation and maintenance, neighborhoods, and homes. This increases the possibilities of projects that are available for construction and provides future developers with more choices. This would mitigate further environmental degradation, supporting the environmental viability objective. In this opportunity, Navassa can use incentives for developers such as expediting building permits or subsidizing development. With LEED certification, citizens will become knowledgeable about the benefits and importance of adopting environmentally friendly practices, which could lead to increased knowledge within the community. After restoration, the land will be safe for the public, addressing the social acceptability criteria. Financial feasibility is also addressed because LEED buildings use less water and produce less pollution compared to other buildings without LEED certification. This option stays in line with the integrative goal while being outside the box. Building with higher environmental consideration would maintain the land, while providing an opportunity for developers and Navassa to be at the forefront of the “green movement.”

Opportunity #4 – Designate Land for Research/Education

In this opportunity, restored land is designated for research and education through partnerships with local colleges and universities. This allows research centers to utilize the land

for study across a wide variety of research disciplines. Colleges and universities will emphasize community outreach through research, while enhancing community partnerships in Navassa and surrounding areas. Colleges and universities will utilize the land for research with environmental consideration, addressing the ecological viability criteria. State and federal funding to the college/university for research on the land could enhance the property values within Navassa and potentially provide employment to citizens. The college/university could also generate tourism through education, satisfying the financial feasibility criteria. The college/university will develop partnerships with the community, relaying findings and engaging the public with the progress and results of conducted research. Ecological studies could mitigate public health concerns and determine actual risks associated with land use, thus addressing criteria of social acceptability. Since the land is owned by the college/university, it will be subsidized or designated as a public land trust. Consequences of designating the land for research and education include the opportunity costs of not developing the land with businesses that provide direct revenues to Navassa.

Ecological Perspective Conclusion

The town of Navassa has a rich amount of biodiversity, as well as many viable habitats and ecosystems. Wetland habitats within Navassa have the ability to provide ecosystem services that benefit the town ecologically, economically, and culturally. These habitats provide storm protection, water filtration, and habitat to marine organisms. In order to sustain these habitats in the future, each of the proposed opportunities aims to satisfy the overarching ecological objectives by addressing potential land use and environmental concerns.

Cultural Perspective Introduction

Due to the risk of losing the Gullah Geechee heritage in Navassa, preservation efforts are needed to ensure that citizens are informed of the contributions the culture has made to our society. Our emphasis on the Gullah Geechee culture addresses the intertwining criteria of ecological and economic perspectives to create a holistic approach. This integrative framework allows us to better focus our objectives in an encompassing way for Navassa's potential policy opportunities.



Figure 3. The Gullah Geechee Cultural Heritage Corridor extending from Wilmington, NC to Jacksonville, FL.

In order to prevent the loss of the Gullah Geechee culture we are making efforts to build upon known successes and existing policies. The Gullah Geechee are descendants of West Africans whom were enslaved to work on rice fields within Navassa and other areas along the Southeast Coast. This geographical area, as identified in Figure 3, is known as the Gullah Geechee Cultural Heritage Corridor (hereafter known as The Corridor). The Corridor is a resource for Gullah Geechee communities, advocating for the preservation of the culture. Preservation of the Gullah Geechee heritage is an integral part of our goal of policy development for a self-sustaining community within Navassa.

Objectives

1. Establish relationships with Gullah Geechee Cultural Heritage Corridor stakeholders and Queen Quet Marquette L. Goodwine- the Gullah Geechee Queen.
2. Locate a site and secure additional funding for the construction costs of a Gullah Geechee Cultural Education location.
3. Connect regional efforts to encourage interest of those not directly involved with the Gullah Geechee Heritage Corridor.

