THE BAY COUNTY LONG-TERM RECOVERY TASK FORCE AND BRANCH LEADERS

It is the responsibility of the Task Force to oversee and ultimately debate/approve a Long-term Recovery Plan for all of the communities of Bay County. The clear mission of this recovery is to rebuild, sustain and grow the entire county. The overall goal of this plan is to guide actions to make our communities better than they were the day before Hurricane Michael (October 9, 2018).

- Commissioner Robert Carroll, Bay County (Task Force Chair)
- Mayor Greg Brudnicki, Panama City
- Mayor Ralph Hammond, Springfield
- Councilman Paul Casto, Panama City Beach
- Commissioner Dan Russell, Lynn Haven
- Mayor Rich Musgrave, Parker
- Councilwoman Linda Albrecht, Mexico Beach
- Mayor Pamn Henderson, Callaway
- Chairman Steve Moss, Bay County School Board

To achieve this critical goal, the focus has been and will continue to be maximum input from all communities; businesses; the education and health community; and citizens of all the communities in Bay County. To support the Task Force, this effort was organized in such a way to utilize six separate “branches” as tools to obtain public input, identify innovative ideas and link all relevant communities, agencies, businesses and groups. This leadership team and their respective branches include the following:

- Mr. Will Cramer, Economic Recovery Branch
- School Superintendent Bill Husfelt, Health and Social Services Branch
- Housing Coordinator Michael Johnson, Housing Branch
- Director Keith Bryant, Infrastructure Branch
- Mr. Dan Rowe, Natural and Cultural Resources Branch
- Director Ian Crelling, Planning and Capacity Building Branch
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On October 10, 2018, Bay County and its communities experienced a natural disaster of historic proportions. One of the costliest hurricanes in the history of this country—Category 5 Michael—caused widespread and significant damages in virtually every area of the County. While at this point—even many months after impact— the costs are not fully compiled, the current estimates are that they will range into the billions of dollars.

In the immediate aftermath of Hurricane Michael, to complement immediate response and recovery efforts, the Bay County Long-term Recovery Task Force was established and tasked to build a broad, ambitious, yet achievable blueprint for the future of all Bay communities. Our vision is that Bay County will emerge from this disaster as an even better home for our residents and a more desirable destination for our millions of visitors each year.

The Task Force is comprised of nine elected officials from each municipality, Bay County and the Bay County School District. The municipalities include: Callaway, Lynn Haven, Mexico Beach, Panama City, Panama City Beach, Springfield and Parker. These leaders are seeking full recovery for their jurisdiction and are working across jurisdictional lines on initiatives that are necessary and promising for all residents. The other key component of this planning effort is a group of six business and governmental leaders that are leading specific “branches” in the recovery planning process. These branches, which are detailed within this plan, include: Economic Recovery, Infrastructure, Housing, Health and Social Services, Natural and Cultural Resources and Planning and Capacity Building.
These elected officials and branch leaders have all shown remarkable vision, compassion, cooperation and innovation over the past few weeks as this plan was being developed. Even more important has been the incredible energy of over 750 local residents, business leaders and other stakeholders who actively participated in nearly 225 public meetings, special research sessions and open discussions about the challenges we face and our future. In addition, many hundreds of residents participated via a special recovery website and social media.

None of us on the Task Force nor branch leadership have been surprised by the actions and determination of our citizens. As always, even in this most critical chapter of our history, the character of Bay Countians and their love for each other and our home has brightened the path upon which we are slowly progressing.

Like every major challenge, leadership is critical. While the critical federal funding was slow in coming, we have been extremely fortunate to benefit from the tireless efforts of Florida Governor Ron DeSantis, Florida Chief Financial Officer Jimmy Patronis, Attorney General Ashley Moody and Agriculture Commissioner Nikki Fried. U.S. Senators Rick Scott and Marco Rubio, Congressman Neal Dunn, State Senator George Gainer, and State Representative Jay Trumbull have also been very aggressive in their pursuit of relief funding for our communities.

We have also received great support in this planning effort from the Federal Emergency Management Agency (FEMA) team assigned to the Panhandle, the Florida Division of Emergency Management (FDEM) and the Florida Department of Economic Opportunity (FDEO). The FDEO will be a critical partner moving forward as we seek permanent solutions to affordable housing, address the unmet infrastructure needs, expand economic opportunities for our citizens, create and retain good jobs, address the workforce shortage challenge in some occupations and satisfy the myriad “unmet” needs of our communities.

As this complex document is reviewed, please remember that our intent was not just to produce a plan with lofty goals and place it on a bookshelf. This plan is just the beginning and it will evolve as we move forward to full recovery. Throughout this effort we are going to work together, including our citizens, to make our recovery full, meaningful and as timely as possible. This plan will soon be placed into a publicly accessible website designed for use by the many stakeholders working together on building the new Bay County and its great communities.

On behalf of the Long-term Recovery Task Force, I want to express our collective thanks to all the many citizens, business owners and subject matter experts who have rolled up their collective sleeves to assist in getting us to this point. A plan is only as good as the vision and commitment of those who prepared it! And with that in mind, I can say with confidence that our plan is solid and as we transition to the full implementation phase, our future remains bright!

Just as Bay County and its communities experienced devastation of historic proportions in October 2018, collectively we have the tenacity and ingenuity to engineer a recovery of historic significance. Please join me and my fellow Task Force members in rebuilding, sustaining and growing our communities for the future.

Commissioner Robert Carroll
Chairman of Bay County Long-term Recovery Task Force
Hurricane Michael’s Devastation

Hurricane Michael, the third most powerful storm to ever make landfall in the United States, began as a low-pressure system in the southwestern Caribbean on October 1st, 2018. The National Hurricane Center began tracking it the next day as it continued to grow and organize. At 4:55pm on October 7th, the system, then a tropical storm, was named Michael. In only 72 hours, this cyclonic storm intensified to sustained hurricane wind speeds of 160 mph (with much higher gusts) and became the first Category 5 hurricane to hit Florida since Hurricane Andrew in 1992. Hurricane Michael made landfall on October 10th between Mexico Beach and Tyndall Air Force Base, leaving a swath of massive destruction encompassing Bay County and 17 other Florida Panhandle counties.

The widespread devastation of Hurricane Michael on the communities in Bay County and surrounding areas will have effects lasting a generation. The devastation encompassed major damage to housing, massive personal property loss to citizens, closure or significant detrimental impact on many businesses, infrastructure wreckage in all jurisdictions (including the County, all cities, the School District, and many non-profit organizations) and injury to our valuable natural and cultural resources. There were also nonphysical consequences such as huge economic losses to the workforce, unmet health care needs and a dramatic increase in psychological issues from the trauma inflicted by this event.
SOME OF THE KEY DAMAGE AND COSTS IMPACTING THE COUNTY:

- There were 25 deaths in Bay County.
- Total insured losses are currently estimated to be over $6.2 billion with over 69% of homes in Panama City alone damaged. As of June 28, 2019, 88,692 insurance claims have been filed in Bay County. This represents over 60% of the total claims filed for all Panhandle counties impacted by Michael. This data is from the Florida Office of Insurance Regulation.
- Over 22,000 residents were displaced immediately following the storm and many remain homeless.
- Over 100,000 people have sought assistance from FEMA through the Individual Assistance Program.
- The Bay County School District has lost approximately 13% of its student population and over 5,000 of its current students are homeless or living away from their home. The loss in number of students severely threatens the District’s annual budget for education and could lead to significant layoffs next year. Three local schools have already been designated to be closed.
- In the region, over three million acres of timber were destroyed, leaving a total of over 72 million tons of fallen trees. This equates to damages to the timber industry totaling $3 billion. This industry represents a significant portion of the regional economy.
- An estimated 10 million cubic yards of debris was left by the storm in unincorporated Bay County. This is approximately one-half of all debris left in the affected region.
- Equally alarming is the significant fire hazard existing due to the overwhelming amount of downed debris. Two major fires have already occurred in the County since Michael.
- In Bay County alone, the estimated cost of damages to public property and infrastructure that are eligible for FEMA reimbursement is over $1.8 billion as of April 2019. This includes the County, all cities within the County, the School District and many non-profit organizations. Additionally, 47 houses of worship in Bay County were destroyed or significantly damaged.
- Tyndall Air Force Base, which was staffed with 11,000 military personnel and another 7,000 civilians, provided an annual economic impact of over $600 million. This base suffered massive damage with the estimated cost to rebuild this critical strategic installation being $4.7 billion.
- The County’s two major hospitals were seriously damaged, resulting in the closure of critical trauma centers and greatly reduced access to medical services and care for residents and visitors.
- The disaster has had a significant impact on the citizenry, many of whom are traumatized each and every day as the community is far from “normal.” Mental health services were severely disrupted and cannot meet the needs of residents. One tragic indicator of the seriousness of this condition is that from October 10, 2018, to May 28, 2019, a total of 122 students in Bay County District Schools have been placed in protective custody for mental health evaluations through the Florida Baker Act. The Baker Act is utilized to assess an emergency psychiatric examination of an individual and determine if they could be a threat to fellow citizens or themselves due to mental illness.
- Like most major disasters, Hurricane Michael has created an enormous economic challenge. In addition to the loss of businesses and a portion of the workforce, the tax revenues for the County and all municipal jurisdictions will be adversely impacted in the coming months and years.
Bay County’s Recovery Plan

Due to the magnitude of the disaster in the immediate aftermath of Hurricane Michael, the Bay County Long-term Recovery Task Force was established by the Bay County Commission and tasked to build a broad, ambitious, yet achievable blueprint for the future of all Bay County communities.

The Task Force is comprised of nine elected officials: one elected official from each municipality within Bay County, one member of the Bay County School Board, and one elected commissioner from Bay County. Bay County Commissioner Robert Carroll serves as the chairman for the Task Force. Each of these Task Force members is seeking full recovery for their community and is working across jurisdictional lines on initiatives that are necessary and promising for the community’s residents. The other key components of this recovery planning effort are the six business and governmental leaders overseeing specific “branches” in the recovery planning process. These branches, which are detailed within this plan, include: Infrastructure, Economic Recovery, Housing, Health and Social Services, Natural and Cultural Resources, and Planning and Capacity Building.

These elected officials and designated branch leaders have all shown remarkable vision, compassion, cooperation, and innovation over the past weeks as this plan was being developed. Even more important has been the incredible energy of more than 750 local residents, business leaders, and other stakeholders who actively participated in nearly 250 public meetings, special research sessions, and open discussions about the challenges ahead and the future of Bay County. In addition, many hundreds of residents participated in the recovery planning and input session via a special recovery website and social media.

The Bay County Long-term Recovery Plan has been developed in full adherence to the FEMA National Disaster Recovery Framework (NDRF). It is now ready for immediate implementation.
Critical Funding Needs for Bay County and its Communities

The preliminary estimated damages and costs exceed the operating budgets of Bay County’s local governmental entities. The chart below includes the most recent audited budget numbers reported to the Florida Department of Financial Services by each governmental entity, the proposed annual budget figures for fiscal year 2018-2019 that were passed prior to Hurricane Michael, documented damages, and mitigation funding needed:

<table>
<thead>
<tr>
<th>Entity</th>
<th>FYE Audited Annual Operating Budget</th>
<th>2018-19 Approved Annual Budget as of 10/01/2018</th>
<th>Population²</th>
<th>FEMA PA</th>
<th>Necessary Mitigation</th>
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<tbody>
<tr>
<td>Bay County (Unincorporated)</td>
<td>$273,003,507.00</td>
<td>$326,279,634.00</td>
<td>77,281</td>
<td>$636,095,411.41</td>
<td>$127,219,082.28</td>
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<tr>
<td>City of Panama City</td>
<td>$119,471,702.00</td>
<td>$108,690,082.00</td>
<td>36,988</td>
<td>$314,306,526.56</td>
<td>$62,861,305.31</td>
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<tr>
<td>City of Mexico Beach</td>
<td>$8,968,622.00</td>
<td>$6,509,082.00</td>
<td>1,202</td>
<td>$180,662,103.19</td>
<td>$36,132,420.64</td>
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<tr>
<td>City of Callaway</td>
<td>$17,177,176.00</td>
<td>$20,024,193.00</td>
<td>15,737</td>
<td>$107,137,618.00</td>
<td>$21,427,523.60</td>
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<tr>
<td>City of Lynn Haven</td>
<td>$36,463,876.00</td>
<td>$37,194,017.00</td>
<td>20,886</td>
<td>$67,322,010.47</td>
<td>$13,464,402.09</td>
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<tr>
<td>City of Springfield</td>
<td>$12,885,492.00</td>
<td>$12,426,465.00</td>
<td>9,568</td>
<td>$28,043,213.21</td>
<td>$5,608,642.64</td>
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<td>Bay District Schools</td>
<td>$376,030,834.00</td>
<td>$385,237,051.00</td>
<td>N/A</td>
<td>$371,594,945.28</td>
<td>$74,318,989.06</td>
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<tr>
<td>City of Parker</td>
<td>$5,317,819.00</td>
<td>$5,731,337.00</td>
<td>4,419</td>
<td>$11,421,000.00</td>
<td>$1,355,440.00</td>
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<tr>
<td>City of Panama City Beach</td>
<td>$87,974,554.00</td>
<td>$110,410,848.00</td>
<td>12,741</td>
<td>$2,392,259.00</td>
<td>$478,451.80</td>
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<td>Churches (47) and Non-Profits</td>
<td>NA</td>
<td>N/A</td>
<td>NA</td>
<td>$125,000,000.00</td>
<td>$25,000,000.00</td>
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<tr>
<td>Total</td>
<td>$937,293,582.00</td>
<td>$1,012,502,709.00</td>
<td>178,822</td>
<td>$1,843,975,087.12</td>
<td>$367,866,257.42</td>
</tr>
</tbody>
</table>

¹ FY 2018-19 annual budgets may be amended through November 30, 2019, to account for changes in revenue and expenditures.

In addition to the necessary FEMA Public Assistance funding outlined on the previous page, the following initiatives and funding needs should be provided through the U.S. Department of Housing and Urban Development and/or other agencies. These costs may be revised based upon cost increases over the long-term recovery period. It is also anticipated that these initiatives (and related funding) will occur over a five to seven year period.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Total Estimated Needs</th>
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<tr>
<td>Alternative Energy Programs</td>
<td>$26,750,000.00</td>
</tr>
<tr>
<td>Beach Restoration and Marine Protection</td>
<td>$47,500,000.00</td>
</tr>
<tr>
<td>Building and Code Enforcement</td>
<td>$425,000.00</td>
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<tr>
<td>Community Capacity Planning</td>
<td>$2,125,000.00</td>
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<tr>
<td>Community Quality of Life</td>
<td>$8,425,000.00</td>
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<tr>
<td>Community Resiliency</td>
<td>$196,450,000.00</td>
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<tr>
<td>Economic Redevelopment</td>
<td>$598,110,000.00</td>
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<tr>
<td>Electrical Hardening</td>
<td>$50,000,000.00</td>
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<tr>
<td>Emergency Housing Programs</td>
<td>$1,025,000.00</td>
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<tr>
<td>Environmental Initiatives</td>
<td>$188,000,000.00</td>
</tr>
<tr>
<td>Health Care Facilities and Service Improvements</td>
<td>$385,496,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, Unincorporated Bay County</td>
<td>$995,500,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Panama City</td>
<td>$752,200,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Mexico Beach</td>
<td>$354,000,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Callaway</td>
<td>$188,000,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Lynn Haven</td>
<td>$215,000,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Springfield</td>
<td>$128,755,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Parker</td>
<td>$68,250,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Panama City Beach</td>
<td>$36,500,000.00</td>
</tr>
<tr>
<td>Mental Health and Community Support</td>
<td>$39,755,000.00</td>
</tr>
<tr>
<td>Military Economics</td>
<td>$118,000,000.00</td>
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<tr>
<td>Natural Resource Preservation and Education</td>
<td>$3,310,000.00</td>
</tr>
<tr>
<td>New Transportation Initiatives</td>
<td>$756,800,000.00</td>
</tr>
<tr>
<td>Parks, Trails, and Greenspace</td>
<td>$101,250,000.00</td>
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<tr>
<td>Port of Panama City Expansion</td>
<td>$110,000,000.00</td>
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<tr>
<td>Private Sector and Small Business Expansion</td>
<td>$85,150,000.00</td>
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<tr>
<td>Public Facility Construction and Hardening</td>
<td>$150,250,000.00</td>
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<tr>
<td>Public Safety and Mission Support</td>
<td>$148,630,000.00</td>
</tr>
<tr>
<td>Public Sheltering and Services</td>
<td>$94,200,000.00</td>
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<tr>
<td>Smart City Sensing and Telemetry</td>
<td>$14,500,000.00</td>
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<tr>
<td>Special Purpose Community Housing Projects</td>
<td>$36,112,000.00</td>
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<tr>
<td>Sports and Recreation Facilities</td>
<td>$61,275,000.00</td>
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<tr>
<td>Stormwater Initiatives</td>
<td>$244,997,000.00</td>
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<tr>
<td>Telecommunications</td>
<td>$93,580,000.00</td>
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<tr>
<td>Transportation Improvements</td>
<td>$321,150,000.00</td>
</tr>
<tr>
<td>Water and Wastewater Initiatives</td>
<td>$320,560,000.00</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>$6,942,030,000.00</strong></td>
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The increased frequency and severity of natural disasters, coupled with the aging of infrastructure, has led to a rising level of economic disruptions in affected communities. Due to these impacts, national and local trends in recovery must contemplate more than simply rebuilding damaged infrastructure and facilities. Recovery efforts need to be more inclusive and designed as a full community recovery plan intended to support and restore the economic viability and growth of the community.

In addition to critical needs in the areas of housing and infrastructure due to the monumental impact Hurricane Michael has had, this plan places a major focus on economic recovery. Hurricane Michael’s impact on the local economy cannot be fully addressed through federal or state funding. A recovery plan must include both public revenue and private investment to achieve maximum success.
As mentioned earlier, to assist in overseeing the recovery efforts, the leadership of Bay County directed and oversaw the formation of the Long-term Recovery Task Force. The Task Force was created and operated under the rubric of the FEMA National Disaster Recovery Framework published in June 2016. In addition to providing specific guidance on the development of the recovery plan, the recovery framework facilitated the necessary sharing of information with state and federal counterparts. The Task Force will remain engaged with the long-term community efforts throughout the entire recovery cycle.

By creating this Task Force, city and county leaders were able to achieve a perspective that could not be gained through previously existing platforms. This new perspective combines the talent and resources of business and community leaders providing forward visibility into the recovery efforts and long-term plans of each segment of the community. By combining these elements, the residents of Bay County are given the best opportunity to receive a successful recovery.

As a key component of this effort, the County requested volunteers to oversee each branch of the Task Force and assigned strong leadership representing the six branches; Housing, Infrastructure, Health and Social Services, Economic Recovery, Natural and Cultural Resources, and Planning and Capacity Building.
The major objective of this plan is to present a recovery and rebuilding path that invests in the community with a vision that conveys the needs of a community open for business, investment and growth. A community being reborn and rebuilt with a focus on resiliency. A community with a strategically planned and calculated future.

A growing trend in disaster recovery is to create a plan with a foundation rooted in economic recovery. A successful recovery must also consider a paradigm shift of planning and resource use considering more than just federal and state assistance.

The Long-term Recovery Plan will be used as a tool that ties together the federal, state and local recovery efforts with the resources of the private sector and non-profit organizations. Having a unified recovery plan will help tell the narrative of how Bay County and its components were affected by Hurricane Michael, give clear direction in providing a pathway to recovery and provide focus to mitigating the adverse impact of future events on the community.
Defining the Plan

Recovery plans are continually evolving. As recovery efforts become more comprehensive, the plans that guide them are becoming more inclusive and based on a broader set of initiatives.

Historically, disaster recovery was guided by an emergency management plan. This helped a community to plan and react more efficiently to an event based on lessons learned from previous disasters. Economic recovery plans have taken a more prominent position in the recovery process as more resources are expended on recovery. The Long-term Recovery Plan focuses on all aspects of rebuilding a community while the emergency management plans are being implemented.

This plan considers economic recovery as well as community recovery. For a community to appropriately recover it must include a plan that supports all aspects of the community. This includes housing, livability, education, health and social services, natural and cultural resources and the capacity of the community to enact major initiatives that can react to an event in the future.

Framework of the Plan

The framework of the Plan allows for each branch to look at their designated subject area from a comprehensive approach and then narrow the respective findings to identify specific action plans and funding mechanisms. The action plans and funding mechanisms are created and applied in a manner that not only addresses response and recovery to an event, but also the planning and mitigation aspects as applied to future events, thereby creating the most efficient use of resources.

Methodology Utilized in Developing the Plan

When considering the scope of devastation left in the wake of Hurricane Michael and the efforts that will be required to recover, the Task Force was given a challenging mandate.

The first step for the Task Force was to assess the entire community. This included conducting an assessment of where the community was before the event, how the event impacted each segment of the community and where the community is today. With this assessment in hand, the Task Force will process sufficient information to implement a long-term community recovery plan that will guide the process of recovery for a period of years.

To develop this plan, multiple work streams were ongoing simultaneously. Each branch worked to identify the critical failures affecting the community’s ability to respond to the event and what the community could do to mitigate the impact of future events.

Finally, each branch assessed what the community can do to respond to the immediate post-event needs and recover from the event in such a fashion that the community emerges stronger, more resilient and bound by the pride of recovering as a community.
Community Outreach

The Long-term Recovery Task Force is essentially a community-wide organization. Each branch is guided by a branch lead who is supported by internal personnel. The branch personnel enlisted community and business leaders to facilitate research discussions and public meetings.

During the course of developing the Plan, more than 25 public meetings were held and over 200 research interviews and meetings were conducted. During the public meetings, it is estimated that over 750 community members attended the meetings, which spanned over 350 hours.

The public input has been critical to driving the Plan’s formulation. Community members were able to give insight to projects that would positively impact the entire community. But most importantly, these individuals were able to give insight to localized concerns and initiatives. Local investors and landowners offered insight to plans and projects being considered and developed that would shape potential incentives and identify growth areas that can be fostered and supplemented in the recovery process. These meetings also helped identify areas of unmet need that could potentially be addressed through federal and state programs, supported by local initiatives.

The ongoing recovery efforts will continuously be supported by public input, which allows leadership to make more effective real time decisions through feedback from the community regarding how the recovery is impacting individual segments of the community. This will give valuable insight to any adjustments that need to be made as we learn what actions are creating the most effective impacts on the community and what opportunities exist for an enhanced recovery effort.
Research Meetings

The core team for each branch created a structure that is best suited for gathering and researching information across the County and then acting upon that information. Although each branch had a slightly modified structure, every branch operated under a format that involved countless hours of research and discussion with community leaders, federal and state agencies, local authorities and local business leaders as well as members of the community itself.

Meetings and calls were held with each local institute of higher education, hospitals, military bases, the Chamber of Commerce, major employers, economic development agencies, FEMA authorities, U.S. Housing and Urban Development (HUD) officials, U.S. Fish and Wildlife officials, Florida and U.S environmental agencies, as well as other agencies, groups and organizations.

As the Task Force branches collected data from the community, multiple national data sets were referenced to determine what impact community demographics and economic factors may have on the recovery and what the best course of action would be to mitigate any identified potential hurdles in the recovery plan.

The research and working sessions, combined with the public input, has given a perspective of the community’s opportunities and challenges. This would have been difficult to obtain through any other format and has ultimately led to the collection of over 300 community actions that will be included in the initiatives that drive the recovery plan.
making this plan from concept to execution is the ultimate objective. A key component of this effort will be the visioning plan. The visioning plan will be a supplemental document that bridges this document to project planning and project level execution.

Through extensive community input and research, the Task Force has identified many broad initiatives and grouped the actions accordingly. The initiatives include projects that cover all aspects of a recovery plan and include items such as: road improvements, transportation initiatives, water and wastewater initiatives, public facility hardening, new and expanded industries, community quality of life, smart city solutions, military installations, Port of Panama City, building and code enhancement, utilities, capacity planning, recycling alternative energy programs, resiliency, and sustainability programs.

The steps required to go from this document to funding are generally outlined in the next section. This is intended to guide the Task Force through that process.

The stakeholders now have an opportunity to review and modify planned actions and initiatives. As the recovery process moves forward, the community will evolve and the Plan should be flexible to meet the changing needs of the community.

The Long-term Recovery Plan is intended to be a working document. In order for the document to guide in the recovery process, it must present the stakeholders with clear initiatives, funding mechanisms for those initiatives and actionable next steps to meet the goals and objectives.
THE ACTION PLAN FOR EFFECTIVE USE OF THE DOCUMENT IS BROKEN INTO TWO SECTIONS:

**Integrating the Plan for public use:**

- The Plan is reviewed by the stakeholders for final comment
- Final revisions made and the Plan is adopted
- Final draft of the Plan and vision guide are published for the public
- Consolidated actions are inserted in the action plan by initiative, branch and corresponding agency
- The entire document set is published online to an interactive platform

**Using the Plan to determine next steps for funding initiatives:**

- Based on the final initiative set, define and structure specific funding mechanisms for each action grouping or initiative
- For each initiative, identify the action list
- Identify subject matter experts to pursue project development. This will include additional studies or documents such as:
  - Unmet needs analysis provided to HUD and other funding sources
  - Technical specifications and requirements associated with desired projects
  - Identify project linkages and collaborative efforts to achieve maximum results
  - Execute detailed funding and incentives strategies to include potential legislative and congressional requests
- Create a program management structure by identifying processes, people and projects that will be assigned to each initiative, and create the tracking tools required to follow each project to completion.
Communicating the Plan

Once the Long-term Recovery Plan is final and ratified by the stakeholders, it is critical to communicate the Plan effectively. Readers of the Plan will include residents, local, state and federal agencies, local investors and global investors. Communicating the vision of the community can attract new industries, increase awareness of the community, attract investment to the County and create pride in the residents.