Evaluative Criteria

1. Criteria #1: Social Acceptability
 - 1) Measurement #1: Gauge responsiveness of Navassa community that identifies with Gullah Geechee heritage through surveys.
 - 2) Measurement #2: Survey the existence value of Gullah Geechee Culture among residents.
2. Criteria #2: Financial Feasibility
 - 1) Measurement #1: Revenue obtained from the Gullah Geechee cultural area, as well as the cost to maintain the location.
 - 2) Measurement #2: Assess the value of grants and allocation to the town.
3. Criteria #3: Environmental Viability
 - 1) Measurement #1: The incorporation of rice field preservation and freshwater quality and supply into Cultural Education area to educate the public about ecosystem services of Navassa.
 - 2) Measurement #2 - Identify appropriate land use zoning for cultural area.

Proposed Policy Opportunities

1. Create an outdoor recreational center complete with greenways and blue ways with cultural exhibits that showcase the Gullah Geechee culture while preserving the natural habitat and rice fields.
2. Build a Cultural Education Center to educate the public about the Gullah Geechee culture and to encourage heritage pride.
3. Build an outdoor amphitheater to encourage community recreation, cultural plays, festivals, and music that reflect the Gullah Geechee culture.
4. Delay the decision making process, but create a Gullah Geechee tour alternative around Navassa and the surrounding sights.

Opportunity 1 –Outdoor Recreation Center

The creation of an outdoor recreation center would help engage the local community with those who may be passing through via the new highway expansion. It would incorporate cultural exhibits and rice fields into guided tours both on land (trails) and water (kayaking). Prospective benefits of this opportunity include the potential to encourage local outdoor activities, create jobs,

and potentially connect to other Gullah Geechee tours in The Corridor. Tourism would likely increase, and this could be seen as a positive or a negative consequence depending on the views of the citizens.

Although there are plenty of potentially good outcomes from the building of a recreation center, there could also be negative outcomes associated with this opportunity. A development issue could result if the land cannot sustain construction of a building close enough to the water for the kayak tour to be feasible. It could also be difficult to fund the building costs, staff, and equipment on tour fees alone. This means additional revenue sources may be necessary. Finally, when kayak tours are complete there would need to be a timely, cost-effective way to return the kayaks to the starting point of the tour. This opportunity could bring in additional revenue for the town as well as create the continuing expense of running the tours as part of the financial feasibility of the framework criteria. It would additionally address the environmental viability by preserving the rice fields and helping the town to appreciate the clean blue ways and green ways.

Opportunity 2 – Cultural Education Center

As a means of preserving the Gullah Geechee culture and promoting heritage pride in the Town of Navassa, the construction of a Cultural Education Center dedicated to Gullah Geechee documentation and preservation would serve as the quintessential mechanism to educate the public about the culture's significance and its contributions. Establishing a Cultural Education Center would be an appropriate way to develop the land and provide a great opportunity to educating the public about ecosystem services, specifically rice fields that are significant to the culture while contributing to economic growth. This would promote advocacy efforts needed to preserve the culture and strengthen relationships within the Gullah Geechee Cultural Heritage Corridor in addition to encourage relationships with those outside the Corridor. This would also increase cultural identity as well as contribute to an increase in the town's identity. The Cultural Education center would also generate needed revenue through increased awareness created by more community involvement and tourism via the highway expansion.

Despite the potential pros of this proposed opportunity, there are some cons to consider as well. While the center would promote preservation efforts to encourage cultural and town identity, the current percentage of those that identify with the culture, in addition to the current existence value of the culture, is both unknown and could affect support for the center. Also, the input of those who do not identify with the culture could adversely affect support of the center if there is

public dissent. Uncertainties about the potential revenue and acquisition of resources, specifically grants, are of concern when assessing this opportunity. This is also true in regards to the initial and ongoing costs for the construction and implementation of the center. In addition to these barriers, there are potential issues of appropriate land use zoning for the construction site of the Cultural Education Center.

Opportunity 3 – Amphitheater

Building an amphitheater dedicated to the Gullah Geechee could potentially increase the surrounding community's interest in the culture. Amphitheaters have revitalized former Superfund sites and can enhance the quality of life in community through diverse programming. The amphitheater would serve a dual purpose of bringing revenue to the community through musical acts and celebrating the Gullah Geechee culture through educational performances. A benefit of the amphitheater is to bring attention to the Gullah Geechee culture through educational programming. Depending upon location, the amphitheater could highlight the beauty of Navassa waterways by using them as a backdrop and create opportunities for additional greenspace. A final advantage of building an amphitheater is the potential for employment of local citizens in Navassa.