An effective long-term public relations plan related to the execution of the community recovery efforts allows for increased public input and trust in the Plan through transparency. The communications strategy should be used to advise federal, state and local agencies, non-profit societies and the media. The strategy should convey the progress, current needs and long-term strategies and visions.

The communication plan should include multi-dimensional strategies. Going beyond traditional print and digital platforms, hosting investment conferences, speaking at and attending conferences and reaching out to state and national leaders in person will multiply the effects of the Plan. It is important that the communications and public relations plan be strategic, balanced, long-term minded and sustainable.
Understanding the fundamentals of Bay County prior to the event is critical to creating and executing a successful recovery plan. Each community will react differently to a disaster event. The reaction will be based on many factors. Before a review of the anticipated cost of the event and a path to recovery, it is important to understand the macro and microeconomics and demographics of the community prior to the event. This is because the characteristics of the communities ultimately dictate their resiliency, ability to recover from the shock to their eco-system and define the potential head winds faced during the recovery process. Building a more resilient community is not simply referring to stronger buildings or backup infrastructure systems. Proper planning across all sectors of the community, from housing and business continuity plans to health and human services and infrastructure, will allow a community to experience fewer losses during a disaster and will also provide for a strengthened ability to recover using available resources efficiently.

Bay County, a coastal community located on the Florida Gulf Coast in the central region of the area known as the Panhandle of Florida, has an approximate population of 180,000, according to the U.S Census Bureau. This total represents a 21% increase from 2000. While the majority of the population is between the ages of 18-64, over 16% of the population is over the age of 65. As the population continues to age, the need for services and housing to support this demographic will increase.

Bay County has significant pockets of population that live at or near the poverty line. The average income is $24,937 a year and almost one third of the population makes less than $35,000 a year.
The number of households in Bay County is estimated at 68,667. Close to 50% of the housing units are single family detached and over 60% of these were damaged in the storm. In Bay County, 13.21% of the population live in manufactured or mobile homes; which is significantly higher than the 9.06% rate in Florida. This makes the housing units in Bay County much more vulnerable during a disaster.

The two largest regions of Bay County are the communities in the eastern region of the County and Panama City Beach. Unlike Panama City Beach, which is a decidedly service industry city, having 88% of the workforce employed in tourism-related jobs, the eastern communities maintain a mix of both white and blue-collar jobs.

Prior to Hurricane Michael, Panama City Beach had seen a significant amount of housing growth in recent years. This is an indication that new residents who are middle class or wealthier were moving to the area, attracted by a healthy local economy and natural resources.

Prior to Hurricane Michael, the economy of Bay County was in an expansion period. County revenues were generally increasing year after year with no millage increases. Ad Valorem taxes were experiencing a long-term positive trend with relatively stable countywide expenses with only modest increases.

When Hurricane Michael hit the Bay County area, governmental entities were less than two weeks into their fiscal (budget) year. The budgets adopted by each of the governmental entities within Bay County were sound, balanced in accordance with Florida law, and included planned expenditures for the fiscal year (October 1- September 30) that did not exceed anticipated revenues. Prior to Hurricane Michael, none of the governmental entities within Bay County were under a state of financial emergency as defined by Chapter 218, Florida Statutes, and each governmental entity required to file an annual financial report for the previous fiscal year with the Department of Financial Services did so in accordance with s. 218.32, Florida Statutes. In summary, all governmental entities within Bay County had financial stability prior to Hurricane Michael’s landfall and there were no signs that any governmental entity would incur extraordinary expenditures that would exceed their capacity to cover such expenditures.
A Growing Economy

After rebounding from the post-2000 recession, the Bay County economy has been on a long-term growth trend. Unemployment rates began to stabilize in 2015 and normalized below 4% in 2018. After falling to a low of 67,000 in 2011, the labor pool counts in Bay County stabilized above 75,000 in 2016 and broke through 80,000 in 2018.

During the first quarter of 2010, total wages for the County dipped to just over $570,000,000. By 2018, this number reached $800,000,000 on a quarterly basis. Average weekly wages have climbed steadily since 2009 and this has translated to steady increases in average income in the County.

With increased income, the percentage of the Bay County population with subprime credit scores decreased from 39% in 2012 to approximately 31% in 2018. Data shows that severe disasters will affect segments of the population with lower credit scores disproportionately. This has the potential to create a compounding negative affect on the recovery. Creating support mechanisms for low-income wage earners will be a critical part of the recovery.

Even during the national recovery to the recession, the number of people living below the poverty level in Bay County increased from 2012 to 2016. This corresponded to a climb in poverty rates from 13% to over 15.5%. In 2016, the trend did reverse as poverty rates began to decline.

While almost one third of the population makes less than $35,000 a year, median household incomes had increased from approximately $44,000 to just over $50,000 from 2010 to 2017 with per capita incomes crossing above $42,000.

The services, health care and education industries are the largest source of employment in the County. Accommodations, food and retail employ over 26% of the population with the health care services industry employing almost 13%. These high employment rate sectors coincide with the lowest income levels for the region. This correlates to income levels below the national average, poverty rates that trended higher than national averages and a higher percentage of residents with sub-prime credit scores than the national average. These combined factors make housing affordability and economic redevelopment more of a challenge during this recovery.

Rebounding Prior to Disaster

The Bay County housing market experienced a broad recovery since the post-2000 Recession. According to the Home Mortgage Disclosure Act (HMDA) data set for 2006-2016, annual mortgage volume in Bay County recovered from an annual low of 2,399 in 2011 and reached 3,558 in 2016. At the same time, the median home sales price in Bay County climbed from $146,000 to $179,000.

In 2012, only 33.94% of loans were used for a home purchase versus 65.94% in 2016. However, only 3.57% of loans in Bay County were for borrowers whose income was less than 50% of the Metropolitan Statistical Area’s (MSA) median income. This indicates that access to home loans for low-income buyers has not increased at the same rate as access to capital for moderate to high-income home buyers.

In the years preceding Hurricane Michael, average home prices in Bay County increased by 7.6% to $210,400 and are expected to rise another 3.9% in 2019 according to Zillow. The Bay County market was ranked as “Very Hot” by the
same index scoring matrix. While this bodes well for local housing prices, it created a pre-disaster shortage of low to moderate-income housing units.

The majority of the homes in Bay County were built prior to 1990, with the highest concentration of older homes being in the Panama City area. The concentration of older homes coincides with the population that experiences the lowest income rates, higher unemployment rates, higher vacancy rates and highest number of low-income housing units that were destroyed during the storm.

Homeownership rates dipped from 65% in 2010 to 61% in 2014. This trend then reversed and is maintaining rates close to or above 62%.

Housing starts had dropped to a Year 2000 Recession low of approximately 350 units in 2009. This reversed in 2010 and steadily increased to just under 980 units in 2016. In 2017, there was a material jump in permits requested to 1,654. This trend indicates that the region was just entering the peak of the recovery that many major markets experienced years earlier. This could indicate the local economy had not fully recovered from the post-2000 Recession and has more vulnerability to the effects of a major event.

**Severity of the Disaster**

Prior to Hurricane Michael, only three hurricanes had impacted the United States as a Category 5 storm. These included the Labor Day Hurricane of 1935, with its maximum sustained winds of 185 mph. This was the most intense ever, heavily impacting the Florida Keys. The next Category 5 storm was Hurricane Camille. With maximum sustained winds of 175 mph, it was the second-strongest hurricane to make landfall (along the Mississippi coast) on August 17, 1969. This hurricane killed over 140 people with its raging floods and massive storm surge. The Camille recovery process took decades.

The other Category 5 storm, Hurricane Andrew, made landfall near Cutler Ridge, Florida on August 24, 1992. Andrew's maximum sustained winds were 165 mph. This disaster devastated much of South Dade County with total damages in excess of $26 billion.

Hurricane Michael, the fourth most powerful storm to make landfall in the United States, began as a low-pressure system in the southwestern Caribbean Sea on October 1, 2018. The National Hurricane Center began tracking it the next day as it continued to grow and organize. At 4:55pm on October 7th the system, then a tropical storm, was named Michael. In only 72 hours, this system intensified to hurricane force winds of 160 mph and gusts much higher. Hurricane Michael became the first Category 5 hurricane to ever hit the Florida Panhandle. Landfall was on October 10th between Mexico Beach and Tyndall Air Force Base. As it entered Florida and advanced to Alabama and Georgia, it covered a swath of land approximately 350 miles wide.

Continuing on a northeasterly heading, Michael crossed the Florida/Georgia border moving at a speed of 13 mph as a Category 3 hurricane. As the storm weakened and moved through Georgia and the Carolinas, it continued to dump massive amounts of rain, tropical-storm level winds and several tornadoes. Michael left the United States by way of Virginia as an extratropical cyclone on October 13th.

The storm finally dissipated on October 16th.

The most significant damage caused by Hurricane Michael to any area in the United States was to Bay County. The damage was catastrophic due to the historically high winds and massive storm surge—exceeding 19’ in Mexico Beach.
The impact of Hurricane Michael on Bay County was, and continues to be, devastating.

Hurricane Michael was directly responsible for at least 25 deaths, according to the National Centers for Environmental Information, a part of the National Oceanic and Atmospheric Administration, and a minimum of $25 billion in property loss and damages. Due to the damage caused by Hurricane Michael, in the region, over 100,000 people have sought assistance from FEMA through their Individual Assistance Program.

In the affected region, work crews have already removed 31 million cubic yards of debris left by Michael. This is compared to three million cubic yards of debris for Hurricane Irma, which impacted a much larger portion of the state. An estimated 10 million cubic yards of debris was left by Hurricane Michael in unincorporated Bay County. This is approximately one-half of all debris left in the communities of Bay County.

Housing continues to be the major challenge. In many areas of Bay County, livable properties continue to be scarce. Due to limited supply and heavy demand following Hurricane Michael's landfall, rental prices have also dramatically increased. Current estimates for Bay County are that around 22,000 residents were displaced immediately following the storm and 5,000 are still considered “homeless.” In Panama City alone, 69% of all residential homes were damaged in some significant way. This has created a housing and economic crisis that will be felt for decades. Insurance claims are expected to climb to over $6.2 billion.

The Bay County School District has lost approximately 13% of its student population and over 5,000 of its current students are homeless or living away from their home. The loss in number of students severely threatens the annual budget for education and could lead to significant layoffs next year. Three local schools have already been designated to be closed.

Many of the lingering effects of the disaster are less tangible. The mental health of residents has been and continues to be impacted as they experience the daily trauma in the storm-ravaged area. Citizens are fatigued, anxious and depressed. The mental health capability of the area (which was already limited) is now taxed well beyond capacity.
One tragic indicator of the seriousness of this condition is that from October 10, 2018, through May 28, 2019, a total of 122 students in Bay County Schools have been placed in protective custody for mental health evaluation through the Florida Baker Act. The Baker Act, a component of Florida’s Mental Health Act, is utilized to effect an emergency psychiatric examination of an individual if such individual could be a threat to fellow citizens or themselves due to mental illness.

The widespread devastation of Hurricane Michael on Bay County will have effects lasting many years. The total cost of physical damages will be in the billions of dollars. These damages include public infrastructure, personal property and wreckage to natural and cultural resources. There were also nonphysical consequences such as economic losses and healthcare needs that are now unmet.

Before the storm, the Panhandle of Florida was well known for its dense forest of pine trees and scenic natural resources. In the region, over three million acres of timber were destroyed, leaving a total of over 72 million tons of fallen trees. This equates to damages to the timber industry totaling $3 billion. This industry represents a significant portion of the regional economy. This loss of trees has left a significant ecological hole, impacting stormwater drainage, air quality, and local aesthetics. Equally alarming is the significant fire hazard due to the overwhelming amount of downed and drying debris. Two major fires have already occurred in the County since Hurricane Michael.

Tyndall Air Force Base, which was staffed with 11,000 military personnel and another 7,000 civilians, provided an annual economic impact of over $600 million. This base suffered massive damage with the estimated cost to rebuild this critical strategic installation being $4.7 billion.

The County’s two major hospitals were seriously damaged, resulting in the closure of critical trauma centers and greatly reduced medical services access and care to residents and visitors.

Like most major disasters, Hurricane Michael has created an enormous economic challenge. In addition to the loss of some businesses and a portion of the skilled and non-skilled workforce, the tax revenues for the County and all jurisdictions will likely be greatly affected in the coming months and years. Additionally, as expenditures related to debris removal and infrastructure repair are incurred, local government budgets will be stressed. Anticipated revenues for the operational needs in FY 2018-2019 will likely be reduced, however, expenditures will increase. This condition has already caused some local governmental entities to amend their FY 2018-2019 budgets and to borrow funds to satisfy internal expenses and invoices attributable to Hurricane Michael.

As reflected in the table below, the estimated cost of damages and costs to governmental entities and non-profit organizations in Bay County (that are eligible for reimbursement through the FEMA Public Assistance Program) is currently over $1.8 billion. This includes the County, all cities, the School District and non-profit organizations. Additionally, 47 houses of worship in Bay County were destroyed or significantly damaged. When the critically needed mitigation costs are added to these damaged facilities, the total cost exceeds $2.1 billion.
The preliminary estimated damage and costs for governmental entities far exceeds the operating budgets of Bay County’s local governmental entities. The following chart depicts the most recent audited budget numbers reported to the Department of Financial Services by each governmental entity, the proposed annual budget figures for fiscal year 2018-2019 that were passed by each governmental entity prior to Hurricane Michael, documented damages attributable to Hurricane Michael, and mitigation funding needed:

<table>
<thead>
<tr>
<th>Entity</th>
<th>FYE Audited Annual Operating Budget</th>
<th>2018-19 Approved Annual Budget as of 10/01/2018</th>
<th>Population</th>
<th>FEMA PA</th>
<th>Necessary Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay County (Unincorporated)</td>
<td>$273,003,507.00</td>
<td>$326,279,634.00</td>
<td>77,281</td>
<td>$636,095,411.41</td>
<td>$127,219,082.28</td>
</tr>
<tr>
<td>City of Panama City</td>
<td>$119,471,702.00</td>
<td>$108,690,082.00</td>
<td>36,988</td>
<td>$314,306,526.56</td>
<td>$62,861,305.31</td>
</tr>
<tr>
<td>City of Mexico Beach</td>
<td>$8,968,622.00</td>
<td>$6,509,082.00</td>
<td>1,202</td>
<td>$180,662,103.19</td>
<td>$36,132,420.64</td>
</tr>
<tr>
<td>City of Callaway</td>
<td>$17,177,176.00</td>
<td>$20,024,193.00</td>
<td>15,737</td>
<td>$107,137,618.00</td>
<td>$21,427,523.60</td>
</tr>
<tr>
<td>City of Lynn Haven</td>
<td>$36,463,876.00</td>
<td>$37,194,017.00</td>
<td>20,886</td>
<td>$67,322,010.47</td>
<td>$13,464,402.09</td>
</tr>
<tr>
<td>City of Springfield</td>
<td>$12,885,492.00</td>
<td>$12,426,465.00</td>
<td>9,568</td>
<td>$28,043,213.21</td>
<td>$5,608,642.64</td>
</tr>
<tr>
<td>Bay District Schools</td>
<td>$376,030,834.00</td>
<td>$385,237,051.00</td>
<td>N/A</td>
<td>$371,594,945.28</td>
<td>$74,318,989.06</td>
</tr>
<tr>
<td>City of Parker</td>
<td>$5,317,819.00</td>
<td>$5,731,337.00</td>
<td>4,419</td>
<td>$11,421,000.00</td>
<td>$1,355,440.00</td>
</tr>
<tr>
<td>City of Panama City Beach</td>
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<td>$110,410,848.00</td>
<td>12,741</td>
<td>$2,392,259.00</td>
<td>$478,451.80</td>
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<tr>
<td>Churches (47) and Non-Profits</td>
<td>NA</td>
<td>N/A</td>
<td>NA</td>
<td>$125,000,000.00</td>
<td>$25,000,000.00</td>
</tr>
<tr>
<td>Total</td>
<td>$937,293,582.00</td>
<td>$1,012,502,709.00</td>
<td>178,822</td>
<td>$1,843,975,087.12</td>
<td>$367,866,257.42</td>
</tr>
</tbody>
</table>

More details regarding these costs are found in Appendix A of this plan.
As discussed previously, the immediate impact of Hurricane Michael on Bay County was devastating to all aspects of the community. Each area impacted seemed to compound the shock on the next. Lack of housing created a loss of population, even if temporary. Loss of educators and professionals in mental health and health care industries created an inability to provide basic services to those most in need. Expansive damage to the school system left students at home with parents in need of housing solutions and a necessity to return to work for both income reasons and to play a vital role in restarting the economy. First responders, educators, and health care providers were left without homes or offices and were forced to meet their own personal challenges while helping a community cope with the disaster response.

These challenges were further exacerbated by the tremendous amount of debris left in the wake of the winds. With millions of cubic yards of debris, transportation systems were blocked with the debris itself or those attempting to clear the debris. An immediate influx of temporary workers to assist in responding to the storm further impacted temporary housing supplies and inventory availability. Restoring a balance or establishing a “new normal” can take some time and requires extra effort during times of inaccessibility to normal resource pools.

Almost as equally important to housing, health care, and employment, focusing on community well-being will become critical. It is important that residents feel a sense of community and normalcy as quickly as possible. This includes having access to places of worship, greenspaces, and seeing progress in the recovery process.
**Economy**

The recession ending in 2009 saw post cycle peak unemployment rates in Bay County close to 12.5% in 2011. These rates had been trending lower, signaling positive economic indicators for the County since that time. By October 2018, unemployment rates had touched as low as 2.8%. This was considerably lower than a year earlier when unemployment was 3.8% in November of 2017. Just one month later, immediately following Hurricane Michael, unemployment rates began to spike and jumped to 6.1% in November of 2018. Unemployment rates have remained above 5% since Hurricane Michael made landfall and the local economy seems to be finding its new short-term “normal” state as unemployment trends appear to be declining since the beginning of 2019, dipping back to the 5% range.

**Impact on Housing Market**

Bay County has 8,308 multi-family units. Of this total, 3,069 units are classified as low-income qualified housing units. Immediately after the storm, of the 8,308 units only 3,387 were habitable with 4,544 families being displaced.

Rental rates have spiked considerably with the post event inventory compression. According to the Trulia market rental report in Panama City Beach, average rental rates have gone from $1,500 to $2,500 and in Panama City they have spiked from an average of $1,200 to just over $1,700. As expected, new home sales dropped precipitously immediately after the storm both in average price and sales volume. This trend seems to be correcting itself in pockets throughout the County and should recover in the near-term as construction catches up with demand for housing. According to data from the Florida Realtors Association, the most current month’s data shows that transaction volume has quickly recovered although average transaction value remains depressed.

Foreclosure trends in Bay County have seen a spike in activity since Hurricane Michael. November 2018 reached a multi-year low for foreclosures, but this trend quickly reversed and in March 2019 total foreclosure activity rates jumped significantly. More research is needed to determine whether the recent activity spikes are due to Hurricane Michael or not, but market indicators show a clear increase in a pre-foreclosure and foreclosure activity in Bay County since Hurricane Michael.

Mexico Beach and Panama City Beach topped the list of metro area average home values in the County at $280,000 and $274,000 respectively. With the extreme loss of homes in Mexico Beach, the potential for loss of ad valorem taxes is very high and will likely put considerable pressure on operating revenues for Mexico Beach going forward.
The local government staff maintains a robust focus on strategic planning, budgetary restraint, and managed growth. Due to the existing operational complexities of managing the governmental services of Bay County, the implementation of a long-term community recovery plan will be challenging for the local governmental entities and their staff members. This implementation will require continued support from the Task Force; however, the County is accustomed to operating within long-term strategic plans and is well positioned with experienced managers and leadership to maintain focus on the challenges that continue to present themselves through the recovery cycle.

Another positive note is that Hurricane Michael spared the largest part of the economy in Bay County—tourism. Typically, an economy that is based largely on a single industry may not be as resilient when shocked by a disaster as an economy that is more diverse. With tourism and related services accounting for over 30% of the local economy, it is very positive that the Panama City Beach region was able to recover quickly. In recent years, the real estate markets have seen the strongest signs of recovery from post-recession lows. Bay County should continue to experience strong outside interest in the region. Quality of life scores across the County were generally high before the storm and the region enjoyed positive press coverage.

The region holds a population that cares about the community and is close-knit. When a population has a strong connection to one another, this can add a level of resiliency as “neighbors help neighbors” and outreach is strong. Local charitable participation is strong, and the process of recovery has been well supported by community leaders, business leaders and the population at large. Before the event, there was a focus on caring for the vulnerable sectors of the community. This network of caring is well supported by local charities and will continue to play a key role in adding stability during the recovery. Local governments are well engaged with the community, encouraging open communication, planning and involvement. This outreach to the public will allow residents to see progress and to participate in the direction of the overall recovery feeling included and connected to the community.

Relationships with private investors (local and outside the region) will be very important to develop and foster during the recovery. Local investors have been engaged in rebuilding and investing in local blocks and businesses. The Bay Economic Development Alliance (EDA) has been very active in recruiting employers to the region. This will remain a critical function in the recovery and should be well supported. The County also enjoys large scale community planning efforts shared by both large landowners. These factors could potentially shorten the period of time for recovery efforts in housing and economic recovery.
Potential Challenges to Recovery

NAVIGATING HEADWINDS

There are several factors that could potentially hamper long-term recovery efforts. It is important that local officials recognize and plan for these factors as effectively and efficiently as possible. The four most critical sub-systems that were damaged in the community include the small business community of the metro regions surrounding Panama City, the market rate and affordable housing markets, the education system, and the mental health industry. These are all components of a community that are critical for recovery. When these components or sub-systems themselves have been damaged, it can potentially hamper a long-term recovery. This compounding effect is explained on the following pages in three topics: financial flow losses, capital resource flows, and stock losses.

FINANCIAL FLOW LOSSES

A primary factor that can affect a community's ability to recover is how quickly flow losses or business resources can be restored in a community. Financial flow losses include lost revenue, wages, and taxes. This can be more important than replacing inventories or stock losses such as buildings, vehicles and personal items. Oftentimes a community's losses from business losses or flow losses can far surpass the static stock or inventory losses. A damaged building is easier to replace than the lost revenue, wages, and taxes the building was used to generate.

The local businesses of the Bay County area are the life of the community. After a disaster event a community's buying patterns may change. Resources are temporarily no longer expended on non-essential items; populations may feel more vulnerable and therefore less likely to shop or spend locally. Long-term habits may change and therefore a local economy may forever be changed.

The economy will reach a “new normal” as temporary workers enter the market-place, federal dollars are injected, and construction activity accelerates. These are often temporary factors in nature and may not become a long-term fixture of the economy.

A community’s ability to recover from a disaster is related to its ability to restore flow losses and its capacity to invest capital of various nature to do so. Due to the extended time it can take to receive the full benefit of federal dollars, attracting outside investment quickly and supporting local investment is key to a recovery. Supporting small and medium sized businesses throughout the County that suffered interruption to their services is a key component to this initiative. This will be a crucial part of restoring the economic flow of the County. It is also critical to support the attraction of new business and new employers to the region. This not only stems the flow losses but can also create confidence in the rebuilding within the community.

CAPITAL RESOURCE FLOWS

There are several capital resources impacted by a disaster and the most meaningful may be population. Immediately following a storm, many displaced residents exit a community due to loss of employment or housing. A community will also have residents moving between households within a region and temporary workers locating to the region for extended periods of time. The
remaining population and inflow of workers can help stabilize outflows.

Population outflows differ between events and can impact a community differently. New Orleans suffered losses of over half of the City’s population after Hurricane Katrina and ten years later had only recovered to 80% of the pre-storm population levels. Although Bay County may be better positioned to recapture lost population, it is critical that efforts focus on this important need.

The 2020 U.S. Census, which will soon be underway, will likely reflect a significant drop in population. This will have a major impact and requires the pursuit of methods to mitigate this concern.

Due to the impact of the storm on the health industry, the community’s ability to retain health care professionals will be meaningful. This industry is a large driver of the local economy and on a national level, this is an industry where skilled professionals are in demand. In addition, the professionals in the mental and health care sectors are critical to the recovery by providing the essential services to retain and grow a diverse population. Losing these professionals could create a significant challenge in the recovery.

**STOCK LOSSES**

Stock losses are losses of buildings and inventories in a community. There are several types of stock losses such as commercial buildings, churches, housing and inventories (including retail sales). Helping the faith-based community recover is critical as the residents of a region often turn to places of worship during times of stress to find comfort. Restoring commercial buildings is critical as the restoration of these buildings stems the flow losses and rebuilds the capital position of the community.