While there are many pros to building an amphitheater, the cons must also be considered. The amphitheater would bring increased traffic to the area and could negatively affect the ecosystem. There would be increased need for involvement from Navassa police, fire departments, and emergency services to ensure the safety of attendees. There are further concerns about noise pollution to surrounding neighborhoods. Popular music acts would require booking in order to maintain revenue streams, which could take focus away from educating the community about the Gullah Geechee culture.

Opportunity 4 – Delay decision and install a town-based tour of Navassa.

By delaying the decision, time is being utilized to collect the necessary data to further support another alternative. The benefits are that resources could be best reserved and there can be quantifiable assurance that the action that is taken is the best alternative. The proposed Gullah Geechee tour of the town of Navassa could highlight the historical landmarks and traditions that are already in Navassa and could be advertised as the beginning of the Gullah Geechee Corridor. The benefit of this option would be to strengthen the relationship with the Corridor and further

their support through the development process of the cultural preservation. It could also build cultural pride within the town and develop a strong connection to the Gullah Geechee and a desire to educate and preserve the culture.

While having some benefit, the potential pitfalls of this option could be through delaying a decision, the gap between current Navassans and the Gullah Geechee culture could continue to widen. The disconnect to the culture could lead to a lack of pride and efforts toward preservation in the area. This loss disconnects the resources and support of the Corridor as well as the centralizing pride of the Gullah Geechee culture. Another potential challenge would be the funding and development of the tour. While income for other alternatives may be more sustainable, the startup and development of a tour would likely be done by the town itself and would need startup funds and people to develop the endeavor.

Cultural Perspective Conclusion

The opportunities and proposed alternatives to address our challenge of preserving Gullah Geechee heritage during the clean-up of the Kerr-McGhee superfund site include the options of building an outdoor recreational center, a Cultural Education Center, an outdoor amphitheater, or a continuation of research coupled with a local tour of the town historical sites. Each of these prospects relates to the integration of the ecological, economic, and cultural criteria established for this policy analysis. The future data collection needs in conjunction with town interaction and approval will assist those finalizing the analysis to determine the most feasible alternative for the town of Navassa.

Next Steps

As part of a long-term partnership supported by Environmental Protection Agency's College/Underserved Community Partnership (CUPP), policy analysis students completed the first step in an ongoing effort to assist the town in local policy development and planning. This first step focused on defining the challenges currently facing the Town of Navassa and development of a framework for deciding on a course of action, in consultation with the Mayor, Town Council and the NCEERC. The involvement of town leaders and residents is paramount to the success of this partnership and effectiveness of policy opportunities. The role of the University and in particular, Dr. Biddle's policy analysis class, is to facilitate the development of policy opportunities, not create

them. Throughout the process, we will integrate multiple viewpoints and interests into our analysis, with a focus on maximizing community benefits and minimizing social and environmental harms.

This report details an integrated framework for evaluating policy and planning alternatives aimed to empower the community with a decision-making tool to help them shape the future of their town in light of their own goals and vision. The feedback obtained and perspectives provided by town leaders and residents will be incorporated into the framework that will be utilized by policy analysis and land-use planning students in the fall semester.

The policy opportunities proposed in this report resulted from a preliminary analysis of existing information and interviews with experts. They serve to spark ideas and showcase the utility of the evaluative framework. Policy analysis students will seek Town Leaders' and Residents' approval before conducting a formal evaluation of identified opportunities.

The second step of this partnership will focus on data gathering and analysis in the assessment of identified opportunities to address the defined challenges utilizing the integrative evaluative framework. Working closely with Town Leaders, and in coordination with federal and state agencies, and town residents, policy analysis students will collect data through focus groups, surveys, and other methods deemed appropriate. This data will be used to assess the merit and feasibility of identified opportunities for achieving agreed-upon objectives and goals. This second step will be completed in conjunction with land-use planning students, beginning in September.

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