Addressing the housing stock losses created by Hurricane Michael is one of the most critical areas to address. While market-rate housing will generally self-correct with market forces, the most vulnerable segment of the community relies on affordable housing. In Bay County, the majority of existing affordable housing units sponsored by various federal programs were located in the Panama City metro area and were damaged beyond usability. This location within the County is one of the densest pockets of vulnerable population. In addition to the ongoing need for affordable housing, it is estimated that over 69% of the residences in Bay County were affected by the Hurricane with an estimated value in excess of $6 billion.

A focus on repairing the housing market will provide urgently needed relief to the vulnerable segments of the population but will also provide much needed solutions for those who are temporarily displaced and critical to the recovery. Finally, the housing market was a growing segment of the economy before the disaster; restoring equilibrium to this market segment is important to the recovery efforts.
The Long-Term Recovery Task Force was tasked with taking a broad look across all sectors of the County. This approach, recommended under the FEMA National Disaster Recovery Framework, will allow the community to truly become more resilient. Strengthening not just facilities and systems but also giving resources to local businesses and each community segment the ability to withstand the shock of a future event.

Through scores of public and research meetings, the Task Force has identified 322 potential actions that will enhance the recovery efforts. The projects have been grouped into initiatives and will be matched to potential funding sources. Community involvement and transparency can foster a positive working environment and create trust throughout the development phase of each action.

As the community input was received and catalogued by the various branches, there were several common themes that surfaced when referencing both the challenges that arose during the immediate aftermath of the event as well as possible opportunities to recover from the challenges and mitigate them in the future. To create a more efficient recovery process, these themes were used to group potential projects into initiatives.
Community infrastructure such as public buildings, roads, bridges, stormwater facilities, telecommunications, energy, water and wastewater services form the primary critical systems supporting local health, welfare and economy. Hurricane Michael destroyed and/or severely damaged key infrastructure taking the community many weeks after the storm to recover even basic services. Many months later, work continues to progress to bring local infrastructure back to pre-storm levels while building increased resiliency to prepare for future disasters.

Due to the interconnected nature and dependencies within municipal and county infrastructure, the effects of partial or complete failure of a particular segment is often amplified causing additional damage, duress and public suffering.
UTILITIES - COMMUNICATIONS:
Particularly difficult in any emergency situation is the effect of loss of telecommunications infrastructure as it plays a key role in coordinating recovery efforts, mitigating suffering and notifying the public of the status of public services and where assistance can be found. The variety of disparate telecommunications infrastructure, multiple owners, various ages and lack of engineered resiliency compounded recovery effort challenges.

UTILITIES – WATER AND WASTEWATER:
Community data collected indicated that most communities within the impacted area suffered significant impact to potable water delivery, wastewater disposal and septic systems. Throughout the public involvement process, a common theme across the County and municipalities involved discussions of hardening structures, implementing redundant services, installing bypass pumps or generators at all lift stations and implementing telemetry systems with all remote sites (i.e., pump stations, booster stations and lift stations). This was particularly important as it applied to critical facilities within the community such as hospitals and care facilities where these utility needs are of extreme necessity for continuity of services.

UTILITIES - ENERGY:
Most of the communities within the impacted area suffered significant electrical outages during the storm, with some taking many weeks to bring electrical power back online. This was apparent from comments and suggestions through the community involvement process related to improving energy redundancy and resiliency of the electrical grid. The failure of the electrical power grid affected all aspects of other utilities and community facilities such as telecommunications and potable water distribution.

STORMWATER MANAGEMENT:
The relatively flat terrain of Bay County, large areas of wetlands and areas with a high water-table combine to present unique challenges for managing stormwater functionality throughout the County. With Hurricane Michael depositing record amounts of debris and causing extensive damage to ditches, outfalls, retaining ponds and other stormwater conveyances, coupled with the massive loss of trees and their natural ability to reduce erosion caused by falling rain and by absorbing water through root systems, flooding and erosion throughout the community is a major ongoing concern.

TRANSPORTATION - ROADS AND BRIDGES:
Community infrastructure relating to transportation components are important to the health, quality of life and long-term economic well-being of a community. Hurricane Michael severely impacted key transportation corridors and transportation facilities, challenging immediate recovery efforts and limiting access to critical community services. Many roads were blocked by debris, trees and other objects, many low-lying and rural areas with unpaved roads were significantly damaged and many traffic signs and signals were inoperable, damaged or missing.

TRANSPORTATION - AIRPORT AND PORT:
Airport and marine services are often critical after a community crisis in delivering rapid outside aid, supplies and emergency personnel. Debris from high winds, along with loss of electrical power after the hurricane, challenged continued operations and delayed recovery efforts.

EMERGENCY SERVICES - LAW ENFORCEMENT, FIRE SERVICES, AND EMERGENCY MEDICAL SERVICES:
There was substantial impact to law enforcement and fire department services throughout the County due to major communications challenges, extensive damage to primary and ancillary facilities and impassable roads due to debris.

PUBLIC FACILITIES:
With sustained winds in excess of 160 mph in many parts of the County, Hurricane Michael was one of the most devastating wind events to ever impact the United States. Catastrophic damages were seen across the region and preliminary estimates of FEMA Public Assistance Category E public facility projects for the County and municipalities stands at over $420,000,000.
Communications

Voice and Data infrastructure in the Bay County area is based on a combination of both aerial and buried cabling and is owned by multiple operators. Every operator was impacted by Hurricane Michael to varying degrees with aerial infrastructure being more severely impacted than buried infrastructure. The combination of both buried and aerial cabling within the same networks in addition to multiple private networks that were largely not interconnected locally, led to significant service interruption during and after the storm.

Primary Communications Network Infrastructure includes:

- Fixed copper lines – telephone, ADSL internet and municipal Ethernet
- Hybrid Fiber / Coax – internet/cable television
- Fiber optic backhaul – mapping with ownership view
- Fiber optic suppliers and points of interconnection (POI)
- Cellular Communications
- Fixed Wireless – point to point communications
- Satellite coverage – both mobile and fixed
- Local Data Storage Facilities for redundancy and resilience post storm
CELLULAR COMMUNICATIONS: Cellular communications were severely impacted from the storm affecting all wireless cellular carriers. Some carriers were able to maintain partial coverage on an intermittent basis while others failed entirely. More detailed investigation into damage sustained by the cellular networks indicated that some portions of the network’s equipment remained operational at the radio tower level, but dependencies on failed backhaul infrastructure impacted service.

The loss of electrical power affected all infrastructure with some critical sites remaining operational in some instances using backup electrical power generators. Distribution of fuel to these sites to ensure continued operation during the days and weeks following the storm became problematic due to blocked transportation corridors.

WIRED INTERNET COMMUNICATIONS: Internet, both HFC (hybrid fiber coax) and Fiber were both severely impacted. Buried cable fared better than aerial cabling due to falling tree damage and high winds. Widespread electrical power failures impacted both relay stations and interface locations for all fiber optic infrastructure. Some local infrastructure survived a few hours after power outages on batteries, but all largely failed after a short period. Some local entities operate their own private fiber optic network but also lost connectivity primarily due to electrical power interruptions.

FIXED WIRELESS COMMUNICATIONS: Fixed wireless communications such as UHF/VHF by several emergency organizations, such as the police and fire departments, were also heavily impacted by the storm. Most tower locations were affected by the loss of electrical power as they were largely not hardened to sustain long-term loss of power. Television and radio broadcast systems were affected by the hurricane interrupting most broadcasts. Initial reports indicated that only one radio station remained operational and public notices were not accurate in many cases with conflicting information.

SATELLITE COMMUNICATIONS: The use of satellite communications in the area was partially affected during the storm due to poor signal propagation through heavy storm clouds but became fully operational immediately afterward. Satellite is often the only reliable communications method from within a disaster area, but in the case of this storm in the Bay County area satellite communication equipment was not widely available to emergency personnel or the general public.

LOCAL DATA STORAGE FACILITIES: In many cases, the use of modern cloud-based infrastructure for storage, remote data collection/analytics and business operations worked against the community as it tried to recover from the damage caused by the storm. Very few of these critical databases were locally stored or replicated as backhaul communications were interrupted. Access to medical databases, patient histories, personal identification systems and authentication systems were all impacted recovery efforts.
UNDERGROUND VS AERIAL CABLING: The use of underground cabling and fiber optic networks versus aerial wiring delivers more resiliency as evidenced by some municipal networks which suffered minimal structural damage. The costs of burying all communications cabling is typically prohibitive but key infrastructure and backhaul segments should be considered.

ELECTRICAL POWER BACKUP: Even the most resilient networks suffered from lack of appropriate backup power systems for each communications node and rapidly failed hours after the storm. Electrical backup systems would need to be deployed along fiber optic routes and on radio tower infrastructure at a minimum. Solar and alternative energy sources should be considered to mitigate challenges in fuel delivery post disaster.

ALTERNATE / BACKUP NETWORKS: Police, municipal governments, military and utilities all possessed some form of private wireless communications capabilities. Most of these networks also failed during the storm. Access and shared resources among the disparate network technologies and owners is recommended. Private LTE cellular networks could also play a key role in ensuring resilient communications for first responders, utilities and municipal government workers. The U.S. Government’s FirstNet cellular network may assist in remaining operational during and after a community disaster for police and fire departments but will likely not be available for the remainder of the community.

LOCAL DATA STORAGE FACILITIES: Replicating remote databases for medical prescriptions and personal identification to local storage before a disaster strikes could dramatically alter challenges to health care and local policing resulting from loss of outside world connectivity.

EXPANDED USE OF SATELLITE TERMINALS: The use of satellite communications is critical for emergency services when terrestrial networks fail. Initial studies indicate that most organizations did not have an adequate number of handheld satellite phones, if any. Rapidly deployable fixed satellite terminals could also provide significant relief if deployed into key buildings such as police, fire and emergency operating centers.

EMERGENCY OPERATIONS CENTERS: The construction and interconnection of multiple emergency operations centers (EOC’s) would facilitate better communications, first responder coordination, medical relief and emergency supply distribution.

MOBILE COMMAND UNITS: The use of mobile command units that possess communications capabilities outside the community would significantly assist mitigating community suffering, lack of first responder and community worker coordination and public information dispersal. Satellite connectivity and private LTE cellular communications could provide backhaul connectivity for public Wi-Fi hotspots around the mobile command units.
SMART CITY TECHNOLOGIES: Low cost sensor networks can offer significant insight into damaged systems as they occur during a time of community distress. Interconnecting the information gathered and overlaying this data onto other public information systems is critical to dispersing the data gathered to those that need it most. These networks could remain operational if deployed on platforms utilizing solar and other alternative energy sources such as solar LED streetlights around a community.

PUBLIC WI-FI HOTSPOTS: All modern cellular phones and computers incorporate wireless Wi-Fi communications in addition to other more proprietary communications technologies. A strategy to mitigate the loss of wired and cellular communications is to deploy public Wi-Fi hotspots throughout a community. If these areas are pre-determined and well-marked, the general public could congregate and use these services to communicate with their families and outside aid organizations. Backhaul connectivity to these sites can be implemented using solar powered wireless radios connected to EOC’s.

BROADCAST NETWORKS: Better communication between and with operational radio and television stations would be of great assistance to the general public during community emergencies. Hardening of infrastructure and backup power systems can ensure resiliency and accelerated recovery.
Water and Wastewater

Nearly all communities within the impacted area suffered significant impact in potable water delivery and wastewater processing. The loss of electrical power created additional challenges resulting in the loss of pumping stations and wastewater treatment plants. The Military Point Advanced Wastewater Treatment Plant (AWT) that provides treatment for unincorporated Bay County, Callaway, Parker, Springfield, Mexico Beach, and Tyndall AFB was severely damaged and accessible only by helicopter. Lastly, the inability to communicate outages and restoration schedules on a district-by-district basis to hospitals, emergency responders and to the general public contributed to additional suffering.

Under the Florida’s Water/Wastewater Agency Response Network (FlaWARN) mutual aid agreement, over 400 utility workers from across the state, along with equipment, tools, generators, pumps, pipes and fittings, deployed to assist with recovery efforts.

Most apparent from comments and suggestions resulting from community involvement was the lack of redundant water treatment facilities, resilient distribution, improving wastewater/stormwater treatment plant capacity and transport and general transitioning private septic systems to the public network.

In conversations with health officials, hospital wastewater treatment processes also needed to be addressed as disposal of wastewater from these facilities can be more critical than other types of municipal infrastructure and caused some issues after Hurricane Michael when wastewater systems failed in the aftermath.

From reviews and interactions with the community, interruptions in electrical power may have been the single largest cause of wastewater related disruptions due to pumping/lift stations going offline. As these stations went offline, there was also increased potential for contamination with potable water systems; this increased in importance in post storm recovery.

In addition to electrical power loss causing lack of wastewater processing and flooding, the inability to communicate outages and restoration schedules on a district-by-district basis to hospitals, emergency responders and to the general public contributed to additional suffering.

After the storm, few automated systems or services were available to provide system-wide health determination and had to be largely performed manually by utility personnel.

Restoration of potable water and distribution to the County’s 180,000+ residents involved slow manual processes performed by municipal and county water department personnel. Loss of electrical power in pumping and distribution stations caused significant challenges, especially where reverse flow occurred. Once power was restored, some pump stations needed to be flushed and tested to ensure potability. Water tankers were also used to provide hospitals and other critical infrastructure with emergency supply during the restoration process.

The greatest impact of loss of potable water to the community was immediately following the event. Mitigation of the suffering caused by loss of water was provided by transporting potable water by vehicle transport to public facilities and communicating this as best as possible to local radio stations, the police and other first responder agencies.
Energy

All communities within the impacted area suffered significant electrical outages during the storm and, in some cases, it took many weeks to bring the systems back online. Accessibility to critical infrastructure was challenged by stormwater and debris on roadways. Prioritizing access clearing to these facilities may greatly reduce future suffering and accelerate repairs post disaster.

From reviews and interactions with the community, interruptions in electrical power may have been the single largest cause of lack of serviceability in all other community utilities and services after the storm. Services such as water delivery, telecommunications and sanitation were all greatly affected, significantly delaying response and cleanup efforts.

The greatest impact of the storm was the near complete failure of the electrical grid within the community that supported other infrastructure such as telecommunications, water, wastewater and emergency facilities.

Restoration of the electricity grid was a slow manual process performed by the power companies and its contractors immediately after the storm. In order to bring these systems back online, access to the areas needed to be obtained, fallen trees had to be removed, all power lines needed to be raised back into place, poles replaced, and lines restrung in many areas. This was an enormous effort due to most infrastructure being above ground and there being considerable loss of access in many areas. Many roadways and access corridors were blocked by debris and/or inaccessible due to flooding. The area’s largest electrical provider, Gulf Power, served approximately 103,000 customers prior to landfall and was able to restore power to 95% of the customers, who were capable of having power restored, within 13 days of Michael leaving the area.

Public participation comments received were associated with installing a separate, redundant transmission line into Tyndall Air Force Base for its electrical needs, the placement of critical electrical lines underground and significant interest throughout all areas of the community regarding the deployment of back-up generators on critical facilities and infrastructure.
**Stormwater Management**

The relatively flat terrain of Bay County, large areas of wetlands and areas with a high water-table combine to present unique challenges for managing stormwater functionality throughout the County. Hurricane Michael left record amounts of debris and caused extensive damage to ditches, outfalls, retaining ponds and other stormwater conveyances. This coupled with the massive loss of trees and their natural ability to reduce erosion caused by falling rain and by absorbing water through root systems, flooding and erosion throughout the community is a major continuing concern.

The removal of debris from stormwater conveyances is an ongoing process throughout the County, hampered by the sheer volume of work to be completed and inherent laborious nature of the operations.

The dominant comments and suggestions resulting from community involvement in developing this portion of the plan were:

- Hardening major outfall ditches throughout the County
- Purchasing property for large stormwater management projects
- Establishing Grand Lagoon and West End drainage systems
- Improving the Watson Bayou drainage system
- Replanting trees and other green infrastructure throughout the community that will assist with flooding and erosion issues
- Evaluating the viability of making detention ponds multi-use facilities by incorporating green infrastructure and park functionality

The common theme associated with these activities relates to effective control of flooding.
Roads and Bridges

Community data indicated that all of the communities within the impacted area suffered significant transportation issues due to the storm and it took many weeks, in some cases, to reopen access for use. Many roads were blocked by debris, trees and other objects, while many low-lying areas were also flooded and unusable immediately following the storm.

Prior to the storm, there were six county or municipally maintained bridges identified as Structurally Deficient by the Florida Department of Transportation, with the Laird Bayou structure on County Road 2297 incurring significant damage during the event. In addition to these hazards, driver and pedestrian safety was significantly impacted by damages to traffic signs and signals throughout the County. The Bay County Traffic Engineering Department has reported that over 12,000 signs were damaged as a result of the storm.

Most apparent from comments and suggestions through public participation was the need for re-evaluating and improving public evacuation routes and providing more timely and accurate data on road conditions, flooding and the status of roads. Specific comments also included the need for upgrading of traffic signals to be "smart" improving traffic flow and public safety.

Weeks and months after the storm, re-evaluation of public transit system routes, stops and frequency became other community concerns as the public adjusted to post storm changes resulting from damaged neighborhoods and changes to local businesses.

Restoration of roadways and access corridors was a slow manual process performed by the municipal workers and contractors immediately after the storm. There was extensive damage from fallen trees and other debris, along with considerable flooding. In order to open access, roadways were cleared of fallen trees and debris so that first responders and other community infrastructure operators could coordinate and optimize their repair efforts.

There are over 199 miles of county-owned and maintained unpaved roads in Bay County. More than 95% of these roads consist of a mixture of sand and clay which make-up the road base. The condition of these dirt roads is highly dependent on the volume and type of traffic, drainage systems, and weather conditions. Immediate emergency repairs are ongoing and initial estimates indicate that permanent repair costs will total $4,525,000.00. Damage has been further exacerbated by heavy equipment used in debris removal operations. Community feedback on this topic is clear: now is the time to pave these roads. From 2004 to 2014, Bay County received over $7,000,000 in FEMA Public Assistance funding to repair dirt roads damaged as the result of presidentially declared disasters. Asphalt paving and the installation of adequate roadside drainage will:

- Improve public safety with better dispersal and drainage of surface water, as well as enable faster response time of police, fire, and emergency services
- Mitigate against future damages
- Greatly improve travel conditions for residents, school buses, and other traffic
- Improve water quality of St. Andrews Bay System and other bodies of water by eliminating the source of sedimentation and reducing nitrification of watersheds
- Significantly reduce maintenance requirements
Airports and Port

The airport was briefly closed after landfall, primarily due to runway blockage from debris, trees and other objects but did have backup power systems in place to ensure operational capability quickly after the storm. The airport resumed full operational capability the morning after the storm but remained inaccessible to some people due to road access blockages.

Marine services in the Bay County area were impacted by the storm and remained inoperable for many weeks afterwards. Hurricane Michael damaged many of the buildings at Port Panama City, but its docks, cranes, and equipment made it through the storm. Power was restored at the port a week after the storm.

Restoration of the airport facilities was a manual process performed by the airport employees and contractors immediately after the storm. There was some damage from fallen trees and other debris but was quickly cleaned up.

The greatest impact of the storm was the destruction and distribution of debris throughout the community on public roadways and access corridors. Mitigation of the suffering due to loss of roadway access would primarily be by communicating the status of the cleanup efforts so that first responders and other community infrastructure operators could coordinate and optimize their repair efforts.
Law Enforcement, Fire Services and Emergency Medical Services

Comments and suggestions through public participation were mostly related to the widespread lack of communications and the need for more localized emergency support facilities.

There were also challenges noted by some existing facilities such as fire stations where doors became inoperable post storm and widespread electrical power outages hampered emergency operations. Communication challenges between hospitals, emergency personnel, first responders and municipal officials also impeded recovery and mitigation of suffering efforts. Most public wired and wireless communications systems were offline or intermittent at best; some organizations had VHF/UHF radios that were operating but did not interoperate with others and there were very few satellite phones to connect to the outside world.

Every emergency response organization within the County did their best to respond and coordinate with each other through word of mouth, intermittent cellular coverage and satellite phones if/when available. All law enforcement, fire services and EMS stations throughout the County were impacted, with damage ranging from minor to catastrophic. Three county stations were completely destroyed.

Several municipalities have expressed interest in hardening existing structures or building new multi-use, hardened facilities that can house essential staff during severe weather events, with the intent of serving as localized, support Emergency Operation Centers (EOC’s). By deploying these facilities in a distributed fashion throughout the County, response efforts could be significantly improved.

Additional comments and suggestions resulting from community involvement were associated with:

- The purchase of property to be used as staging area during emergencies. Those that could be used as a staging area may be tied to existing parks.
- Replacing structures for the purpose of housing law enforcement specialty vehicles and equipment, as well as a classroom/Emergency Operations Center for law enforcement training and operations
- Bringing the County into compliance with National Fire Protection Association (NFPA) standards
Public Facilities

With sustained winds in excess of 160 mph in many parts of the County, Hurricane Michael was one of the most devastating wind events to ever impact the United States. Catastrophic damages were seen across the entire region and current damage estimates for public facility projects for the County and municipalities stand at over $420,000,000.

The Bay District School system was especially hard hit, with over $300,000,000 in estimated damages to facilities. Total estimated capital costs for the District and Charter Schools are currently estimated to be in excess of $330,000,000.

Throughout the community involvement process, discussions were had related to effective mitigation opportunities and the hardening of critical facilities. The most commonly cited examples include:

- The use of standing seam metal roofs
- Replacement of gable roofs with hip roofs
- Installation of hurricane shutters
- Installation of hurricane clips, hurricane straps and other reinforcements
- Anchoring of rooftop equipment, ductwork, lightning protection system, and other components

Additional project ideas offered:

- Construction of a hardened records facility with space for key public works staff during emergency. This facility would act as a Continuity of Operations (COOP) facility for the County Emergency Operations Center (EOC) and would be equipped with back-up power and a redundant, hardened communication system. In addition to this functionality, it would be an ideal location to house critical county staff, equipment, and materials during weather emergencies, thereby allowing them to immediately begin response activities upon passing of the event.
- Harden all government facilities with roof mounted air conditioner units
- Equip additional government facilities with building-wide backup generators
Based upon the extensive research and discussion occurring within the Infrastructure Branch, the following specific actions (and associated tasks) are recommended to assist the communities of Bay County achieve maximum recovery.

1. Lift Station Bypass Pumps and Generators

**ACTION:** Install backup bypass pumps and/or generators at all lift stations in the Bay County collection system. This project will ensure that the lift stations will continue to pump wastewater in the event of a loss in commercial power, significantly minimizing the potential for sewer backups and overflows.

**TASK I:** Meet with county water and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Review options for backup power systems to increase resiliency; research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

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2. Military Point Wastewater Treatment Plan Critical Structures Hardening

**ACTION:** Harden critical structures at the Military Point Advanced Wastewater Treatment Plant (MPAWT) to withstand wind loads of up to 184 mph (Miami-Dade code).

As a result of Hurricane Michael, many critical structures at the Military Point Advanced Wastewater Treatment Plant were severely damaged or destroyed, compromising human safety and the highly sensitive and expensive equipment contained within. Hardening these structures will ensure safety of staff and critical operational equipment during hurricane events, allowing the MPAWT to continue accepting and treating domestic wastewater and preventing sewer backups within the municipal wastewater systems.

**TASK I:** Meet with county wastewater staff and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Review options for backup power systems to increase resiliency; research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.
3. North Bay Additional Water Storage

**ACTION:** Design and construct additional treated water ground storage tanks in the north and western areas of the County.

Additional ground storage tanks will provide additional capacity in the wholesale water distribution system and significantly decrease the possibility of service interruptions should the water treatment plant be compromised or when water line service repairs are needed.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

4. North Bay Wastewater Treatment Plant Critical Structures Hardening

**ACTION:** Harden critical structures at the North Bay Wastewater Treatment Plant (NPWWTP) to withstand wind loads of up to 184 mph (Miami-Dade code).

As a result of Hurricane Michael many critical structures at the North Bay Wastewater Treatment Plant were severely damaged or destroyed, compromising human safety and the highly sensitive and expensive equipment contained within. Hardening these structures will ensure safety of staff and critical operational equipment during hurricane events, allowing the NBWWTP to continue accepting and treating domestic wastewater and preventing sewer backups within the municipal wastewater systems.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
5. North Bay Water Treatment Plant

**ACTION:** Design and construct a new 30 million gallon per day (MGD) water treatment plant in the northwestern area of the County.

The current Water Treatment Plant is a 60 MGD treatment facility located on Transmitter Road. Bay County's Water Treatment Plant is the sole producer of all treated drinking water for Panama City Beach, Panama City, Springfield, Callaway, Parker, portions of Lynn Haven, Tyndall Air Force Base, Mexico Beach and unincorporated Bay County. In order to deliver treated water to the north and western areas of the County, large infrastructure must cross several critical water bodies. A second water treatment plant would provide a redundant treated water source for the entire county should the current water treatment plant be compromised and would more efficiently and effectively service the north and western areas of the County where significant growth and development is planned.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

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* Project 6 removed during final editing due to duplication or overlap.
7. Subaqueous Potable Water Main at Dupont Bridge

**ACTION:** Design and construct a new subaqueous potable water main underneath East Bay at Dupont Bridge. The existing water main was installed on the bridge structure in 1966 and supplies all potable water to Tyndall Air Force Base and Mexico Beach.

The proposed subaqueous water main will ensure the delivery of potable water and the viability of Tyndall AFB and Mexico Beach. Reduce the potential negative traffic impacts to the Dupont Bridge, which is the only connection from Tyndall/Mexico Beach to Bay County and vice versa. Tyndall AFB is a major economic driver for Bay County and has committed to spend $3B to rebuild the base as one of the most advanced and premier military bases in the country. Ensuring the delivery of sufficient quantity and quality of potable water is critical to maintaining the viability of the Tyndall AFB.

**TASK I:** Meet with county and Tyndall AFB officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the facilities.
8. Subaqueous Potable Water Main at Hathaway Bridge

**ACTION:** Design and construct a new subaqueous potable water main underneath St. Andrews Bay at Hathaway Bridge. The existing water main was installed inside of the bridge during its construction in 2003 and supplies all potable water to eastern Panama City Beach. As a result of bridge movement, the water main is failing.

The proposed subaqueous water main will ensure the delivery of potable water and the viability of Panama City Beach and reduce the potential negative traffic impacts to the Hathaway Bridge, which is the only connection from Panama City Beach to Panama City and vice versa. Approximately 70,000 vehicles per day cross Hathaway. Panama City Beach is a major economic driver for Bay County and accounts for approximately $2.5B in economy sales revenue. Panama City Beach is a major tourist destination that receives approximately 17 million visitors annually. Ensuring the delivery of sufficient quantity and quality of potable water is critical to maintaining the viability of the tourism industry.

**TASK I:** Meet with county and municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the facilities.

9. Subaqueous Raw Water Main at Deerpoint Dam

**ACTION:** Design and construct a new subaqueous raw water main underneath Deerpoint Reservoir at the Deerpoint Dam. The existing raw water main was installed on the dam structure and transports raw water from Econfina Pumping Station to the Water Treatment Plant.

The proposed subaqueous water main will provide redundancy at this critical water crossing to ensure the delivery of raw water from Deerpoint Reservoir to the Water Treatment Plant. Bay County's Water Treatment Plant produces all treated drinking water for Panama City Beach, Panama City, Springfield, Callaway, Parker, portions of Lynn Haven, Tyndall Air Force Base, Mexico Beach and unincorporated Bay County.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
10. Utility Remote Sites Communication and Telemetry

**ACTION:** Install communication and telemetry at all water and wastewater remote sites including pumping stations, storage tanks and lift stations.

This project will allow the water and wastewater treatment plants to communicate and control the remote sites at all times. Specifically, during storms, allow water and wastewater pumping stations to continue to move water and wastewater through the distribution and collections systems minimizing loss of critical services.

**TASK I:** Meet with county and municipal water and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

11. Water Treatment Plant Critical Structures Hardening

**ACTION:** Harden critical structures at the Bay County Water Treatment Plant to withstand wind loads of up to 184 mph (Miami-Dade code). As a result of Hurricane Michael, many critical structures at the Water Treatment Plant were severely damaged or destroyed, compromising human safety and the highly sensitive and expensive equipment contained within. Hardening these structures will ensure safety of staff and critical operational equipment during hurricane events, allowing the Water Treatment Plant to continue producing treated drinking water.

**TASK I:** Meet with county and municipal water departments and detail challenges in water infrastructure and most impacted sites and equipment necessary to harden this infrastructure in case of future events.

**TASK II:** Review options for backup power systems to increase resiliency, identify research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on water treatment pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.
12. Critical Facility Utility and Communication Infrastructure

**ACTION:** Establish and maintain dedicated and/or redundant utility and communication infrastructure to critical facilities such as Emergency Operations Centers, Hospitals, Shelters and Government Facilities.

As witnessed during Hurricane Michael, critical facilities, such as Emergency Operations Centers, Hospitals, Shelters and Government Facilities were unable to provide necessary services due to the lack of power, water, wastewater and communication. By establishing and maintaining dedicated and/or redundant infrastructure, this project will ensure the sustainability of essential services to the community in times of need.

**TASK I:** Meet with the local telecommunications companies, utility providers, county and municipal governments, educational institutions and military installations to determine the existing infrastructure and how redundancy and hardening could best be implemented.

**TASK II:** Define available budgets and other outside sources of capital to enable the implementation of this project.

**TASK III:** Issue RFIs to determine potential vendors and approximate costs for the project.

**TASK IV:** Work with the local chamber of commerce, the universities and private investors to develop a plan to connect this network to an IT/Innovation technology center to drive new economic opportunities.

13. Deerpoint Lake Protection Zone Septic to Centralized Sewer

**ACTION:** This project consists of providing a centralized sewer system within the western portion of the Deerpoint Lake Protection zone. The installation of this project will also provide the backbone for future phases of septic to sewer transition.

Approximately 50 million gallons per day of water is pumped from the Deerpoint Lake, which is the main source of all drinking water for Bay County. In addition to supplying drinking water, between 500 million and one billion gallons per day of freshwater spills over Deerpoint Dam into North Bay and subsequently into St. Andrews Bay. The quality of this water is extremely important to the sensitive ecological balance of the bay systems.

As a result of the absence of a centralized sewer system, there is a high density of septic tanks located within the Deerpoint Lake Protection Zone. A large percentage of the septic tanks in this area are old, failing and/or do not meet the current standard for construction. This allows high levels of nutrients and bacteriological pollution to infiltrate Deerpoint Lake.

As a result of septic tank removal, the water quality of the Deerpoint Lake Reservoir, North Bay and the entire St. Andrews Bay system will be greatly improved by reducing nutrient loading and bacteriological pollution. The installation of this project will also provide the backbone for future phases of septic to sewer transition.

**TASK I:** Meet with county and municipal septic and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal and ways to encourage residents to move to public sewer infrastructure.

**TASK II:** Review legislation and incentive programs to encourage the transition from private septic systems to public utilities.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.
14. Septic System Incentive Program

**ACTION:** Incentive program to connect all septic systems in the areas hardest hit by the storm to sewer lines.

**TASK I:** Meet with county and municipal septic and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal and ways to encourage residents to move to public sewer infrastructure.

**TASK II:** Review legislation, discuss opportunities with state and federal partners regarding incentive programs to encourage the transition from private septic systems to public utilities.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

15. Internet Connectivity

**ACTION:** Enable high speed internet for all locations throughout Bay County and enable super high-speed internet for High Tech Industrial Park. In terms of deployment, coverage of residential, commercial and beach areas including public areas, parks, bus stops and airports should be evaluated. Providing these services using redundant fiber routes would also provide a backbone for emergency communications services when mobile cellular networks fail. New facilities such as IT Innovation Centers and Government Services could also enhance economic development and community outreach programs to drive new economics and efficiencies for the region.

**TASK I:** Meet with the local telecommunications companies, the County and municipal governments, universities and colleges, as well as the Tyndall AFB to determine the existing infrastructure could be expanded throughout the community.

**TASK II:** Define available budgets and other outside sources of capital to enable the implementation of this project.

**TASK III:** Issue RFIs to determine potential vendors and approximate costs for the project.

**TASK IV:** Work with the local chamber of commerce, the universities and private investors to develop a plan to connect this network to an IT/Innovation technology center to drive new economic opportunities.
16. Dirt Roads Stabilization

**ACTION:** Stabilization of Bay County’s existing 199 miles of dirt roadways and construction of roadside swales for stormwater treatment. More than 95% of these roads consist of a mixture of sand and clay which make-up the road base. The condition of these dirt roads is highly dependent on the volume and type of traffic, drainage systems, and weather conditions. Asphalt paving and the installation of adequate roadside drainage will improve public safety, mitigate against future damages, greatly improve travel conditions, improve water quality of the St. Andrews Bay system and other bodies of water, and significantly reduce maintenance requirements.

**TASK I:** Coordinate with county officials on existing plans for roadway resurfacing.

**TASK II:** Investigate funding sources to assist with the completion of roadway resurfacing and watershed management systems.

18. Elevated Pedestrian Structures on Back Beach Road/U.S. 98.

**ACTION:** This project would allow pedestrians to safely cross U.S. 98 without the risk of conflict with vehicles on U.S. 98. This would further increase the efficiency of U.S. 98 by not forcing vehicles to stop for pedestrian traffic.

**TASK I:** Meet with county and state officials in charge of public transportation and evaluate the status of traffic congestion and traffic impacted by pedestrians on primary traffic corridors.

**TASK II:** Evaluate potential areas where pedestrian structures could improve traffic flow.

**TASK III:** Research funding sources and apply for assistance grants to develop these new services.

**TASK IV:** Investigate the use of new sensing technologies to monitor and predict pedestrian use and traffic statistics to better analyze and predict usage patterns.

*Project 17 removed during final editing due to duplication or overlap.*
19. Establish Grand Lagoon and West End Drainage Systems

**ACTION:** Construct drainage system and treatment area to reduce sediment washing into Grand Lagoon and West End Beaches. These actions will improve water quality and create a stronger, resilient system to help prevent flooding in the area.

**TASK I:** Coordinate with county and municipal officials on existing plans for regional stormwater water management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

22. Study for Construction of a North Bay Bridge

**ACTION:** Investigate the viability of a North Bay Bridge that connects from the north end of the Bailey Bridge in Lynn Haven and terminates parallel with the Hathaway Bridge towards Panama City Beach. This structure could reduce traffic congestion "in town," including Hwy 77, Hwy 390, and 23rd Street, and would assist with improving traffic flow during emergency evacuations.

**TASK I:** Meet with state and county officials in charge of public transportation and evaluate the current status of the project.

**TASK II:** Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Design process: During design, detailed construction plans are prepared.

**TASK IV:** Determine the status of Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.

*Projects 20 and 21 removed during final editing due to duplication or overlap.*
23. Continuation of East Bay Parkway to Wildwood Road

**ACTION:** Creation of an additional east-west roadway servicing Bay County and Panama City Beach from Hathaway Bridge to SR 79.

Presently, this area is served by one main travel corridor, U.S. 98. After the storm, major congestion resulted and impacted evacuation, access to emergency vehicles, 1st responders, etc. Another route will be instrumental in recovery process.

**TASK I:** Meet with state and county officials in charge of public transportation and evaluate the current status of the project. Discuss with subject-matter-experts the possibility of expediting the process.

**TASK II:** Determine the status of the Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Determine the status of the design process: During design, detailed construction plans are prepared.

**TASK IV:** Determine the status of Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.

24. Countywide Off-Road Bicycle Network

**ACTION:** Construct a series of off-road bicycle paths.

**TASK I:** Meet with county and municipal officials in charge of public transportation and evaluate the status of traffic congestion and alternative methods of transport such as bicycle paths.

**TASK II:** Evaluate potential areas where solar powered LED lighting may improve safety while using bike paths to encourage more use.

**TASK III:** Research funding sources and apply for assistance grants to develop these new services.

**TASK IV:** Investigate the use of new sensing technologies to monitor and predict bike path use and traffic statistics to better analyze and predict usage patterns.
25. Gulf Coast Parkway (Advancement)

**ACTION:** Construct an arterial highway from Port St. Joe and Mexico Beach to U.S. 231, north of Panama City Distribution Center.

This project will enhance the transportation connection to Gulf County and eastern Bay County, thereby promoting increased development, will provide a by-pass to Tyndall AFB reducing traffic congestion and conflicts with Tyndall AFB operations and will provide greater evacuation route capacity.

**TASK I:** Meet with state and county officials in charge of public transportation and evaluate the current status of the project. Discuss with subject-matter-experts the possibility of expediting the process.

**TASK II:** Determine the status of the Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Determine the status of the design process: During design, detailed construction plans are prepared.

**TASK IV:** Determine the status of Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.

26. West Bay Parkway (Advancement)

**ACTION:** The advancement of West Bay Parkway will improve mobility and interconnectivity in the regional transportation network and enhance traveler safety. Additionally, it will improve hurricane evacuation and emergency response capabilities, promote economic development in the region, and increase capacity and relieve existing and anticipated traffic congestion.

**TASK I:** Meet with state and county officials in charge of public transportation and evaluate the current status of the project. Discuss with subject-matter-experts the possibility of expediting the process.

**TASK II:** Determine the status of the Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Determine the status of the design process: During design, detailed construction plans are prepared.

**TASK IV:** Determine the status of Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.
28. Right-of-way (ROW) Acquisition and Construction of East Avenue Improvements

**ACTION:** FDOT has funded a PD&E study to improve East Avenue (SR 389), but the ROW and construction phases are not funded. East Avenue will be prime for the new East Terminal and for Eastern Shipbuilding Nelson Yard and it will also provide relief to U.S. 231.

The East Avenue (SR 389) improvements include work from Sherman Avenue to Baldwin Road and are designated as Segment 5 of a larger U.S. 231 Project Development and Environmental Study with a total potential cost of $415,000,000.

**TASK I:** Meet with state and county officials in charge of public transportation and evaluate the current status of the project. Discuss with subject-matter-experts the possibility of expediting the process.

**TASK II:** Determine the status of the Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Design process: During design, detailed construction plans are prepared.

**TASK IV:** Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.

29. Thomas Drive Flyover Phase 2

**ACTION:** The expansion of this roadway will service expected future growth in the area, enhance traveler safety, and will greatly assist with hurricane evacuation and emergency response capabilities.

**TASK I:** Meet with state and county officials in charge of public transportation and evaluate the current status of the project. Discuss with subject-matter-experts the possibility of expediting the process.

**TASK II:** Determine the status of the Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Determine the status of the design process: During design, detailed construction plans are prepared.

**TASK IV:** Determine the status of Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.

* Project 27 removed during final editing due to duplication or overlap.
30. Underground Power and Communications on Front Beach Road and Thomas Drive

**ACTION:** In addition to aesthetic improvements, placing utilities underground can improve security and reduce the likelihood of damage in future storms.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

31. Healthy St. Andrews Bay

**ACTION:** Improve stormwater runoff to lessen the amount of stormwater that runs directly into the bay. Initiate programs that help create a cleaner bay through prevention, monitoring and maintenance.

A healthier bay makes for a more attractive community for tourists and potential residents.

**TASK I:** Coordinate with state, county and municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

32. Improve Watson Bayou Drainage System

**ACTION:** Establish stormwater treatment and water quality testing of Watson Bayou. Includes construction of a vessel mooring area to reduce wastewater within the bayou.

**TASK I:** Coordinate with state, county, municipal officials on existing plans for regional stormwater and potable water management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater and water systems in general.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
33. Regional Stormwater Management Facilities

**ACTION:** Provide a series of regional stormwater management facilities (RSMF) throughout the County and municipalities to provide for the treatment and management of stormwater for existing and future development including commercial areas, residential neighborhoods and roadways.

The RSMF will receive and treat stormwater runoff, thereby improving environmental quality in the area’s bays, bayous, creeks and other natural waterways. The RSMF will reduce existing flood hazards by conveying and attenuating stormwater runoff from existing development and roadways. The RSMF also have the added economic benefit of attracting new business/investment in the area by providing capacity for new development. Rather than construct stormwater facilities for a single development, RSMF can relieve developers of stormwater requirements and save on the upfront costs of site construction and allow owners to maximize the use of their properties.

**TASK I:** Coordinate with state, county and municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

34. CR 2321 Deer Point Bridge Replacement and Dam Improvements

**ACTION:** The Deer Point Lake Reservoir serves as the county’s primary water supply source, providing over 90% of the water used throughout the county. The intent of this project is to replace the existing 62 year old bridge with a new 40’ wide concrete structure with bike path facilities, construct a new dam with low-head hydroelectric power functionality, and to connect this new alternative power source to the nearby Williams Bayou Water Pumping Station, which is one of two raw water pumping stations that supply water to much of the county.

This project will ensure the long-term integrity of the Deer Point Bridge and dam that supports the county’s primary water source and will provide a redundant power source at the pumping station to help ensure that water service can continue in the event of a loss in commercial power.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
35. Stream Restoration at All Impacted Crossings

**ACTION:** Before restoring streams at all impacted crossings and in an effort to stabilize stream banks, project design should take into account the contours of the natural channel, as well as possible culvert improvements. Ongoing stream stability needs to be a consideration.

**TASK I:** Coordinate with county and municipal public works staff, as well as environmental specialists to discuss currently adopted processes and best practices as they relate to upstream and downstream alignment of culverts.

36. Policies to Reduce Impervious Surfaces

**ACTION:** Adopt policies about reducing impervious surfaces and begin conversion to pervious surfaces in key watersheds that are directly affecting the bay.

**TASK I:** Coordinate with county and municipal public works staff, as well as environmental specialists to discuss currently adopted processes and best practices as they relate to pervious surfaces in key watersheds that are directly affecting the bay.

37. Emergency Vehicle Signal Preemption

**ACTION:** Emergency Vehicle Signal Priority would give first responders signal priority when approaching traffic signals during an emergency. This would allow for faster response and reduce the potential for emergency vehicle accidents during response.

**TASK I:** Meet with state, county, and municipal officials in charge of public transportation and evaluate the status of smart traffic signal implementations in the Bay County area.

**TASK II:** Evaluate potential areas where backup power systems for connected intersections and smart traffic signals could improve public safety during power outages.

**TASK III:** Evaluate the implementation of eco-friendly solar led lighting systems to reduce the community’s carbon footprint while improving safety.

**TASK IV:** Research funding sources and apply for assistance grants to develop these new services.
38. Hardening of Bay County Traffic Signal System

**ACTION:** Replace span wire intersections with mast arms and cut loops at all intersections.

**TASK I:** Meet with state, county, and municipal officials in charge of public transportation and evaluate the status and use of hardened traffic signal infrastructure.

**TASK II:** Research funding sources and apply for assistance grants to develop this new infrastructure.

39. Smart City/Connected Intersections

**ACTION:** The procurement and installation of hardware at traffic signals around Bay County to prepare for vehicle to infrastructure communications. This will include connected vehicles, emergency traffic signal preemption and any other safety or efficiency improvements.

These projects will enhance the safety and efficiency of the movement of the traveling public around Bay County.

**TASK I:** Meet with county and municipal officials in charge of public transportation and evaluate the status of smart traffic signal implementations in the Bay County area.

**TASK II:** Evaluate potential areas where backup power systems for connected intersections and smart traffic signals could improve public safety during power outages.

**TASK III:** Evaluate the implementation of eco-friendly solar LED lighting systems to reduce the community's carbon footprint while improving safety.

**TASK IV:** Research funding sources and apply for assistance grants to develop these new services.

40. Crosswalks

**ACTION:** Add additional crosswalks along all tourist corridors throughout Bay County and Panama City Beach.

**TASK I:** Meet with county and municipal officials in charge of public transportation and evaluate the status of traffic flow. Also, look to implementing smart traffic signals to improve traffic flow.
41. Widening of SR 77 from SR 388 to US 231

**ACTION:** After the storm, travel on north-south roadways was a major challenge in town. The east-west patterns are generally being addressed through the flyovers, although there were challenges due to massive relocation of residents (and responders) relocating to the west with daily commuting. Unfortunately, the north-south traffic has remained a constant challenge. Highways 77 and 231 are over capacity. Highway 231 will help with 77 and Star Avenue flyovers, but we need north-south relief from Highway 388 South to 98 on Hwy 77. Need to find a good solution because of the limited right of way and complexity with business setbacks. There is currently no efficient route to get to I-10 if motorists are traveling west.

**TASK I:** Meet with county and municipal officials in charge of public transportation and evaluate the status of traffic congestion. Also, look to implementing smart traffic signals to improve traffic flow.

**TASK II:** Evaluate potential areas where backup power systems for connected intersections and smart traffic signals could improve traffic flow.

**TASK III:** Research funding sources and apply for assistance grants to develop these new services.

**TASK IV:** Investigate the use of new sensing technologies to monitor and predict roadway use and traffic statistics to better analyze and predict usage patterns.

42. Countywide Optical Infrastructure to Connect to Florida LambdaRail (FLR)

**ACTION:** Install optical infrastructure capable of working at and through FLR which would be available to both the public and private sectors.

This will promote economic development and enhance operations of public institutions including military installations.

**TASK I:** Meet with county, municipal, LambdaRail officials and other stakeholders to evaluate the requirements and expectations of becoming a participant of Florida LambdaRail services.
43. Increased Communications Fiber Redundancy and Reliability

**ACTION:** Install buried fiber along separate routes—via Pensacola and one via Tallahassee. Current fiber links are both along Hwy 20 right-of-way, east to Tallahassee.

Separate redundant routes will reduce risk of mass communications service loss and improve data management efficiency via routing options.

**TASK I:** Meet with the local telecommunications companies, the County and municipal governments, universities and colleges, military installations and other stakeholders to determine the existing infrastructure and how redundancy could best be implemented to community fiber optic networks.

**TASK II:** Define available budgets and other outside sources of capital to enable the implementation of this project.

**TASK III:** Issue RFIs to determine potential vendors and approximate costs for the project.

**TASK IV:** Work with the local chamber of commerce, the universities and private investors to develop a plan to connect this network to an IT/Innovation technology center to drive new economic opportunities.

44. COMMUNITY CENTERS

**ACTION:** Better community centers, possibly tied in with community gardens to help them become more of a center.

**TASK I:** Conduct a study of existing community centers and the need for more and optimal locations by meeting with county and municipal officials and receiving input from the community.

**TASK II:** Investigate funding sources to construct one or more community support centers throughout the County.

**TASK III:** Coordinate with county and municipal officials on zoning and sourcing of optimal locations for new community centers.

**TASK IV:** Issue RFI’s to determine costs for engineering and retrofitting facilities.
45. **Alternate Emergency Operations Center (EOC)/Hardened Records Facility**

**ACTION:** This project is to construct a hardened records facility with space for critical public works staff during emergencies. The facility will act as COOP for EOC equipped with backup power and hardened communication system.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of the facility.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the facility.

46. **Install Additional Generators on County Facilities**

**ACTION:** Equip additional county facilities with building-wide backup generators (all fire stations, library, entire county admin building, etc.)

**TASK I:** Work with local county officials to determine the requirements and shortfall for backup power systems in all critical facilities. Also, look for options to generate alternative energy using renewable resources to augment existing demands.

**TASK II:** Establish new programs to access federal and state grants that could leverage green-alternative energy generation within the communities for both primary and backup use.

**TASK III:** Investigate opportunities to work with local entrepreneurs looking to provide electrical backup and charging stations for EV vehicles to determine potential services that could be provided to county facilities in times of community disaster.

**TASK IV:** Issue RFI’s to determine costs for engineering and retrofitting facilities with backup power systems.

47. **Wind Retrofit Hardening of Existing County Fuel Depots (Majette and 9th St)**

**ACTION:** Construct canopies to Miami-Dade wind load standards. Install backup generators to provide emergency power for lighting, fuel pumps and Fuelmaster pedestal. Provide wireless connectivity capability for Fuelmaster pedestal.

**TASK I:** Conduct a study of the existing facilities and what wind retrofitting engineering must be done to bring the facilities up to standards.

**TASK II:** Investigate funding sources.

**TASK III:** Issue RFI’s to determine costs for engineering and retrofitting facilities.
48. Wind Retrofit Hardening of Existing Majette Yard Facilities

- Roads and Bridges Administration Building
- Roads and Bridges Fleet Shop
- Traffic Sign Shop
- Mosquito Control System

**TASK I:** Conduct a study of the existing facilities and what wind retrofitting engineering must be done to bring the facilities up to standards.

**TASK II:** Investigate funding sources.

**TASK III:** Issue RFI's to determine costs for engineering and retrofitting facilities.

49. Animal Control Hardened Facility to Act as "Animal Shelter"

**ACTION:** Community needs safe/secure location to house pets during disasters.

**TASK I:** Meet with county officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of the facility.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the facility.

50. Emergency Staging Areas

**ACTION:** Purchase property for use as staging areas during and after emergencies. After Hurricane Michael, it was apparent that county-owned designated properties were urgently needed for the staging of equipment and other resources for county, municipal, mutual aid and contract providers.

**TASK I:** Conduct a study of existing locations that are currently used for emergency staging operations.

**TASK II:** Investigate federal, state and possible private partner funding sources.

**TASK III:** Report on the establishment of a network of staging areas throughout the County. This report would also recommend locations, facility features and reoccurring costs and cost estimates. Emphasis should be placed on use of the location outside of emergency events (i.e. open/greenspace, other uses, etc.).

**TASK IV:** Issue RFI's to establish vendor and costs for site development of new staging areas for emergency operations.
Primary Sponsor: Bay County  
Estimated Cost: $6,500,000.00  
Source of Funding: USDOT, DOE, Smart Cities Council  
Initiative: Alternative Energy Programs

### 51. Electric Car Charging Stations

**ACTION:** As electric cars are becoming more popular, the ability to charge electric vehicles is crucial. Many campus environments such as the military bases and colleges have electric vehicles for internal vehicles but there are very few in the community. If charging stations were available at strategic locations throughout the County, both our visitors and locals alike could benefit. As infrastructure is being rebuilt, now is the perfect opportunity to have these put in place.

Provides peace of mind for those using electric cars to commute around the County. With more and more electric cars becoming more affordable, the need for charging stations will grow.

**TASK I:** Consult local county and municipal officials on existing legislation for building car charging stations.

**TASK II:** Evaluate zoning and other issues that might be delaying or discouraging new charging stations and make changes to encourage new facilities.

**TASK III:** Discuss potential partnerships with local entrepreneurs to place charging stations throughout the community.

**TASK IV:** Evaluate options for using eco-green sources of energy such as wind and solar which leverage the local climate and could provide backup power systems for public facilities in the community.

**TASK V:** Research funding sources and apply for assistance grants to develop these new services.

### 52. Tethered Aerostats for Emergency Response

**ACTION:** Aerostats could be tremendously useful as a communication platform for first responders and other critical staff after the loss of communications. An aerostat can be unreeled to a desired altitude on a synthetic tether about the diameter of a school pencil. When necessary, the tether can house fiber optic strands to download data from the payloads without risk of interference and copper wires to deliver power to the payloads. An aerostat at 500 feet above ground will give a radio nearly 50 kilometer line-of-sight range to the horizon; that exceeds the range of most radio payloads commonly used by field operators.

**TASK I:** Meet with public safety and first responders’ carriers to determine potential for utilizing Tethered Aerostats as backup telecommunications and surveillance systems.

**TASK II:** Investigate vendors and costs to do a cost benefit study on this type of technology for emergency services provision. Long-term needs, including logistical concerns, required training, recurring costs, and other elements need to be covered.

**TASK III:** Develop a strategy to deploy tethered aerostats as backup systems if cost effective.

**TASK IV:** Pilot: Perform a pilot project to test the feasibility and costing to deliver services by this technology.
53. Consolidated Communications/ 911 Center

**ACTION:** Propose a consolidated 911/Dispatch facility capable of handling all 911 demand and dispatch of police, fire and EMS resources.

**TASK I:** Conduct a study to determine shortfalls in the existing 911/Dispatch system and how it coordinates with local first responders.

**TASK II:** Make recommendations on changes to the existing 911/Dispatch systems that could better serve the community.

**TASK III:** Implement changes to the 911/Dispatch system per studies and recommendations.

54. EMS Stations

**ACTION:** Emergency Medical Services (EMS) stations need to be located strategically throughout all of Bay County, including municipalities. EMS units can be stationed within fire stations or housed in stand-alone structures. None of the existing county or city infrastructure has capacity for the EMS units and associated crews.

**TASK I:** Contact the County and municipalities to determine optimum locations for EMS facilities.

**TASK II:** Investigate funding sources to construct facilities throughout the County.

**TASK III:** Evaluate the potential for developing dedicated and/or redundant utility and communication infrastructure from the facilities to other critical facilities.

**TASK IV:** Report on the establishment of a network of EMS Stations throughout the County. This report would also recommend locations, facility features and cost estimates.

55. New Fire Stations (Unincorporated Bay County)

**ACTION:** Stations needed for current call volume and protection of life, property and environment.

**TASK I:** Meet with county and municipal officials to determine the extent of existing facilities that are not meeting community standards for volume and support.

**TASK II:** Investigate funding sources to construct one or more emergency operations centers throughout the County.

**TASK III:** Investigate optimal locations and zoning to implement new fire stations within the communities.

**TASK IV:** Issue RFI’s to determine interest in constructing new facilities.
56. **Retrofit County Fire Station/EMS Station Truck Bay Doors**

**ACTION:** All doors retrofitted to accordion type doors like existing doors at West End Fire Dept. to meet Miami-Dade wind load standards.

**TASK I:** Meet with the County fire stations to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Investigate funding sources to construct one or more emergency operations centers throughout the County.

**TASK III:** Issue RFIs to determine vendors and exact costs for the retrofits.

57. **Wildfire Property Protection**

**ACTION:** Plans need to be made to protect property from potential wildfires. With forest and timberlands damaged as they are, it is primed for wildfires. Plans need to be made to clean up these areas of the large amounts of dead and dying trees. Fire protection methods need to be established now. Additionally, in just a short order of time these areas will be infested with bugs/beetles that will cause future problems for the citizens of Bay County and the surrounding areas.

**TASK I:** Consult with state and county officials on trends and challenges with wildfires in the area and the potential impact of the storm with creating significantly more dry wood in some forested areas.

**TASK II:** Meet with local and regional firefighting crews to determine state of readiness and potential areas where services could be improved to speed up response and increase capacity.

**TASK II:** Establish plans for mitigating damage caused by wildfires in the most critical areas of the region.

**TASK III:** Research funding sources and apply for assistance grants to develop these new services.

58. **Tarp-It**

**ACTION:** Get information out to debris removal companies and to the public, to tarp their loads of debris before travel. This will help ensure the roadways and vehicles on the roadway remain safe and help keep debris out of the roadway.

**TASK I:** Discuss with Emergency Services officials and local Public Information Officers across jurisdictions the development of a public awareness campaign to get the word out. Also, ensure that all county and municipal debris management plans reflect this initiative.

**TASK II:** Considerations should include consultation with public works operators, contract managers, debris haulers and social media.
59. BCSO Training Facility/Law Enforcement Command Post and High-Value Vehicle Storage

**ACTION:** Project to replace structures damaged by Hurricane Michael for the purpose of housing law enforcement specialty vehicles and equipment as well as a classroom/Emergency Operations Center for law enforcement training and operations. The Bay County Sheriff’s Office is located at 3421 Highway 77 on the border of Panama City and Lynn Haven. Structures in this area sustained catastrophic damage. The Bay County Sheriff’s Office lost a warehouse/shop metal building, several pole barns and sustained damage to a 20+ year-old portable classroom used to train law enforcement officers.

The Bay County Sheriff’s Office is active in the Regional Domestic Security Task Force and has one of the regionally designated bomb squads and SWAT teams. As such, BCSO has obtained valuable specialty vehicles to respond to critical incidents throughout Northwest Florida. The bomb squad is one of two in the region and has vehicles and equipment valued at over $1.5 million. The SWAT team is one of three designated in the region and has vehicles and equipment valued at over $400,000, including a $300,000 armored vehicle that was recently acquired through federal/state funding. BCSO also has a mobile command post vehicle on order that is a joint purchase with Bay County Emergency Services that cost $650,000. The total value of this equipment exceeds $2.5 million. Due to the effects of Hurricane Michael, this equipment is being housed in the BCSO parking lot and exposed to the elements.

The project will allow for a suitable location to effectively train law enforcement officers. The training room could also function as a law enforcement command post in natural disaster and other law enforcement emergencies. The garage bays would allow for appropriate storage of high-value vehicles extending the useful life of this equipment.

**TASK I:** Meet with the local law enforcement and other county officials to determine the extent of the damage that was incurred and what it would take to replace destroyed facilities.

**TASK II:** Research federal and state programs to determine potential sources of funding that might assist in the project.

**TASK III:** Issue RFI’s to determine interest in designing and constructing few facilities and rebuilding damaged facilities for this project.

60. Improvements for School Bus Routes

**ACTION:** Paving, lighting and bus stop shelters. These improvements will reduce risks concerning school bus program safety and security, weather sensitivity, bus schedule delays, tripping and falling injuries and bus damage due to recurring road washouts and potholes.

**TASK I:** Meet with county and municipal officials in charge of public transportation and school bus systems and determine the extent of public use and damage caused by the storm. Determine what safety measures could be taken to reduce risks to students and vehicles.

**TASK II:** Evaluate potential areas where new services such as solar LED lighting and public Wi-Fi hotspots might also improve safety.

**TASK III:** Evaluate the implementation of eco-friendly solar LED lighting systems to reduce the community’s carbon footprint while improving safety.

**TASK IV:** Research funding sources and apply for assistance grants to develop these new services.
61. Bay District Schools Ancillary Building Hardening

**ACTION:** This project will improve the safety and security of the Bay District School maintenance facility. Reducing wind-borne debris and protecting property the District deems necessary to return students to schools after an event.

**TASK I:** Conduct a study to determine the hardening requirements and damage that was inflicted by the storm. Evaluate the costs and benefits of performing the necessary improvements.

**TASK II:** Meet with school and community officials investigating the implementation of school building hardening and determine existing engineering or work done to date to bring these facilities up to date.

**TASK III:** Issue RFI’s to determine costs for engineering and retrofitting the facilities.

62. Bay District Schools Shelter Hardening

**ACTION:** The proposed project will retrofit existing school buildings designated as shelters by Bay County Emergency Management with impact-resistant glass, window shutters, hurricane-resistant doors and reinforced roofing.

**TASK I:** Conduct a study to determine the hardening requirements and damage that was inflicted by the storm. Evaluate the costs and benefits of performing the necessary improvements.

**TASK II:** Meet with school and community officials investigating the implementation of school building hardening and determine existing engineering or work done to date to bring these facilities up to date.

**TASK III:** Issue RFI’s to determine costs for engineering and retrofitting the facilities.

63. Bay District Schools Structure Hardening

**ACTION:** The proposed project will retrofit existing school buildings with impact-resistant glass, window shutters, hurricane-resistant doors, and reinforced roofing.

**TASK I:** Conduct a study to determine the hardening requirements and damage that was inflicted by the storm. Evaluate the costs and benefits of performing the necessary improvements.

**TASK II:** Meet with school and community officials investigating the implementation of school building hardening and determine existing engineering or work done to date to bring these facilities up to date.

**TASK III:** Issue RFI’s to determine costs for engineering and retrofitting the facilities.
64. Bay District Schools Fuel Depot Hardening

**ACTION:** This project will expand and harden the fuel depot of Bay District Schools, used by school buses, district vehicles, and district police.

This project will improve the safety and security of the district fuel store in disaster and during normal operations. It will allow for the rapid deployment of district assets after an event, expediting the return of students to schools.

**TASK I:** Conduct a study to determine the hardening requirements and damage that was inflicted by the storm. Evaluate the costs and benefits of performing the necessary improvements.

**TASK II:** Meet with school and community officials investigating the implementation of school building hardening and determine existing engineering or work done to date to bring these facilities up to date.

**TASK III:** Issue RFI’s to determine costs for engineering and retrofitting the facilities.

65. Bay District Schools Pre-Connects and Generators at All Schools

**ACTION:** The proposed project will acquire mobile generators and generator pre-connects for the district schools. The generators will be stored at an accessible location for deployment when needed. The School District prefers mobile generators as it allows flexibility in deploying assets as well as servicing and maintaining the generators in a central location.

The proposed project will provide back-up power to ensure continuity of electrical power during and after storm events for shelter operation, as well as allowing for students to return to school.

**TASK I:** Meet with school district staff to detail power requirements and options for self-generation and storage within their facilities.

**TASK II:** Review options for backup power systems to increase resiliency.

66. Bay District Schools Drainage Improvements and Flood Reduction

**ACTION:** This project will construct new and upgraded drainage systems at many of the Bay District Schools. This project will consist of new systems to convey runoff from low-lying areas as well as upgrading existing infrastructure to increase capacity.

This project will reduce flooding in Bay District Schools, making a safer and cleaner environment for the students of Bay County.

**TASK I:** Meet with local schools, municipal and county wastewater departments and detail challenges in stormwater infrastructure, most impacted sites and work necessary to respond.
67. Pet and People Shelter

**ACTION:** The proposed project will construct a dual-purpose shelter to be used as a classroom and open space learning environment during the school year and will serve as a shelter open to people and pets during a disaster event. This will keep traditional shelter spaces available for those without pets and will allow school buildings to return to normal operations more quickly.

**TASK I:** Meet with school district and county officials to evaluate needs, expectations, and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

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68. Expand and Improve Emergency Shelters Operations

**ACTION:** Develop additional sheltering facilities besides Bay District Schools and staff emergency shelters with trained personnel from outside the local area. Additional non-school shelters supervised by trained outside manpower will better ensure that Bay County sheltering capacity and capability meets community needs.

At present, Bay County has no options except to use schools for emergency sheltering. Planning and developing alternative non-school sheltering facilities will strengthen the County’s readiness for future storms and other disaster events. In the past and in Hurricane Michael, Bay District Schools that were used as emergency shelters were too heavily reliant on the school principal and staff for supervision of the shelters for the duration of the sheltering period. Trained outside manpower resources should be used to supervise our emergency shelters, not local BDS manpower. BDS staff are not trained for operating shelters. Based on our Hurricane Michael experience, tasking school staff to supervise emergency shelters will not work in future storms.

**TASK I:** Conduct a study of shelter facilities that were used in Hurricane Michael, the facility shortfall and services shortfall.

**TASK II:** Work with school district, county, and State Emergency Management (ESF-6) staff to discuss the County’s sheltering procedures, determine the viability of using non-school facilities for sheltering operations, identify available and optimal locations for additional shelters and determine the most cost-effective methods to provide secure shelter to the community.
69. Panama City Hardened Operations Center and Emergency Services Headquarters

**ACTION:** The City will construct a multipurpose building to house the emergency operations activities of the city during an event and emergency services during normal operations.

This project will protect emergency services in the event of a disaster, allowing for enhanced coordination between units as well as to other emergency entities. Combining the emergency services of Panama City into one building allows for better coordination, pre-disaster and under normal operating conditions.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

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70. Millville Wastewater Treatment Plant Relocation

**ACTION:** This project will relocate the existing Millville WWTP to a new site in North Panama City. The new facility will treat wastewater from North Panama City and existing flow to Millville WWTP will be rerouted to the St. Andrews WWTP.

The Millville WWTP is currently at risk due to still water and storm surge flooding. If impacted, there would be a severe and extended loss of function of sanitary sewer services to residents of about half the city.

**TASK I:** Meet with municipal wastewater staff and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.
71. Extension of Sanitary Sewer to Underserved Areas

**ACTION:** This project will construct sanitary sewer collection lines to areas in Panama City and adjacent to Panama City that are not currently served by sanitary sewer lines. The project will also implement house-to-sewer connections in areas with existing lines.

This project will improve water quality due to septic tank leaching into public waters as well as improve sanitary sewer functionality for impacted residents.

**TASK I:** Meet with municipal wastewater staff and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Propose legislation and incentive programs to encourage the transition from private septic systems to public utilities.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

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72. Underground Utility Replacement and Upgrades

**ACTION:** Replacement of old and out of date utility infrastructure with modern materials using improved standards. Utilities included in this project include sanitary sewer, potable water, electrical and communications.

**TASK I:** Meet with municipal staff and detail challenges in infrastructure and most impacted sites and equipment necessary to harden this infrastructure in case of future events.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on infrastructure to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.
73. Lift Station Hardening and Resiliency

**ACTION:** This project will install, as needed, the infrastructure to quickly access and implement bypass pumping if the lift station were to lose power or function in another manner.

The community will benefit by the continued, uninterrupted function of the city's sanitary sewer system. Loss of function of the sanitary sewer system can cause a multitude of environmental and health problems.

**TASK I:** Meet with municipal staff and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

74. Removal of Active Sewer Lines along the Bay Shore

**ACTION:** There is a stretch of sewer line with manholes that runs along the Bay Shore West of Michigan and south of 16th Street. Sewage should be rerouted away from the bay’s edge. Untreated sewage has discharged from the manhole on numerous occasions, including over several days after Hurricane Michael.

This project would result in a cleaner bay, with less chance of costly environmental violations by the city.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
75. Hospital Facility Resiliency Project

**ACTION:** This project includes the construction of potable water ground storage tanks, pumping systems and backup power to continue flow of potable water to both Panama City hospitals in the event of loss of water from current infrastructure.

This project will allow the hospitals to remain functional with potable water while the county water distribution system is repaired and brought back to full function.

**TASK I:** Meet with municipal and county water departments and detail challenges in water infrastructure and most impacted sites and equipment necessary to harden this infrastructure in case of future events.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on water treatment pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

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**Primary Sponsor:** City of Panama City  
**Estimated Cost:** $5,000,000.00  
**Source of Funding:** FEMA HMGP, HUD CDBG-DR  
**Initiative:** Health Care Facilities and Service Improvements

76. Panama City - Fire Station #1 Wind Retrofit (+Generator)

**ACTION:** Fire Station # 1 is a three-story critical facility constructed in 1990. The proposed project will serve to reduce future deaths and damage from high winds by upgrading the existing facility and retrofitting the structure to protect the integrity of the building envelope including apparatus bay doors. A generator will also be installed to power the roll-up shutters and ensure continuous power throughout the stations.

The project will protect the integrity of the building envelope, provide safety and security to critical facility employees/station equipment, respond expeditiously to community needs and save lives during and after a storm event.

**TASK I:** Meet with municipal staff to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

**TASK V:** Issue RFPs to determine vendors and exact costs for the retrofits.

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**Primary Sponsor:** City of Panama City  
**Estimated Cost:** $300,000.00  
**Source of Funding:** FEMA PA and HMGP  
**Initiative:** Public Facility Construction and Hardening
77. Panama City - Fire Station #2 Wind Retrofit (+Generator)

**ACTION:** Fire Station #2 is a one-story critical facility constructed in 1996. The proposed project will serve to reduce future deaths and damage from high winds by upgrading the existing facility and retrofitting the structure to protect the integrity of the building envelope by installing four hurricane resistant apparatus bay doors. A generator will also be installed to power the roll-up shutters and ensure continuous power throughout the stations.

The project will protect the integrity of the building envelope, provide safety and security to critical facility employees/station equipment, respond expeditiously to community needs and save lives during and after a storm event.

**TASK I:** Meet with municipal staff to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

**TASK V:** Issue RFPs to determine vendors and exact costs for the retrofits.

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78. Panama City - Fire Station #3 Wind Retrofit (+Generator)

**ACTION:** Fire Station #3 is a one-story critical facility constructed in 1976. The proposed project will serve to upgrade the existing site to reduce future deaths and damage from high winds by upgrading the existing facility and retrofitting the structure to protect the integrity of the building envelope. The project will consist of a roof retrofit, installation of building opening protections and hurricane resistant apparatus bay doors. A generator will also be installed to power the roll-up shutters and ensure continuous power throughout the stations.

The project will protect the integrity of the building envelope, provide safety and security to critical facility employees/station equipment, respond expeditiously to community needs and save lives during and after a storm event.

**TASK I:** Meet with municipal staff to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

**TASK V:** Issue RFPs to determine vendors and exact costs for the retrofits.
79. Panama City - Fire Station #4 Wind Retrofit (+Generator)

**ACTION:** Fire Station #4 is a one-story critical facility constructed in 1977. The proposed project will serve to reduce future deaths and damage from high winds by upgrading the existing facility and retrofitting the structure to protect the integrity of the building envelope. The project will entail installing impact-resistant glass and hurricane-resistant apparatus bay doors. A generator will also be installed to power the roll-up shutters and ensure continuous power throughout the stations.

**TASK I:** Meet with municipal staff to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

**TASK V:** Issue RFPs to determine vendors and exact costs for the retrofits.

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80. Panama City - Fire Station #5 Wind Retrofit (+Generator)

**ACTION:** Fire Station #5 is a one-story critical facility constructed in 1986. The proposed project will serve to reduce future deaths and damage from high winds by upgrading the existing facility and retrofitting the structure to protect the integrity of the building envelope. This project will entail a roof retrofit, installation of impact-resistant glass, shutters, and hurricane-resistant bay doors. A generator will also be installed to power the roll-up shutters and ensure continuous power throughout the stations.

The project will protect the integrity of the building envelope, provide safety and security to critical facility employees/station equipment, respond expeditiously to community needs and save lives during and after a storm event.

**TASK I:** Meet with municipal staff to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

**TASK V:** Issue RFPs to determine vendors and exact costs for the retrofits.
81. Millville Wastewater Treatment Plant Generator

**ACTION:** The City of Panama City's Millville Wastewater Treatment Plant is a multi-structure facility initially constructed in 1951. The existing generator at the site was purchased and installed in 2000 and has been determined to be undersized and unable to power the complete facility as currently constructed. The proposed project will upgrade and relocate the generator to a more protected area.

The installation will implement permanent back-up power systems to ensure continuity of electrical power during and after future disasters at the plant and offer a safe, healthy environment for a vulnerable community.

**TASK I:** Meet with municipal staff to determine the extent of the project and what costs and engineering have been completed to date.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

**TASK V:** Issue RFPs to determine vendors and exact costs for the retrofits.

82. Public Works Safe Room

**ACTION:** The Public Works shop building is a one-story masonry building constructed in 1980. The proposed project will be phased. Panama City will re-design the breakroom to construct an internal safe room in accordance with the FEMA P-361 and ICC 500 standards. The room will be structurally independent of the remaining of the building but provide the same wind and wind-borne debris protection as a stand-alone safe room. The room will provide 24 hour protection to approximately 40 essential public works employees during a high wind event, so they may respond quickly to community needs to clear the roadways for emergency vehicles, perform debris removal, etc., immediately after a storm event.

**TASK I:** Conduct a study to determine the hardening requirements and damage that was inflicted by the storm. Evaluate the costs and benefits of developing performing the required improvements.

**TASK II:** Meet with municipal officials to determine whether improving the existing building is the best option or if there are other facilities nearby that could serve as an emergency operations center.

**TASK III:** Meet with officials investigating the implementation of county wide Emergency Operations Centers to determine whether facilities could be included for these critical Utility employees.

**TASK IV:** Issue RFI’s to determine costs for engineering and retrofitting the facilities.
## 83. Utilities Safe Room

**ACTION:** The City of Panama City's Utility building is a one-story steel building constructed in the 80’s. The structure is a stand-alone facility that has not been designed, constructed or retrofitted to withstand extreme winds and the impact of wind-borne debris during hurricanes or other extreme-wind events. Panama City will design the internal safe room in accordance with the FEMA P-361 and ICC 500 standards. The safe room will provide 24 hour protection to approximately 20 essential utility personnel, to quickly begin the process of repairing vital infrastructure immediately after a storm event.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

## 84. Relocate Fuel Dock at Beach Drive and 6th Street

**ACTION:** Relocate the Fuel Depot at Beach Drive and 6th Street to the industrial park at Sherman Ave or the Port. The current location is not consistent with planned redevelopment. Fuel trucks are not suited for operation on streets downtown and better served in an industrial site where that infrastructure is already in place. The depot was damaged in Hurricane Michael and is very old. Move the holding tanks and upgrade the facility to new state standards.

Makes waterfront land available for the new development plan. Moves fuel truck traffic from the downtown/neighborhood area to an industrial site. Upgrade the bay front facility to state standards.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

## 85. Bike Path/Boardwalk between Downtown and St. Andrews

**ACTION:** Better bike paths. The beachside of Beach Drive could now become home to a boardwalk that provides a pathway between downtown and St. Andrews.

**TASK I:** Meet with municipal and county officials in charge of public transportation and evaluate the status of traffic congestion and alternative methods of transport such as bicycle paths.

**TASK II:** Evaluate potential areas where solar powered LED lighting may improve safety while using bike paths to encourage more use.

**TASK III:** Research funding sources and apply for assistance grants to develop these new services.

**TASK IV:** Investigate the use of new sensing technologies to monitor and predict bike path use and traffic statistics to better analyze and predict usage patterns.
86. Panama City Comprehensive Stormwater Management Program

**ACTION:** This project will define and implement a series of stormwater management and drainage improvement projects to reduce flooding and improve water quality throughout the city.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

**Primary Sponsor:** City of Panama City  
**Estimated Cost:** $50,000,000.00  
**Source of Funding:** FEMA PA and HMGP  
**Initiative:** Stormwater

87. Flooding Reduction through Drainage Improvements

**ACTION:** This project will install new or upgraded drainage systems at four separate complexes owned by the Panama City Housing Authority. These individual projects will reduce flooding causing damage to homes and property and inhibiting access to homes.

**TASK I:** Coordinate with municipal and county officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

**Primary Sponsor:** Panama City Housing Authority  
**Estimated Cost:** $1,500,000.00  
**Source of Funding:** HUD CDBG and CDBG-DR, USDA NRCS  
**Initiative:** Stormwater
88. Building Hardening

**ACTION:** Panama City Housing Authority sustained damages due to Hurricane Michael. Tenants were displaced, buildings were damaged and others were demolished. The proposed project is to protect the integrity of the building envelope to avoid failure and reduce damages. Impact-resistant glass, window shutters, hurricane resistant doors and high wind rated roofs.

This project will protect many residences from potential disaster damage. The intent is to reduce the number of residents displaced as seen after Hurricane Michael.

**TASK I:** Meet with municipal officials and detail challenges in building infrastructure and most impacted sites and equipment necessary to harden this infrastructure in case of future events. Also discuss the capacity of the existing housing facilities looking to future demands as the community recovers from the storm.

**TASK II:** Review hardening technologies as well as options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Investigate green eco-friendly upgrades to the facilities to reduce operating costs and improve the community’s carbon footprint.

**TASK IV:** Review impact of remote sensing to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK V:** Research funding sources and apply for assistance grants to harden these facilities.

**Primary Sponsor:** Panama City Housing Authority  
**Estimated Cost:** $9,000,000.00  
**Source of Funding:** FEMA, HUD CDBG-DR  
**Initiative:** Public Facility Construction and Hardening

89. City-Wide Paving Improvements

**ACTION:** Rehabilitate and resurface approximately 75 miles of local and collector city roads.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

90. Stormwater System Improvements

**ACTION:** Improve, replace, clean and rehabilitate city-wide stormwater improvements. The City’s stormwater system has sustained severe damage which includes inlet failure, pipe failure, pond failure and road failure.

**TASK I:** Meet with municipal officials to evaluate needs, expectations, and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

**Primary Sponsor:** City of Lynn Haven  
**Estimated Cost:** $15,100,000.00  
**Source of Funding:** EPA, FDE, USACE, WMDs  
**Initiative:** Stormwater
91. Underground Utilities

**ACTION:** In addition to aesthetic improvements, placing utilities underground can improve security and reduce the likelihood of damage in future storms.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

92. City-Wide Wastewater System Collection Improvements

**ACTION:** Rehabilitate approximately 120,000 FT of 1960 gravity sewer pipes to reduce inflow and infiltration and prevent future failures. Also include new lift station and force main upgrades.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

93. Wastewater Treatment Plant Expansion/Improvements

**ACTION:** Expand the Wastewater Treatment Plant from 2.5MGD to 4MGD.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
94. Reuse System Improvements

**ACTION:** Expand the existing Reuse Pump Station and construct a new Reuse Booster Pump Station. Also includes new reuse distribution mains.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

95. Water Distribution System Improvements

**ACTION:** Replace old asbestos and cast-iron water mains to improve water quality and fire flow.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

**Primary Sponsor:** City of Lynn Haven

**Estimated Cost:** $10,000,000.00

**Source of Funding:** EPA, FDEP, HUD, DEO

**Initiative:** Water and Wastewater

96. Hurricane Shelter/Hardened Operations Center

**Action:** Construct a hardened facility that can be used to safely house staff during major events.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

**Primary Sponsor:** City of Lynn Haven

**Estimated Cost:** $6,000,000.00

**Source of Funding:** EPA, FDEP, HUD, DEO

**Initiative:** Water and Wastewater

**Primary Sponsor:** City of Lynn Haven

**Estimated Cost:** $3,000,000.00

**Source of Funding:** HUD, DEO, HHS, DOH, DCF, DOI, FDEP, FWCC, DOACS

**Initiative:** Public Safety and Mission Support
97. Hurricane Hardened Gym Facility

**ACTION:** Replace the existing gymnasium at the sports complex with a 60,000 sq. ft. hardened facility to be used primarily for an indoor basketball and football/soccer facility.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

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98. Sports Complex/Kinsaul Park and Cain Griffin Park Improvements Expansion

**ACTION:** Rebuild new fields and add additional fields.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

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99. Lynn Haven City Hall Government Complex

**ACTION:** Build a new 40,000 sq. ft. government complex to house administration, police, builder services, planning and commission chambers. Includes additional parking and adjacent land acquisition.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
100. City-Wide Ditch and Creek Clearing and Maintenance

**ACTION:** Most ditches and creeks need clearing for pre- and post- hurricane issues to include access for recurring maintenance. Clear drainage will eliminate potential flooding for future events.

**TASK I:** Coordinate with municipal officials on existing plans for cleanup of local ditches, streams and watershed to ensure that blockages can be cleared before the upcoming storm season.

**TASK II:** Investigate funding sources to assist with the costs of deploying additional resources to clear drainage paths.

101. Bay Parkway Phase 2

**ACTION:** A two-lane rural roadway connecting Bay Parkway Segment 1 terminus at North Pier Park Drive to the terminus at Nautilus Street. Stormwater facilities with the associated structures and piping, underground utilities, lighting, multi-use trail and bike lane.

This project is anticipated to divert approx. 4,800 weekday trips and 6,100 weekend trips from the already over capacity PCB Parkway in this section as well as improve the level of service for the intersection of SR 79 and PCB Parkway from D to C in the AM peak period. Reduction of 25% in turning movements onto PCB Parkway and SR 79.

**TASK I:** Meet with municipal officials in charge of public transportation and evaluate the current status of the project. Discuss with subject-matter-experts the possibility of expediting the process.

**TASK II:** Determine the status of the Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Determine the status of the design process: During design, detailed construction plans are prepared.

**TASK IV:** Determine the status of Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.
102. Full Build-Out of Bay Parkway Phase 1 and 2 (Addition of 2 More Travel Lanes)

**ACTION:** This project includes full build-out of the existing Bay Parkway Phase 1 and 2. Phase 2 will be under construction by fall 2019. Construction consists of two more driving lanes and curbing. This project will provide relief for the already over-capacity Back Beach Road. It will also serve as a bypass in disaster situations for emergency personnel and first responders.

**TASK I:** Meet with municipal officials in charge of public transportation and evaluate the current status of the project.

**TASK II:** Project Development and Environment Study (PD&E). During this step, design options and their social and environmental effects are examined.

**TASK III:** Design process: During design, detailed construction plans are prepared.

**TASK IV:** Right-of-Way Acquisition: This phase entails acquisition of necessary right-of-way, based on the construction plans.

**TASK V:** Contract letting and awards.

**TASK VI:** Construction of the roadway.

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103. Alf Coleman Drainage Improvements

**ACTION:** Raising the roadway existing elevation approximately 3’ and providing a stormwater collection system for this basin to include a stormwater facility with associated structures and piping.

During significant rainfall events, this roadway becomes submerged and must be shut down to local traffic only due to flooding. This roadway provides connection for two subdivisions and two apartment complexes. Pedestrian traffic is compromised in some locations along this roadway.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
104. Front Beach Road Stormwater Improvements and Storm Hardening

**ACTION:** Provide stormwater treatment and attenuation in all road rights of way located in the CRA District. Storm hardening measures with undergrounding all overhead utilities in the area.

This project will reduce pollution to the Gulf of Mexico, minimize flooding to the transportation grid and adjacent property and protect power and communication during severe weather events from falling trees, extreme winds and airborne objects.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

105. Front Beach Road Stormwater Improvements and Storm Hardening-Segment 4.1

**ACTION:** This project is a subset of the “Front Beach Road Stormwater Improvements and Storm Hardening” project above. Provide stormwater treatment and attenuation in all road rights of way located in the Segment 4.1 CRA District. Storm hardening measures with undergrounding all overhead utilities in the Segment 4.1 CRA District.

This project will reduce pollution to the Gulf of Mexico, minimize flooding to the transportation grid and adjacent property and protect power and communication during severe weather events from falling trees, extreme winds and airborne objects.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
106. CRA Stormwater Improvements and Storm Hardening-Segment 4.1 and Segment 4.2

**ACTION:** This project is also a subset of the “Front Beach Road Stormwater Improvements and Storm Hardening” project. Provide stormwater treatment and attenuation in road rights of way located in the Segment 4.1 and Segment 4.2 CRA District. Storm hardening measures with undergrounding all overhead utilities in Segment 4.1 and Segment 4.2 CRA District.

This project will reduce pollution to the Gulf of Mexico, minimize flooding to the transportation grid and adjacent property and protect power and communication during severe weather events from falling trees, extreme winds and airborne objects.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

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107. City of Panama City Beach and Bay County Continuous Outfall Sediment Reduction Projects

**ACTION:** This project engulfs an approximately 570 acre basin and includes 15 continuous outfalls in the Bay County and City of Panama City Beach that stretch along nine miles of beach front to the Gulf of Mexico. The locations are between Riviera Drive and R. Jackson Blvd.

This project will provide an overall plan to improve water quality at each of the continuous outfalls as well as construct the water quality improvements. It will also include the survey, design and studies for the offshore outfall that will combine outfalls and permit and construct one offshore outfall approximately 1,300 feet into the Gulf.

**TASK I:** Coordinate with municipal and county officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
**108. N. Glades and Hombre Drainage Improvements**

**ACTION:** This project includes but is not limited to the construction of 5,764 LF channel improvements including the construction of a single lane timber bridge crossing, sodding, seed and mulch, riprap, erosion control and earthwork.

This project could help alleviate some of the flooding for 100-year rainfall events within the Glades basin. This improvement, along with a few others, should be able to drop flooding levels approximately 0.6' in those areas where the most damage occurred to residences.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

**109. Grand Lagoon Sewer System**

**ACTION:** Project builds upon the previously completed first phase of a program to provide a centralized wastewater system to eliminate septic tanks in the environmentally sensitive Grand Lagoon estuary. Seven independent phases are contemplated. This program will provide for protection and long-term improvement of the Grand Lagoon estuary water quality. Improved water quality enhances the attraction and beneficial use/enjoyment of the lagoon area by county residents and visitors. A centralized sewer system eliminates marginally treated septic system discharges.

Bay County recognizes the critical role and economic benefits of preserving and improving the water quality in the Grand Lagoon area. Previous water quality improvement initiatives include the Bay County Thomas Drive bridge replacement project for better tidal flushing and the City's completion of the first phase of providing a centralized sewer system for the developed land south of Grand Lagoon. Although Phase 1 of the sewer system provided progress towards providing sewer service to this environmentally sensitive area, there is still a large area remaining. Through this sewer program, bacteria and nutrient loadings to the Grand Lagoon area from septic systems would be eliminated. A centralized sewer system would eliminate discharges from failing or poorly maintained septic systems and increase area property values. Improved water quality of Grand Lagoon would increase tourism and economic benefits.

**TASK I:** Meet with municipal and county septic and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal and ways to encourage residents to move to public sewer infrastructure.

**TASK II:** Propose legislation and incentive programs to encourage the transition from private septic systems to public utilities.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.
110. Grand Lagoon Stormwater Management/Sewer Expansion

**ACTION:** Expand and improve the existing sewer system in the Grand Lagoon to protect our economy and ecology. Updated sewer system would improve stormwater/wastewater management, lessen dependence on septic systems and improve health of the Bay, a critical initiative in creating a sustainable future for the Grand Lagoon and St. Andrews Bay.

The health of the St. Andrews Bay is paramount to the vitality of the Grand Lagoon area and the quality of life for its residents and visitors. The increasing level of nutrients found in the Grand Lagoon and surrounding bay waters is alarming now and getting worse. A comprehensive and affordable sewer plan would help curb the leaching of nutrients into the lagoon and remove a hindrance to Thomas Drive business development as it is currently cost-prohibitive for businesses to connect to the sewer line.

**TASK I:** Coordinate with municipal and county officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater and water systems in general.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.

111. Laguna Beach Sewer System

**Primary Sponsor:** City of Panama City Beach

**Estimated Cost:** $9,320,000.00

**Source of Funding:** HUD CDBG and CDBG-DR, USDA NRCS, City of Panama City Beach

**Initiative:** Water and Wastewater

**ACTION:** Over 1,250 residential homes and vacant lots in the Laguna Beach community near the Gulf would be served by a new gravity sewer system in unincorporated Bay County, eliminating the necessity of septic tanks from the area.

Residents will be provided a means to eliminate the use of septic tanks, reducing the environmental impacts on three inland dune lakes and the Gulf of Mexico. Roads within the project area will be repaved as a part of the project. Larger homes would be possible since the small lots would not be limited by septic drain field area requirements.

**TASK I:** Meet with municipal officials and detail challenges in water infrastructure, waste and stormwater removal and ways to encourage residents to move to public sewer infrastructure.

**TASK II:** Propose legislation and incentive programs to encourage the transition from private septic systems to public utilities.

**TASK III:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.
112. Hardened Sports Center at Frank Brown Park

**ACTION:** Phase I of this project is to construct an 18,000 sq. ft. hardened sports/community center at Frank Brown Park. The facility will be used to shelter park event attendees during storm events, lightning and tornadoes. It will further serve as an after hurricane temporary shelter for residents and emergency aid providers. Phase II is the demolition of the existing 14,000 sq. ft. community center and the construction of a 14,000 sq. ft. hardened gymnasium center that will provide tornado shelter for a one mile radius including Pier Park. It will also increase the available space for after-hurricane temporary shelter for residents and emergency aid providers.

**TASK I:** Conduct a study of shelter facilities that were used during Hurricane Michael, the facility shortfall and services shortfall.

**TASK II:** Work with community planners, first responders and health officials to determine optimal locations for additional shelters, alternative non-emergency facilities use and most cost-effective methods to provide secure shelter to the community.

**TASK III:** Research funding sources and apply for assistance grants to develop these new shelter facilities.

**TASK IV:** Issue RFI’s to determine interest and capabilities from local contractors to build the new facilities.

113. 10 Acre Debris Management Site

**ACTION:** This project includes land purchase of a 10 acre parcel for debris management during disaster related activities. Potential future festival site and potential mulched walking trails around the boundary of the property.

This project will provide staging area for disaster related activities such as hurricanes, tornadoes, severe flooding, etc.

**TASK I:** Meet with municipal officials to evaluate needs, expectations, and the current status of the project.

**TASK II:** Investigate funding sources to assist with the acquisition and necessary sitework.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
114. Panama City Beach East Police Substation

**ACTION:** This project will construct a new police substation in the eastern section of Panama City Beach. This building will be used as an administrative office for deployed officers during normal operations and as a safe room to protect officers and allow for quick deployment post event.

This project will allow for a more efficient response of emergency personnel in Panama City Beach during normal operations and will protect police personnel during an event.

**TASK I:** Meet with municipal officials to evaluate needs, expectations, and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

115. Panama City Beach Fire Station #31 Reconstruction

**ACTION:** This project will reconstruct Fire Station #31 and administrative offices. The building will be reconstructed above current building codes to provide increased protection to emergency service personnel and equipment.

This project will allow emergency personnel to remain protected during a disaster. This will allow emergency services to return to action immediately after an event.

**TASK I:** Meet with municipal officials to evaluate needs, expectations, and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

116. Panama City Beach Fire Station #32 Hardening

**ACTION:** A new Fire Station #32 will be constructed as the current station is undersized and insufficient for current needs. The new station will protect emergency personnel in a disaster as well as the emergency equipment.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
117. Fix Thomas Drive

**ACTION:** Bury utilities, add separate bike/pedestrian path (30A style) and install adequate lighting on the full length of Thomas Drive (Hwy. 98 to Joan Ave). Use funds currently earmarked for Thomas Drive culvert project to leverage grant/recovery funding and coordinate with Sewer Expansion project for efficiency and to leverage additional funding.

As the primary road of one of the most important tourism corridors in Bay County, this project is vital to the long-range goal of revitalizing the east end of the island and creating an inviting corridor for locals and visitors to explore the Grand Lagoon.

**TASK I:** Meet with municipal officials in charge of public transportation and evaluate the status of traffic congestion and emergency evacuation routes. Also look to implementing smart traffic signals to improve traffic flow, as well as exploring the placement of utilities underground, and potentially modifying the current culvert project.

**TASK II:** Evaluate potential areas where solar LED lighting systems would improve safety and increase usage thus driving more economic benefits to the area.

**TASK III:** Research funding sources and apply for assistance grants to develop these new services. Eco-green solar lighting grants may be available, helping to reduce the region's carbon footprint.

**TASK IV:** Investigate the use of new sensing technologies to monitor and predict roadway use and traffic statistics to better analyze and predict usage patterns.

118. Martin Lake Drainage Basin Restoration and Improvements

**ACTION:** The objective of the project is to restore the stormwater system in the City of Springfield, the predominance of which flows into Lake Martin. Tasks include removal of debris from all stormwater features (inlets, pipes, retention ponds, open ditches, etc.), restoration and improvements to grades, side slopes and embankments and restorative maintenance of all stormwater features.

The improvements will greatly lessen the threat of flooding caused by impeded waterways and stormwater systems and reduce pollutants by restoring stormwater retention features.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure and facilities to support better management and processing of stormwater systems in general.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
119. Stormwater Management

**ACTION:** The City of Springfield would like to have a stormwater study conducted in order to determine the current status and best course of action regarding ditches, holding ponds and related infrastructure. With massive loss of trees throughout the city, there is major concern about the stormwater system impact to wetlands and the potential flooding of homes.

**TASK I:** Coordinate with municipal officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with having a stormwater study conducted to determine the best course of action.

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120. Sanitary Sewer and Potable Water Systems Rehabilitation

**ACTION:** Project consists of the City of Springfield's replacement of the city's problematic components of its sewer collection and water distribution systems which experience frequent failures, incur high maintenance costs, many of which are over fifty years old and some of which were damaged by uprooted trees as a result of Hurricane Michael.

The community will save from reduced fees for sewer treatment at the AWT due to a reduction in and reduced costs for raw water by reducing water losses from line breaks. There will also be a reduction of health hazards by having fewer line breaks, fewer boil water notices will be issued, fewer traffic disruptions due to repairs and there will be reduced maintenance costs. Utility crews will be able to spend more time on preventive maintenance.

**TASK I:** Meet with municipal and county water and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Identify possible funding opportunities.

**TASK III:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK IV:** Review impact of remote sensing on water and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK V:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.
121. Springfield City Hall Complex

**ACTION:** The project scope includes the new construction of the following to replace those destroyed by Hurricane Michael: City Hall, Police Station, Fire Station, Warehouse 1, Warehouse 2, Shop Building and related facilities/furnishings for those buildings.

The project will restore to full functionality, the governmental operations for the City of Springfield.

**TASK I:** Conduct a study of municipal and emergency facilities that were destroyed by Hurricane Michael. Also consider what new facilities and services that the existing facility fell short in supporting the community.

**TASK II:** Work with the community on determining whether facilities will be rebuilt at their pre-disaster locations or if there will be opportunities to move, consolidate or otherwise alter the footprints.

**TASK III:** Research funding sources and apply for assistance grants to develop these new municipal and emergency facilities.

**TASK IV:** Issue RFI’s to determine interest and capabilities from local contractors to build the new facilities.

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122. Regional Stormwater Detention

**ACTION:** This project would provide regional stormwater detention for the City of Parker's areas that are most flood-prone due to a lack of centralized stormwater system. This project would also include land acquisition for implementation.

This project will also reduce localized flooding within the city and provide the potential for recreational greenspace.

**TASK I:** Coordinate with municipal and county officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
### 123. Sewer Emergency Response

**ACTION:** This project would include the purchase of bypass pumps for the City of Parker's lift stations for use in emergency conditions when power is lost to the City's sewer pump stations.

After Hurricane Michael, the City's lift stations and sewer system were non-functional due to loss of power. Most of the City's lift stations do not have backup generator. This project would allow the City to operate bypass pumps as needed in order to keep the sewer system operational in future storms.

**TASK I:** Meet with municipal staff and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond.

**TASK II:** Review options for backup power systems to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

### 124. Cheri Lane Townhomes Drainage

**ACTION:** There have been stormwater issues in the vicinity of the Cheri Lane townhomes. This project would include land acquisition and development of stormwater conveyance.

**TASK I:** Coordinate with municipal and county officials on existing plans for regional stormwater management.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure to support better management and processing of stormwater.

**TASK III:** Investigate the use of new sensing technologies to monitor and predict streams and watershed status. Pilot projects that may provide greater insight and predictive analytics in future storms.
125. Multipurpose Community Building, Hardened Operations Center, and Public Shelter

**ACTION:** This project would include a new multipurpose building or complex for the City of Parker consisting of a community building, hardened operations center, and public shelter.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

126. Sports Complex

**ACTION:** This project would include planning, design and construction of the City of Parker’s Sports Complex and stimulate economic activity within the City.

This project would increase activity and stimulate local economy while also providing recreational opportunities for residents.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.

Primary Sponsor: City of Parker

Estimated Cost: $3,000,000.00

Source of Funding: HUD, DEO

Initiative: Public Facility Construction and Hardening

Primary Sponsor: City of Parker

Estimated Cost: $4,500,000.00

Source of Funding: HUD, DEO

Initiative: Public Safety and Mission Support
127. Beach Outfall

**ACTION:** This project would include design, permitting and construction to replace the 8th Street canal outfall with a piped system to take stormwater collected inland and discharge it offshore.

This project would improve water quality and aesthetics on the beach. Because Mexico Beach has a tourist-based economy that centers around the city's beaches, enhancing the water quality and aesthetic (color). This also has the potential to reduce erosion at the current outfall.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the facilities.

128. Regional Stormwater Detention

**ACTION:** This project proposes a regional stormwater detention facility that would drain to restored wetland area and create new greenspace within the City of Mexico Beach. In addition, this project would be located within the 100-year floodplain. By dedicating this area for conservation, installing detention ponds and restoring the natural wetland area, the City would not only address flooding issues but also improve water quality within the water ways and beach and would conserve an open greenspace in an area within the city that is prone to flooding.

Regional stormwater detention and wetland restoration within the 100-year floodplain provides an opportunity for the City to reduce localized flooding, address resiliency, conserve greenspace, improve the City's water quality along the beach and provides a recreational space for walking paths.

**TASK I:** Meet with municipal officials to evaluate needs, expectations and the current status of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the facilities.
129. Mexico Beach Government Complex

ACTION: This project would include a new government complex for the city consisting of fire station, police department, civic center that would also serve as an emergency shelter.

Prior to the storm, the City did not have a shelter suitable for citizens to seek emergency shelter during storms. The City's police and fire department buildings were completely destroyed by the storm. This project would address multiple needs for the community.

TASK I: Meet with municipal officials to evaluate needs, expectations and the current status of the project.

TASK II: Investigate funding sources to assist with the construction of infrastructure.

TASK III: Preliminary engineering and planning development.

TASK IV: Contract letting and awards.

TASK V: Construction of the facilities.

Primary Sponsor: City of Mexico Beach
Estimated Cost: $3,000,000.00
Source of Funding: HUD, DEO, HHS, DOF, DCF, DOACS, DEP
Initiative: Public Facility Construction and Hardening

130. Hwy 98 Beach Parking Improvements

ACTION: This project would include installing defined angle parking for beach access along the City of Mexico Beach's dedicated beach. The project would include permitting, design and construction and would require coordination with FDOT for implementation.

This project would increase safety for visitors and residents to access the beach by adding an entry/exit aisle and additional space for angled parking. Currently, parking for access to the beach requires entering/exiting vehicles immediately adjacent to the travel lane. In addition, the spaces are not defined which causes congestion.

TASK I: Meet with municipal officials to evaluate needs, expectations and the current status of the project.

TASK II: Investigate funding sources to assist with the construction of infrastructure.

TASK III: Preliminary engineering and planning development.

TASK IV: Contract letting and awards.

TASK V: Construction of the facilities.

Primary Sponsor: City of Mexico Beach
Estimated Cost: $5,000,000.00
Source of Funding: HUD, DEO, USACE, FDEP, WMDs
Initiative: Transportation Improvements

131. Separate Transmission Line into the Base for Electrical Needs

ACTION: Securing a separate electrical transmission line into the base for its electric needs - currently it has service by two separate entities, but they come in on the same lines.

Primary Sponsor: Tyndall AFB
Estimated Cost: $10,000,000.00
Source of Funding: DOD, DOE
Initiative: Military Economics

TASK I: Meet with the local power utility company and Tyndall AFB to determine the existing infrastructure and damage assessment from the hurricane.

TASK II: Define available budgets and other outside sources of capital to enable the implementation of secondary backup power transmission lines to the base.

TASK III: Issue RFIs to determine potential vendors and approximate costs for implementation.
132. Sewer Line Expansion/Improvement through Tyndall That Leads to Mexico Beach

**ACTION:** The sewer line for Mexico Beach that runs through Tyndall needs to be expanded/improved. Growth in Mexico Beach prior to Michael caused there to be a serious strain on the system.

**TASK I:** Meet with Tyndall AFB and City sewer and wastewater departments and detail challenges in water infrastructure, waste and stormwater removal, most impacted sites and equipment necessary to respond during storms and increase capacity arising from future demand.

**TASK II:** Review options for backup infrastructure to increase resiliency, research alternative energy as potential sources for backup power.

**TASK III:** Review impact of remote sensing on septic and wastewater pumping stations to better monitor performance and identify sources of potential failure using predictive data analytics.

**TASK IV:** Prepare pilot projects that can evaluate new sensing technologies to improve reliability, improve system efficiencies and predict maintenance.

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133. Crosswind Runway at Northwest Florida Beaches International Airport (ECP)

**ACTION:** The crosswind runway is a planned 7,500 ft. runway located at ECP, which would allow additional access to the airport in differing weather conditions. The runway would facilitate airport development on the east side of the airport and would allow for continued aviation development in the region.

**TASK I:** Meet with airport officials to evaluate the current status, need, and expectations of the project.

**TASK II:** Investigate funding sources to assist with the construction of infrastructure.

**TASK III:** Preliminary engineering and planning development.

**TASK IV:** Contract letting and awards.

**TASK V:** Construction of the infrastructure.
134. Cleaning and Clearing Bus Stops

**ACTION:** The Bay Town Trolley is in the process of evaluating and documenting damaged sustained to shelters and benches at all bus stops and exploring how to better maintain the safety and cleanliness, considering all the hurricane debris and trash being dumped at the trolley stops.

1) Clearing and maintaining clean trolley stops to assist with the clean-up of neighborhoods and communities.

2) Safety. Evaluating/removing hazards from the stops and surrounding stops.

3) Function better to move people safely and more efficiently.

**TASK I:** Meet with public transportation officials to determine the current status of recovery operations. Determine the effects of the hurricane on previously established routes and where changes should be made to optimize services to the community.

**TASK II:** Evaluate potential areas where the communities could cooperate with local entrepreneurs to implement additional transportation options for the area.

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135. Re-Evaluating Bay Town Trolley Routes Post-Hurricane

**ACTION:** Upgrade the trolley system be upgraded to more of a bus line system. Citizen input indicates that the system needs more trolleys/buses, pickup/drop off spots and it needs a better schedule to be more effective for people.

**TASK I:** Meet with public transportation officials and determine the extent of public use. Determine the effects of the hurricane on previously established routes and where changes should be made to optimize services to the community.

**TASK II:** Evaluate potential areas where the communities could cooperate with local entrepreneurs to implement additional transportation options for the area.

**TASK III:** Evaluate the implementation of more eco-friendly public transit systems to reduce the community's carbon footprint.

**TASK IV:** Research funding sources and apply for assistance grants to develop these new services.
136. Trolley System

**ACTION:** The trolley system needs to be upgraded to more of a bus line system. More trolleys/buses pickup/drop off spots, and it needs a better schedule to be more effective for people.

**TASK I:** In consultation with county and municipal officials, citizens, and other affected parties to determine the extent of public use. Determine the effects of the hurricane on previously established routes and where changes should be made post the storm to optimize services to the community.

**TASK II:** Evaluate potential areas where the communities could cooperate with local entrepreneurs to implement additional transportation options for the area.

**TASK III:** Evaluate the implementation of more eco-friendly public transit systems to reduce the community’s carbon footprint.

**TASK IV:** Research funding sources and apply for assistance grants to develop these new services.

**Primary Sponsor:** Bay Town Trolley

**Estimated Cost:** TBD

**Source of Funding:** HUD, DEO

**Initiative:** Transportation Improvements
The Health and Social Services (HSS) Branch was created to guide and assist locally-led recovery efforts in the restoration and enhancement of public and mental health, physical health care and the social services networks that promote the protection, resilience and well-being of Bay County citizens. Simply put, HSS is the nuclear center to the community. It forms the holistic structure of daily life for individuals and families. Due to the extensive network of community organizations and programs that support Bay County’s citizens, individual representative subgroups were formed to gather information on the impact of Hurricane Michael.
The HSS Branch has focused on the diverse aspects of human welfare in Bay County. To support an in-depth look at how the hurricane impacted the social working structure within the County, the HSS branch subdivided into eight representative subgroups: Education, Workforce, Medical Care, Behavioral Health, Community and Children, Churches, Law Enforcement, High School Students and the Disabled. These subgroups, comprised of leaders from within their respective fields, worked with disaster specialists to hold numerous meetings, working sessions and public branch meetings, to capture the critical and long-term needs of the municipalities. The brief description below summarizes the challenges that existed before Hurricane Michael and the resulting impacts afterwards.

Prior to the storm, the general infrastructure of the HSS Branch was already in need of updating. Aging infrastructure and patchy communication networks, combined with a pre-storm shortage of health care specialties and childcare providers, revealed several pre-storm deficiencies across the County. Many facilities were built prior to updates in building codes that would reinforce security, fire and energy ratings. Programs that support mental health, transportation and specialty care were effective, but in need of funding for expansion to reach the varied population. It is important to note that a segment of Bay County’s population of 183,000 people, as reported in 2017, incorporates the demographic shift that resulted from the influx of some of the 400,000 permanently displaced residents from Hurricane Katrina in 2005.

Over the three months preceding the release of this plan, many HSS projects have been identified ranging from improvements and back-up of communication modes, to hardening of public facilities, mitigation of utilities, collaboration with technology, expansion of first responder training, substance abuse programs and mental health initiatives that support senior, adult, adolescent, youth and disabled citizens. Through cross-examination of this subgroup data, it is evident the fundamental social service components of the Branch are highly interconnected, all of which lead back to the need for hardened communication, “with redundancy,” housing and a focus on addressing mental health.

After Hurricane Michael, doctors, police and other first responders reported a complete breakdown of communication that exacerbated an already unanticipated disarray from the less than 72-hour shift in response from a tropical depression to a Category 5 hurricane. Challenges aggravated by the lack of cellular network coverage and a weakened communication infrastructure, frustrated standard response operations, transportation and evacuation of hospital patients. Communication to and from the emergency operations centers was unreliable as information disseminated through the County. Coupled with structural damage, educators were unable to connect with schools to identify employment status and their students to address their welfare. Over 90% of churches lost roofs and numerous police stations, senior facilities, childcare operations, parks, museums and behavioral management facilities were destroyed. The ensuing affect resulted in a mass exodus of medical professionals, senior citizens and families, forced to move out of the County to seek workspace and a place to live. The not so evident impact is the reduction of the County’s taxpayer base, driving economic hardship, school closures and reduced programming, resulting from the complex formulas that financially support county operations.

Many of the issues identified within the different subgroups are similar in nature, but with a unique vantage point that collectively create a comprehensive and interconnected picture for the recovery process. For this reason, individual narratives have been created to clearly identify and define these needs and offer suggestions to improve the welfare of the County.
Education

The education subgroup is divided into K-12 Bay County District Schools, Charter schools, and higher education through Florida State University Panama City (FSU-PC) and Gulf Coast State College (GCSC). Among the challenges faced post-storm, were loss of communications, significant damage to, or loss of building structures such as homes, dormitories, school buildings and business facilities, as well as, a loss of buses, computers, textbooks and learning resources. A focus on reconstituting normal operations and seeing to the mental welfare of the students has become paramount.

K-12 BAY COUNTY SCHOOLS
(DISTRICT AND CHARTER)

The impact of housing displacement has greatly affected student enrollment. Many families relocated after the storm. K-12 school building damages and reduction of student population has resulted in the consolidation of students and temporary deferring of schools during repair until the student population returns. A request for state funding as a carry-over was critical to the continued operation of the Bay County School District to deter the lay-off of teachers. Along with building damage came a loss of education related equipment used in K-12 schools (school buses, computers, etc.). Charter schools have had in excess of $60M in financial losses, with K-12 Bay District Schools measuring in with a deficit close to $400M.

Prior to the storm, an average of 800 students in the Bay District School System were identified as homeless. The number has now grown to nearly 5,000; this is a self-reporting number through BDS’s Parent Portal and therefore Bay District Schools anticipates that the total number of homeless youths is much greater. Teachers, notwithstanding their personal losses, were reaching out to their students by going to their homes when possible, to aid and ensure the well-being of families. An initiative to utilize large commercial kitchens in the schools to aid in immediate recovery has been identified as a response item and emergency response measure for future storms. Bay District Schools has stated that over 400 students remain unaccounted for, as no record requests for transfer to other schools have been received.

In addition to the physical devastation caused by Hurricane Michael, the adverse impact caused to the mental health of students and teachers is evident. As of May 2019, 122 Baker Acts have been identified between the ages of 10 and 16 years of age. Additionally, there have been 832 community care referrals post-storm in contrast to the 200 before the storm. Teachers, community support leaders and mental health providers, some who are also still displaced, have reported compassion fatigue as they continue to support critical needs with reduced resources. Since the hurricane, many of the latter have relocated to other cities within Florida or other states largely due to lack of housing. This has had a direct impact on the obtainability of mental health services available throughout Bay District Schools and other
facilities previously dedicated to offer this service.

To address the mental health needs of Bay County students, Bay District Schools has identified a need for 76 licensed mental health practitioners and 15 mental health coordinators/case managers to be embedded in the schools to coordinate and provide longer term crisis counseling or therapy for students until the community is able to rebuild the service network locally. Additionally, Bay District continues to seek group counseling opportunities for students and training, and professional development opportunities for teachers to identify and support students who are suffering. Bay District Schools has continued to advocate for students seeking funding and resources from various sources to meet the very large need of all students and teachers.

**FSU-PC**

Florida State University Panama City sustained damage to almost every building on campus prompting the university to rebuild, reorganize and rethink operations to include identifying the need for additional student housing. Sources of funding and community resiliency may be enabled by accessing federal programs for emergency shelter by leveraging university facilities and expanding facility dormitories. This additional capacity may be useful in attracting a greater number of students to the community.

FSU-PC played a key role in assisting the community with recovery. University students took to the streets just days after the storm, going door to door in some of the hardest-hit areas to offer food and supplies, manpower and assistance to those in need connecting them with volunteer organizations. Students, faculty and staff volunteered at Operation BBQ, an organization that provides meals to people impacted by natural disasters, and continued their efforts every weekend once class was in session, despite weeks of make-up coursework to make up. FSU-PC campus also hosted classes for GCSC during roof repairs, provided meeting space to many community organizations such as United Way of Northwest Florida, Life Management, Doorways of Northwest Florida and partnered with Bay District Schools to help address the mental health concerns amongst its student populations.

To supplement the critical need for mental health intervention in the Bay District Schools, FSU Tallahassee College of Social Work and FSU-PC in collaboration with GCSC, offer an initiative that would expand mental health programs to attract, educate and deploy advanced level behavioral health students into the K-12 schools. The goal is to partner with BDS to meet immediate staffing needs while additional resources and funding are located.

Through the FSU-PC Multidisciplinary Center (MDC) for Research, Resiliency and Emergency Response, university students would intern in K-12 schools under the supervision of a licensed psychologist and social worker while earning their Master of Social Work (MSW). As condensed four semester internships within K-12 schools are an attractive incentive to students pursuing licensure, the initiative could both serve as a supplement to address the mental health needs of students and stimulate “a grow from within approach” to retaining talent and addressing long-term shortfalls in licensed counselors. The premise recognizing it has been difficult to attract providers to this area even prior to the storm due to the lack of affordable housing.

The MDC would also host a mental health summer outreach program for BDS students and families, as well as be involved with collecting data for long-term study on the impact of Hurricane Michael over several vectors within the community to include the aging and the socio-economically disadvantaged. Other advancement programs through the MDC would bridge the social, (e.g., food security, behavioral health, housing) sides of hurricane response with research and planning on the technical side (e.g., meteorological, infrastructural and disaster response training). This research would give rise to partnerships with the
National Oceanic and Atmosphere Administration, NOAA.

FSU-PC is also proposing the development of an Engineering, Science, Technology and Advance Workforce Center with nodes in aerospace, robotics and manufacturing. By connecting the MDC with a center for big data enabled science and engineering research, FSU-PC hopes to offer students access to advanced technical training. Potentially housed in the Bayside Building on campus, this can diversify the economy and attract high-end industry, private enterprise and research driven technology. Through partnerships with the Air Force, Navy and other government entities, this initiative can grow the population and stimulate a need for teachers, housing, medical care and small business infrastructure. FSU-PC in collaboration with GCSC and other partner colleges in the eight-county region will improve resilience and revitalize the region by focusing their efforts on the specific needs of Bay County residents. A large effort to this will be to source additional funding from both public and private sources to support the expansion of facilities, dorms and programs.

**GULF COAST STATE COLLEGE**

Gulf Coast State College (GCSC), located in close proximity to FSU-PC, was also exceedingly affected by high winds. Facilities took heavy damage to their roofs and windows. The 100% destruction to GCSC off-campus housing negatively impacted enrollment, resulting in a reported 14 to 16% decline in numbers for the school year. Commuters and displaced students reported an average increased drive time of 45 minutes during peak hours just to travel over the bridge to attend classes. This hardship, made worse by the attrition due to relocated workers and base reassignments, has prompted an initiative to create student housing on the east side of the bridge within walking distance of the campus. Student housing incentives and development initiatives have also been presented, as well as plans to expand course offerings in downtown Panama City and on Panama City Beach. Efforts in diversifying the economy can often be achieved through public / private partnerships with local companies looking at worker shortages or planning future expansions.

GCSC is a valuable asset to Bay County and is working to leverage state disaster relief programs to waive certain tuition fees to attract out of state students. Focusing on an end goal to retain a skilled workforce, GCSC is streamlining programs and internships to attract students and pair tech industry with clean high-end manufacturing, aerospace and other needed vocational programs. Training in emergency management is another one of GCSC’s contributions to the community. Post-storm, GCSC hosted the Incident Command Center (ICC) and its own Emergency Operations Center (EOC). A reliable communication process is essential for the dissemination of information relative to the availability of services and the overall status of schools, health care facilities and businesses. It was identified that establishing a single point of contact within the institutions to relay accurate information between the EOCs and the student body is crucial to avoid misinformation and to ensure safety.
Medical Services

Immediately after Hurricane Michael, hospitals became shelters. The medical subgroup reported they had several issues to remediate. These issues ranged from lack of communication, transportation, facility and utility damage, security, access to pharmaceuticals, as well as the loss of outpatient and specialty facility treatment space.

Within hours of the storm, most medical facilities were completely without power, running off their own electrical generators for over a week. Bottled water was used to flush toilets and evacuation of patients was frustrated by reduced communication and extensive roadway debris. The loss of other community care facilities created an inability to discharge the aging and mentally compromised adolescents within Bay County, delaying hospital turnover and intake of patients through the emergency rooms. Extensive damage to hospitals and private care facilities prompted a loss in specialty care providers, nurses and other support staff. Recommendations include the mitigation of water and sewer utilities, incentives to attract new health care staff and obtaining a new business recovery center with 100,000 sq. ft. of medical grade office space to assist with non-hospital related community health issues.

After the storm, communication became the most important problem between hospitals and emergency response personnel. Hospital staff were unable to communicate with the Emergency Operations Center (EOC) and other community response entities. Most cellular services throughout the area were severely impacted with only AT&T providing intermittent service in some areas. Their immediate solution was to share sim cards and phones on hand until other networks came back online. Satellite phones were also used, but providers and staff reported that they could only get reception in the stairwells of the hospital and outdoors. Communication became a serious issue when providers were unable to access resources to treat and evacuate patients.

Lack of communications between hospitals also hampered the evacuation process because supervising staff were unaware if the roads had been cleared to get ambulances through. Some facilities were neither aware of when the ambulances would arrive or whether neighboring facilities could receive patients. This resulted in many patients being transported outside the County at significant expense. Fuel trucks were costing $7,000 daily to sustain power generators and ambulances with hospitals
assuming these non-sustainable costs, making transportation one of the most expensive immediate response issues.

Patient movement challenges also included indoor assets such as elevators that couldn’t be used while electrical power was down, thus, evacuating elderly and non-upright patients out of health care facilities was particularly challenging.

Once outdoors, evacuating patients to other facilities was also difficult. Helicopters could only take a couple of non-ambulatory patients at a time. Charter buses were not designed to carry non-upright patients and ambulances are typically configured for individual patients per trip. After a few days of operations, personal transportation for staff also became an issue due to the lack of fuel for personal vehicles.

Senior citizens that remained in their homes during the storm also had issues with transportation and required support with securing medications, oxygen and other necessary services. Post-storm, the changes in landscape and increased commute time from congested roadways prevented many seniors from leaving their homes. The loss of electricity affected medications, treatment and severely jeopardized the needs of the elderly and others who were physically challenged to access care. First responders encountered this while going door to door and through information shared by concerned citizens. 911 calls were utilized as a way to respond once communication was restored. An assessment of current needs to address these issues has been initiated through projects mentioned throughout the Plan to support the aging and disabled.

The inability to access databases for prescriptions and patient records made it difficult to treat many who were requiring regular medicines and suffering from substance withdrawals or mental health disorders. Outside of the hospitals, patients with chronic conditions like diabetes that lost insulin due to power outage and refrigeration issues were forced to come to the hospitals to get medication. Resources and pharmaceuticals on hand became coveted. Police came by to report that there had been armed looting in the area but were unable to stay. Security measures were taken into the hands of individuals who had the ability to “conceal and carry.” They were posted on roofs and throughout the facilities to protect providers and scarce resources. Projects have been submitted to increase the awareness of the Rx Open application that informs the user on the post-storm opening status of care facilities and pharmacies in Bay County, along with a security initiative to support and protect providers.

Utility water at some facilities also failed after the storm requiring hospital facilities to use bottled water and whatever else was on hand. Without water, toilets couldn’t be flushed, and facilities couldn’t be cleaned appropriately. It was reported that some of the redundant sources for water were difficult to use because of the lack of standardized connectors on hand to connect to tanker trucks. Although there was no reported issue with sewage after the storm, there is a concern to mitigate redundant ways to handle sewage, such as a lift station outside of each hospital.

Due to the shift in population on Panama City Beach, a project for a new 150 bed micro-hospital has been presented to support the growing demands west of the Hathaway Bridge. Additionally, community development builders that support the over 55 demographics should be cognizant of decisions by this population to relocate based on access to specialty care. Mapping of the current facilities show both hospitals are east of the bridge. The new hospital will alleviate patient workloads while changes are made to improve and expand existing infrastructure. It would also lessen the burden on emergency service providers with response times. This hospital would service a seven county area and support the Bay County veterans with access to care. Currently, veterans travel to Biloxi, Mississippi and Tampa, Florida for their specialty care. This facility can also serve as an incentive to attract medical specialty care providers to the area. With a potential public/private partnership with higher education, this hospital and programming could have a positive economic impact on Bay County.

Currently, many health care providers are still without office space or are sharing with other providers and this has resulted in reduced patient care capacity and specialty care. The County lost several providers due to their inability to support the increased costs of private practice staff and equipment rental. A new business recovery center should be immediately up and running within two weeks of a storm. Each provider room should contain a water source and portable clinic kits that convert into two hospital beds that would enable providers to quickly return to a pre-storm patient care level. It should be noted that free community medical support from non-profit organizations can negatively impact the economic recovery of private health care practice providers if sustained past the most immediate demand period after a storm as the loss of medical grade office space directly impacts the economic recovery of private practice providers. To attract and retain health care providers and
Incentives should be developed immediately to compete for this highly sought-after sector of the national workforce. It is important to note that it takes at least a year or two to utilize graduating professionals that are new to the profession. This should be accounted for in the incentive plan. Suggested incentives may include a signing bonus, a half tax (for a specified amount of time) for younger physicians married without children and/or a federally sponsored “five year” hurricane write-off loan program similar to, “service in rural area” loan forgiveness program, but with disaster terminology.

Recovery efforts are underway to restore health care facilities and bring bed capacity back to adequate levels for the current population; reported at 36,986 in 2017 for Panama City and 183,563 for the County. Hospitals had reduced bed space at one point post-storm because they could not discharge adolescents, mental health patients, substance abuse patients and elderly. A detailed evaluation should be conducted to assess the current status and capacity of the facilities supporting these four areas within the County to include the veterans. Nursing homes are at less than half of their pre-storm capacity. Many elderly citizens are still living out of the County unable to return home. Reconstruction and capacity assessment of nursing homes is also important to support the 6,508 seniors as reported in 2017 in Panama City.

It is recommended that in mitigating for future needs, the County hospitals should have a lift station within so many feet of the facility to handle extra wastewater in case of flooding. Dual water feeds to the hospitals and in-patient facilities is recommended, along with multiple connectors for redundant water sources, (water tanks). All facilities should have back-up generators with a plan for fuel to power them.

When developing revised plans, hospitals should activate FEMA teams through the Governor’s office immediately after the storm. The FEMA teams can set up in the parking lots enabling construction crews to repair facilities and utilities quicker. In-patient facilities should develop provider/nurse A and B teams to be on call within 24 hours of a storm. A list of primary care providers should be included in the Plan. Not all patients require a hospital level of care. A 90-day supply of schedule C drugs should be on hand at both hospitals with a plan for security and proper storage, in addition to plans for chemotherapy and nuclear medicine shipments. There have been delays in receiving the latter. Effective half-life of medication is proportional to predictable shipping times.

A future disaster preparedness plan should include training and coordination components with mental health facilities. Several behavioral health operations were staffed and running after the storm, but the hospitals were not aware and not informing patients. An interdisciplinary training exercise between hospital staff, mental health providers, first responders, contracted services and other contributing entities should be coordinated every one to three years to test responsiveness and coordination of various plans between hospitals, Pan Care, behavioral health and satellite facilities, transportation, EOCs, local media, law enforcement and response teams.
Behavioral Health

The mental health needs of the community have proven to be of significant concern. Examination of the County's social services infrastructure identified varied age demographics as senior citizens, adults, adolescents or teenagers, the youth and disabled. Combined with facility damage, the lack of staffing and licensed providers has resulted in a critical need for counselors to address declining mental health, especially in the adolescent population. This Plan recommends support incentives for staffing and programs, a telehealth system to assist with current challenges and to mitigate for future storms and an upgrade to key facilities and telecommunications infrastructure.

The community at large is suffering from trauma and grief. Normalcy within positive mental health is the number one issue Bay County is facing. Since Hurricane Michael, suicide, “Baker Acted” patients, domestic violence and child abuse have been on the rise, with a spike in mid-February. With the hurricane season having started June 1st, medical and behavioral health providers, clergy, law enforcement, educators and other community leaders have strong reason to believe that mental health challenges and post-traumatic stress disorder will continue to increase. Coupled with a current 40% loss in behavioral health providers and the anticipated losses at the end of the 2018-2019 school year due to the housing shortage, staffing to support the County is becoming a larger challenge.

Immediately following Hurricane Michael, behavioral health became a critical issue. Different age groups have different mental health needs, therefore varied programs and treatment are prescribed toward the elderly, adult, adolescent and youth populations. Post storm, several facilities supporting elderly and hospice patients closed due to facility damage. Six months later, the adolescent treatment center, the male housing center, the substance abuse center, the detox center and the detention center are still closed or running at reduced capacity. A project has been proposed that will expand the Life Management Center treatment capacity with step down care to help support the community.

Immediately after the storm, the lack of adequate telecommunications between care facilities and care professionals became critical because behavioral health representatives were attempting to support the programs and triage patients, but the hospitals did not know. The assumption was if their facilities were closed, mental health providers were not treating patients. The communication breakdown between the EOC, the hospital and the behavioral health facilities, resulted in patients not knowing where to go and by default going to the hospitals and being admitted. The hospitals did not have access to medications, prescriptions or care records, resulting in many patients being transferred out of the County for care.

Many of the behavioral health programs targeted to address community challenges are a result of ongoing care issues. The elderly community is showing increased signs of cognitive decline resulting from isolation due to lack of community space,
programs and transportation to access community support. Many are living in substandard conditions with general lack of knowledge on how to access transportation in the changing landscape and get help for their trauma. Data collection also supports the concern that many elderly are still dealing with damage to their homes without the cognitive means to navigate the recovery process or financial means to oversee repairs. A project to assess available programs and leverage a transportation system specifically designed to support the elderly and the disabled community with direct transportation to services has been submitted.

Similarly, adults are displaced and living in multiple family dwellings. Many are out of work and living in FEMA camps. Due to new social circles and a drastic decline in childcare options, many are not getting a break and showing signs of poor mental health and an increase in substance abuse. Adolescents are a vulnerable population. They have lost their movie theater, bowling alleys, restaurants, parks, portions of the mall and after school programs, hindering their ability to connect.

Middle schoolers and youth have similar issues which has resulted in greater numbers acting out and showing focus issues. Like the other populations, they are displaced, have no safe play space, parks, sports or community resources to provide connection with peers and/or reach out or help. The Boys and Girls Club of America and Girls, Inc. youth centers took heavy damage and are now running at reduced capacity out of school buildings. Several of the elementary schools have combined or closed causing even further instability with change to teachers and classmates.

Lastly, teachers and mental health providers are doing more with less staff as well as dealing with displacement in their personal lives. They suffer from compassion fatigue and have communicated they will be forced to leave the area at the end of the school year. Many of the behavioral health specialists have already left the area. There is a critical need for doctors, licensed professionals, four year and non-degree staff. Many are leaving the area due to housing and lack of facilities to practice. Many of the providers live close to the epicenters of Panama City, in order to serve that population, but lost houses or rental units and have been forced to commute. To address this critical shortage in mental health care, projects are proposed to obtain a teledicine system for seven mental health facilities and for the medical psychiatry ward to access remote care from providers located outside of the County. These remedies will aid in preventing hospital emergency room bed space from being filled to provide non-emergency mental health services. It will also leverage the capacity to expand specialty mental health counseling for people in the community.

Response to the post-storm issues revolve around restoration of facilities and bringing program support up to capacity. In-patient facilities are closed or have reduced bed space. As programs come back online, attention has been given to expanding capacity while restoration takes place. Transporting target groups, such as the aging and adolescent, out of the County is very expensive. A detailed evaluation should be conducted to assess the current status and capacity of the facilities supporting the County such as domestic violence programs, the Serenity House, AA programs and Maternal Substance Abuse programs, many of which have not been running. Nursing homes are less than half their pre-storm capacity. Many elderlies are still living out of the County. Nursing homes and senior living infrastructure should be evaluated for restoration and rebuilding to meet the needs of the population. Projects and assessments have been created to more accurately identify these needs in connection with the Panhandle Center for the Aging.

A senior transportation system specifically targeted to seniors and people with mobility impairment would support access to care and social connection without the inconsistency that can surround a volunteer system. For a scaled fee, an on-demand transportation system (i.e. Dial-a-ride) can be utilized during business hours to assist patrons in going directly to and from a destination that supports their care. This program could be sponsored by the County in conjunction with FDOT and would be independent of the trolley system that is used for public transportation.

Programs should be initiated or strengthened to support the four demographics. Using the “wrap around model,” the public should be taught to provide self-care rather than dependency. A media campaign to promote education through “850 mental health” and advocacy hotlines should be targeted to the entire population. This will promote awareness and self-identification. Support groups, crisis counseling and childcare training programs will benefit the community by assisting the adult population and employing the adolescents. Peer recovery and the Aware program will teach regulation of emotion and substance
abuse avoidance. Sponsoring programs for the youth through day camps and summer camps like Camp Connect will provide grief counseling and grounding tools for the youth.

Loss of office space directly impacts the economic recovery of mental health providers. From privacy for the individuals to public access and meeting space for large groups, a business recovery center is needed immediately. To attract and retain providers and specialty care, some type of immediate housing solution must be found. Whereas housing has been a critical issue for everyone, it seems to greatly affect this portion of the workforce. It is also recommended that some type of blocked housing be developed such as a tiny house community.

Communications and Emergency Operations Centers (EOC’s) resource buildings should be hardened and strategically located around the County, each containing a generator, equipment, a medical kit, chainsaw and a hardened communication system with redundant backhaul capabilities. The EOC’s should be staffed with one coordinator, two medical personnel, one with behavioral health training and two additional field personnel (consider a military representative) within 24 hours of a storm. A communication plan should be developed to include the Air Force, the Navy, contract services, transportation and a reporting “call list” communication chain tested annually to ensure behavioral health facilities, EOCs, hospitals and satellite in-patient facilities are in contact and can report as operational in post-storm situations. The main EOC operator should be responsible for relaying the resulting information to the County POC and/or media sources. Drivers responsible for transportation should have a way to communicate with the EOC and EOC assets. All EOC support facilities should have back-up generators with a plan for fuel to power them.

A disaster preparedness plan should include training and coordination with medical facilities. Several behavioral health operations were staffed and running after the storm, but the hospitals were not aware and not informing patients. A training exercise should be coordinated every one to three years to test responsiveness and coordination of various plans between behavioral health facilities and programs, hospitals, Pan Care, and satellite facilities, transportation, EOCs, local media, law enforcement and response teams.
Community and Children

Immediate issues identified in the community and children’s subgroup surround critical needs to offer space and programs. The domestic violence program is of the greatest concerns because of the lack of privacy and safety for victims. Community meeting spaces as well as park and recreation programs are also looking to re-establish operations post-storm due to the extensive damage to play space and buildings that support children. Many aspects of this subgroup connect within the greater Bay community. Immediate safety measures to protect people have been identified along with concept for a community resiliency center to address long-term needs.

The “domino” effect of damaged and reduced community meeting space, school closures and the lack of housing has created a critical need for licensed childcare for the County and its workforce. Several childcare facilities have been damaged beyond repair including all childcare support on Tyndall Air Force Base due to the loss of its childcare center and all of its housing that would normally support in-home childcare. Without physical dwellings to facilitate in-home childcare, the County has less infrastructure to sustain programming and support the workforce. There is a critical need for intervention. Starting at a 40% shortage pre-storm, provider availability is now approaching a 70% deficit. In response, subgroup leaders recommend county financial sponsorship of a quarterly workshop that certifies licensed providers for both in-home and commercial facility care.

Immediately following Hurricane Michael, many families were displaced and continued to relocate. The housing shortage has forced some to live outside of their neighborhoods and towns, some in multi-family living situations or FEMA trailers. Parents have lost jobs; many grandparents are living outside of the County due to a nursing home shortage and many children have had to change schools. Childcare options are sparse, and parents are not getting a break. Familiar parks and sports outlets have been destroyed and youth centers like the Boys and Girls Club of America and Girls, Inc. in Panama City have been severely damaged. Children 5-17 years of age have dealt with such an immense amount of disruption and care staff are noticing increases in children “acting out” or showing emotional distress. Community programs and support groups that used to be held in community facilities no longer have a place to commune. Playgrounds, golf courses, tennis courts, basketball courts, and the performing arts have all been negatively impacted.

The primary goal post-storm has been to restore facilities and bring program support up to capacity with a primary focus on safety. Goals to replace sports equipment and park structures have been slowly accomplished to reintegrate sports for the community and children. Repairing community buildings supporting the Boys and Girls Club of America and Girls, Inc. programs has been vital as these after school programs have been running at a diminished capacity out of the schools.

Childcare is a critical need for this community. It is recommended to consider expanding current facilities to support larger groups or day care. A primary goal is to immediately find funding sources to support physical space for support groups and the domestic violence program, which includes ability to temporarily house victims (facilities also need shower capability). To address critical childcare needs for younger children, education or workshops around the small business opportunities available in opening in-home childcare
programs should be offered quarterly. Potential financial partners should be identified to offer microenterprise loans to help individuals to start their own in-home childcare center. Childcare space and need for trained care providers are necessary for the workforce. With limited options for opening new, free standing childcare centers, the best solution short-term will be to encourage people to open in-home childcare programs. Training programs for licensure can take almost 40 hours, require background checks for all adults in the home and require an in-home inspection. The County’s support with this during this next year will be paramount if the workforce is to regain forward momentum.

Other goals include immediately restoring parks, and investing in new playground equipment and sports facilities to create a safe space for children to play. Golf courses, tennis courts and cultural arts facilities are slowly coming back online by working with their insurance providers. Establishing grant programs to restore and revitalize the community’s performing arts programs and buildings will assist with the process. One suggestion for recovery was to research options throughout the County for an amphitheater in one or more parks to expand to an outdoor theater.

To mitigate for a future storm, the long-term goals are to build a community resiliency center, strategically placed in the County, that during good times houses teen centers, community wellness centers (access to fitness equipment identified by the student group), senior center programming and other needed services for the community such as workforce readiness training programs, adult literacy programs, art classes, etc. Teens, seniors and community members would all have their own separate entrances to ensure quality care to each group. As identified by the student group, these facilities should be adjacent to sports fields, skate parks and the like. These buildings would have several rooms built to childcare standards that could be used for emergency childcare for first responders in the event of an emergency. Facilities would also be designed to serve as emergency shelters for people of all ages and abilities. Facilities should also include showers and basic kitchen services. Facilities should also include the latest multiple communication options in the event that we have another huge loss of telecommunication service as well as self-contained power backups using solar power and battery storage. The resiliency center could be owned and operated by the cities or county or managed through a public/private partnership. The short-term goals for the community and children’s subgroup are to get the Boys and Girls Club of America and Girls, Inc. operations out of the schools and up to capacity in their own facilities.

The Salvation Army domestic violence program facility is restored. The biggest short-term need is for added security measures. The facility had been hidden away by a large wooded area. The loss of trees now makes their facility visible for a great distance making it easier for people to watch people coming and going from the facility which keeps victims at risk of being found by their abusers. A security fence would assist with safety.

For both the short-term and long-term recovery, it is important to provide free educational conferences or workshops to educate non-profit and private for profit business leaders on how to develop effective strategic plans, emergency operation plans that include business continuity plans and clear steps for seeking assistance from SBA and FEMA in the future.
Houses of Worship

Community data collected suggests there was a need for the County to better support the area’s houses of worship as they played a key role in providing critical services to their communities. Leveraging capacity from their parent organizations outside the area, churches provided many volunteers and supplies post-storm, but encountered difficulty in storing supplies and providing adequate housing. The faith-based community also requests that planning be put in place to rotate mental health and disaster counseling teams throughout the County within one week of a storm to assist with immediate requests for citizens that may not have transportation.

Following Hurricane Michael, it became evident that houses of worship were hit hard. The majority lost roofs as well as extensive structural damage and some were forced to close completely. Throughout Bay County many church buildings were either badly damaged or damaged beyond repair, resulting in a community-wide impact to the spiritual health of the residents. Churches serve as a resource for information, physical and mental care, as well as guidance but they were prevented from performing their traditional roles. Several churches utilized tents to continue services, but without adequate facilities to house volunteers and supplies, many churches were not able to support outreach programs and utilize resources from sister churches outside the County. The current challenge many churches are facing is those that have insurance are having difficulty negotiating what may be “fair” compensation for claims filed. Some churches did not carry any insurance.

Immediately after the hurricane, support crews that came to help with clean-up and recovery were coming to the churches requesting food and water waiting for a paycheck or reimbursement. The Baptist Disaster Team was deployed to Panama City immediately to assist local Baptist churches, bringing crews to clear roads of debris, counselors and medical support. This was not the case for every house of worship and there were great difficulties finding housing for those who did come. Immediate post-disaster needs included ice, generators, fuel, diapers, clothes, blankets, personal items and food in addition to shelter. Other immediate needs identified were mental and spiritual help for county residents. Coordination between local organizations and reimbursement entities and churches to make services available is essential. Re-establishing effective communication after a disaster to inform residents of current conditions and receive information as to where services may be available. A team should be established to come in twice a month at alternating churches throughout the County with mental health support and information for the reimbursement process. This would support the many residents that are not able to drive or must travel from townships outside of Panama City.

Adequate housing is needed for volunteers for the first 60 days after a storm. Churches have outside resources that can be used if planning is in place to house them, such as establishing serviced parking lots where volunteers can set up tents and trailers. A project has been submitted that requests utility connectivity, laundry and shower trailers to support the volunteers staying in the parking lots of the host churches. A request for permit waivers to be streamlined during an immediate response period to use available portable housing has also been proposed as a way to utilize two current buildings that support 30 volunteers each.
To prepare for future storms, a coordinated effort should be made by the churches in the area to develop a disaster response plan that will address the immediate needs of the residents and all religious affiliations. Churches are not designed to double as shelters but can be a place for residents to come and participate in support groups that will help them cope. Moreover, churches can become the source of important places to gather and receive counseling, supplies and information after a natural disaster.

Addressing the availability of financial assistance to those that lost their jobs as a result of natural disaster in the interim before FEMA support is initiated would be very helpful. It is recommended that an endowment through private non-profit be created to provide such assistance. Long term, rebuilding church buildings to current building code standards is necessary in order to minimize future damages during similar events.

Law Enforcement

Following Hurricane Michael’s path of destruction throughout Bay County, law enforcement agencies were faced with the daunting task of providing safety and security throughout their communities despite blocked roads and the loss of electrical power, telecommunications and support facilities. Like the rest of the community, officers and staff also suffered personal losses to their homes, cars and property. Three police stations were destroyed during the hurricane creating additional requirements for operations space and shelter. There should also be the option of a pet daycare to allow a stronger response from officers and support staff members that do not want to leave their pets alone.

Among the immediate needs are enhanced communication systems. During the hurricane, communication towers were damaged, law enforcement providers were left without a way to communicate and could not receive or send any data from their vehicle computers. Crucial coordination of patient intake with hospitals and mental health facilities was severely impacted. More resilient mobile tower structures and the installation of a resilient fiber optic network are essential for continued operational capabilities post community disasters. Deployment of command buses equipped with the latest technology will also be helpful in responding to community disaster.

In order to assist law enforcement, it is also necessary to improve mental health response by expanding capabilities to treat clients of all ages. At present, this service is only available to clients ages 0 to 25. Some officers need to be trained to be able to Baker Act a person when needed. A project to expand the mental health crisis response team and enhance law enforcement training to meet this need has been proposed. To address the needs of people recovering within the jail from substance abuse, a project to construct a 5,000 sq. ft. facility for the Lifeline Drug Treatment Program with treatment beds has been proposed to relieve hospital congestion and jail space. Expansion of the current Living Free Community Program now offered within the jail will build on the continued success with rehabilitation.
**Young People**

Immediately following Hurricane Michael, many families were displaced due to housing. Workers lost jobs and teenagers were thrust into adult roles having to care for younger siblings, grandparents or distressed parents. Many lost the cohesion of their neighborhoods, electronics, personal items, friends, pets and anywhere to go to share their stories and feelings. Common social activities and meeting spaces like the mall, bowling alley, movie theater and favorite restaurants were lost throughout the County in varying degrees. Parks and sports complexes were severely damaged and are still being used as a debris staging site. High schoolers are sharing their school space with community entities who have nowhere else to meet. The result for the teenagers has been difficulty with emotional regulation and at least one reported suicide.

Some recommendations from the public include restoring parks and sport complexes to give this age group somewhere to naturally release physical and mental tension. Look for funding sources to restore or build bowling alleys or a movie theater. Create a teen center that enables high schoolers to have a place to hang out including Wi-Fi internet access for personal electronics. Design the space so that the high schoolers can have glass enclosed study rooms in order to have a quiet place to do homework or read. Ensure the space is large enough to support group gatherings and one on one counseling or tutoring. It is recommended that the location be centrally located in the County and include some component of outdoor recreation. Design a skateboard park in several of the towns in the County and/or consider incorporating these things into a resiliency center.

When planning for the construction of the teen center, it was recommended that the community ensure it is a hardened facility with showers. The teen center should be designed for sheltering in case of a storm and equipped with back-up generators. Look for funding resources that incorporate a volunteer program that might expand grant funding options. If possible, centrally locate the teen facility in the County to allow access to those populations that need to use public transportation.
Citizens with Disabilities

The challenges faced by the disabled citizens in Bay County highly revolve around resources and financial support. Families exhaust personal funds attempting to support their loved one either with medical and private supervision or face financial hardship because they stay home to provide the care themselves. Additional challenges can also arise, from special diets and feeding delivery to large equipment for movement and transport. Medical costs, special teachers, training and therapy materials collectively add up. Arc of the Bay is one such entity in this county that works to support this population with day training, volunteerism and job employment. Currently, Arc of the Bay supports 21 special needs adults in the day program that contend with spina-bifida, autism, cerebral palsy and other intellectual disabilities. It is estimated that there are about 250 more citizens in the County that are waiting for Medicaid enrollment and coverage to participate through this program. The Arc of the Bay incurred $200,000 dollars in damage to their facilities due to the storm and is slowly rebuilding to resume normal operations.

Due to the unique needs of this population, changes in daily routines, care providers and even lighting can trigger anxiety or fear, seizures, behavioral outbursts or depression. On the drastic end, this may result in refusal to eat, or harm to themselves or others. Arc of the Bay offers a day program that supports families with this need and is funded with grants and funding from other non-profits. There is a current need to expand facilities to increase capacity for this population. The goal would be to harden current facilities.

During Hurricane Michael, many families evacuated to escape the impending storm, however, for the special needs population that represented additional hardship. Moving equipment, supplies and medical supplies makes evacuation a difficult task, especially for families that are already struggling financially. The logistics to move a special needs loved one, combined with monetary requirements for gas and outside lodging, proved very difficult to navigate and upsetting for many Bay County families. Many had to stay in their homes because it was not feasible for them to leave. This put entire families at physical risk, compounding the mental trauma already introduced through loss of community because of the storm.

Having a hardened shelter that is designed to support this population would greatly benefit families with loved ones who have special needs. Extra rails, ramps, wider doorways, special lighting, Hoyer lifts and larger bathrooms would assist greatly with the ability to shelter in place. Consideration can also be given to taking a day trip prior to an event to this location to build familiarity for the target group. Finally, plans should be outlined for expansion to accommodate a greater number of families with special needs loved ones.
Non-Profit Organizations

Non-profit organizations in the Health and Social Services (HSS) Branch face a unique mission and several fiscal challenges. Churches, the American Cancer Society, The Red Cross, The Bay County Chamber of Commerce, the Boys and Girls Club and Emerald Coast Hospice are just a few of 1174 non-profit organizations in Bay County that fall into the 501.c.3 category. When these facilities are faced with damage after a storm, they are not able to perform their usual function to support the community.

Federal programs like 2-1-1 are sponsored by The United Way, and provide resources to help people connect to financial, domestic, health or disaster-related assistance. 2-1-1 is a free service that provides information to assist non-profits with supporting their community and is a valuable resource after a storm. After Hurricane Michael, it was estimated that the usual call volume jumped from an average 300 calls a month, to over 300 calls a day, proving the worth of this critical service.

Special national funding resources are also available to assist non-profits with maintaining their mission after the storm such as ESF 15 funding that drives Emergency Operations Centers (EOCs).

Non-profits were also challenged while going through the restoration process to get their facilities and programs back up and running as support money was held by The United Way until specific criteria were met for reimbursement.

One EOC issue identified after Hurricane Michael, was a critical need to ensure accurate information dissemination through public networks such as radio and television stations. It is a recommendation through numerous interviews of health and social services officials, that a person be designated in the main EOC to be the point of contact for information dissemination.

The World Renew organization has donated $25,000 to support an assessment of the area that covers parts of Georgia, South Carolina and Northern Florida. This information can be used to develop improvement to plans, operations and mitigation of future needs for non-profit organizations in the Bay County area.

Along with the many efforts made by individual churches and faith-based groups, affiliated organizations like “Recover PC” and “Rebuild Bay County” have been hard at work reaching out into the community to fill in the gaps. Recover PC, a small group of around twelve local churches that have joined together to jumpstart youth programs and other projects in the Panama City community, has established a goal to help, heal and connect Panama City residents with resources. One project has a special focus on the Panama City youth who have been especially hit hard with dislocation and destruction of many of their common meeting spaces like the mall, movies theaters, and parks. Efforts are aimed at connecting Panama City youth with youth throughout Bay County via programs that encourage group participation through indoor and outdoor games and activities.

Rebuild Bay County is a larger, more robust organization comprised of over 70 non-profit groups, businesses and agencies like the United Way, Habitat for Humanity, Doorways of NW Florida, faith-based entities, and other non-profit organizations. Their mission is to help Bay County residents rebuild after the devastation of Hurricane Michael through coordination of volunteers, donations and through professional collaboration with outside agencies.

Home-based in the Bay County Public Library during the immediate response period, Rebuild Bay County is a benchmark program that is working with FEMA to provide a hub for residents to engage disaster assistance of all types, to include: education on long-term recovery, housing assistance, insurance guidance, legal advice, supplies, and emotional and spiritual counseling. On April 10th, 2019, this organization partnered with many professional entities around Bay County to sponsor “Pray for Bay,” a commemorative community-wide event hosted to honor, remember, renew and rebuild the lives of citizens six months post-storm. Currently, Rebuild Bay is partnering with World Renew, another volunteer organization focused on long-term recovery efforts to raise money and extend outreach with additional hubs and disaster assistance throughout the county to assess and address unmet needs post-storm.
Based upon the extensive research and discussion occurring within the Health and Social Services Branch, the following specific actions (and associated tasks) are recommended to assist the communities of Bay County to achieve maximum recovery.

### 137. Enhance Communication Technology

**ACTION:** Enhance and expand communication technology and infrastructure (i.e. fiber optics, networks, mobile towers) that can remain operational during and after a natural disaster or that may be deployed within hours following a natural disaster. This includes not only equipment, but radio stations that maintain broadcast capabilities that first responders and county citizens utilize for information on what resources are available.

**TASK I:** Create a study to determine the most critical impact on loss of communications to the health and social infrastructure.

**TASK II:** Obtain redundant sources for communication such as extra satellite phones, extra sim cards for multiple cellular carriers and ham radios.

**TASK III:** Work with others in the community looking to improve the community disaster communications plan to integrate health and social services communication into the overall strategy.

**TASK III:** Attach solar powered “back-calling” to utility poles to connect to satellites as a long-term initiative during the rebuilding of infrastructure.

### 138. Acquire Mobile Response Vehicles and Repeater Trailer

**ACTION:** Acquire mobile response vehicles and repeater trailer for law enforcement and first responders. Ensure equipment is stored in a facility located outside of the range of an anticipated natural disaster that can be deployed within hours of a storm to restore communications within Bay County. Install a fiber optic network that can remain operational during a storm.

**TASK I:** Contact the Sheriff’s office on specific needs for mobile equipment.

**TASK II:** Look for a location to store equipment during an impending storm or build a hardened structure to house vehicle(s); develop agreements with outside agencies.

**TASK III:** Develop plans that dictate the use and storage of equipment.
139. Designate EOC Spokesperson in Future Events

**ACTION:** All information disseminated following a natural disaster should be accurate, a problem faced following Hurricane Michael. To prevent this from occurring during future natural disasters, a designated Emergency Operations Center (EOC) spokesperson should be appointed in each key organization building (i.e. hospitals, mental health facilities, law enforcement, churches, schools, universities, senior homes, shelters, and military bases) to report to the EOC. A designated EOC representative will then report to the radio stations with an understanding that the EOC designee will be the only official source for public information. Additionally, it’s recommended that the community harden the broadcast capabilities of local radio stations.

**TASK I:** As part of a community-wide communication initiative, appoint a position in each EOC pod to be responsible for accepting information from key organizations and relaying public communication to the radio stations.

**TASK II:** Work with local radio stations to develop plans for hardening capabilities and establishing a joint communication plan for public information flow.

**TASK III:** Appoint a person from each key organization to relay information to and receive information from the EOC’s.

**TASK IV:** Ensure appointment of all positions reflects a 24hr period (12hr shifts) and is written into disaster preparedness plans.

140. Establish Ham Radio Back-Up Communication Systems

**ACTION:** Redundancy should be built into support communication. Supply ham radios to hospitals, EOC’s, and Pods, (Satellite EOCs, EMCs) and inpatient facilities as a redundant communication back-up system during immediate response after a storm. Systems would be dispersed throughout the municipalities in the County to support communication with the hospitals and first responders.

**TASK I:** Work with the local hospitals and EOCs and key facilities in the municipalities to ensure that a reliable back up communications infrastructure is established.

**TASK II:** Evaluate the benefits of ham radios and other types of wireless communications technologies during community distress and determine which technologies should form the primary telecom structure within the community.

**TASK III:** Research and procure appropriate ham radio systems for all entities and train on use.

141. Create Communication Mobile “Hot Spots”

**ACTION:** Enter into an agreement with mobile carriers to create hot spots throughout the County that will be available for public use should the regular system go down. Consider linking this to future 5G service.

**TASK I:** Appoint someone in the County to work with mobile carriers to communicate needs.

**TASK II:** Work with community planners on implementing public Wi-Fi hotspots around schools, community facilities and public areas such as parks and recreation facilities.
142. Deploy Mental Health Experts in Bay Schools

**ACTION:** Make available mental health providers for each school in Bay County, to include two PhD Clinical Psychologists, Licensed Marriage and Family Therapists, Licensed Mental Health Counselors or Licensed Clinical Social Workers per school (as of April 2019, there are 34 open schools) in K-12 Bay District Schools. This would enable the school to better respond to the mental health needs of the children. Many are displaced and acting out. Some are withdrawn depressed or not able to concentrate due to issues presented by Hurricane Michael.

**TASK I:** Identify funding sources for immediate needs already identified by the Bay District Schools Assessment. There is a need for two PhD Clinical Psychologists, Licensed Marriage and Family Therapists, Licensed Mental Health Counselors or Licensed Clinical Social Workers per school (as of April 2019, there are 34 open schools) for the FY19/20 School Year.

**TASK II:** Conduct an inventory of all mental health and social health providers prior to and post Hurricane Michael in the Bay County area that can support this unmet need. Determine staff shortages and disciplines where additional professionals are most needed. Compare capabilities with all BDS schools needs to determine how they are currently supporting mental health and what the long-term requirements are.

**TASK III:** Locate funding sources to hire professionals for mental health support in all K-12 Bay District Schools.

**TASK IV:** Work with local colleges and universities to partner with the new mental health programs they offer, aimed at delivering mental health interns and professionals to Bay District Schools.

143. Implement Innovative Mental Health Services FSU, FSU-PC, GCSC

**ACTION:** Florida State University Panama City (FSU-PC) College of Social Work is proposing specific programs geared at providing assistance to Bay District School students such as summer camp opportunities to offer HEART- an art therapy intervention program, and Journey of Hope- a more intensive program specific to trauma and other trauma and grief programs that can be infused into BDS relatively quickly. Initiative would train FSU-PC students, FSU volunteers, and interns to deliver these programs for maximum coverage both during the summer 2019 and during the 2019-20 school year as needed. Programs would be attached to the Multi-Disciplinary Evaluation and Consulting Center at FSU-PC.

**TASK I:** Locate and institute funding immediately to hire and build infrastructure that would supervise operations.

**TASK II:** Contact FSU-PC College of Social Work to discuss specific programs that can be fast tracked for the summer.

**TASK III:** Address sustainability issues early in the operation of the center.
144. Implement Advanced Mental Health Training and Disaster Research through the MDC- FSU, FSU-PC, GCSC

**ACTION:** FSU-PC has presented a new model geared to train and retain new talent in the area of mental health through a multi-disciplinary center (MDC) that offers mental health advancement programs. This center would also tie to a research program that studies and assesses hurricane disaster areas and the socio-economic effects they have on the surrounding population. The FSU-PC initiative would attract and incentivize social work students to come to Bay County to complete their BSW and continue on with their MSW by completing internships within Bay District Schools. This would support a critical need in K-12 Schools to have mental health support in every school and support a dire need to expand the mental health workforce, which is currently experiencing a shortage. Upon completion of the internship, licensed staff and social workers could remain as full-time members of the staff, facilitating a “grow from within” approach.

**TASK I:** Conduct an inventory of all mental health and social health providers prior to and post Hurricane Michael in Bay County and determine staff shortages and disciplines where additional professionals are most needed. Include all schools to determine how they are currently supporting mental health issues.

**TASK II:** Identify immediate funding that FSU-PC can use to launch summer programs as “phase 1” of the multi-disciplinary center initiative.

**TASK III:** Work with the Dean of Faculty at FSU-PC/FSU Tallahassee, President of GCSC and Bay District Schools to obtain specific design needs for mental health degree programs to accommodate and connect internships that could support Bay District Schools and supplement mental health staffing shortages in Bay County.

**TASK IV:** Look for immediate funding sources to institute “phase II” to open the multi-disciplinary center and expand programs. This will enable the hiring of a psychologist and licensed social worker to create the infrastructure needed at FSU-PC to drive the degree programs for launch in spring 2020.

145. Implement an Engineering, Science, Technology and Advanced Workforce Center at FSU-PC

**ACTION:** FSU-PC is proposing an Engineering, Science, Technology and Advanced Workforce Center for Resilient Infrastructure and Emergency Response that will enhance higher education opportunities for aerospace, cyber security and advanced manufacturing. Training will partner with the military, support higher paying technical jobs, and improve the economy by attracting a high-end industrial market to the area.

**TASK I:** Work with the local state university and colleges to establish which degrees and workforce training programs are resulting in new employment opportunities.

**TASK II:** Cooperate with local chambers of commerce, military entities and others working on new entrepreneurship and business centers to expand educational training programs to meet new demands for engineering employment.

**TASK III:** Identify potential locations and initiatives downtown that can connect research to programs. Discuss with FSU-PC Dean and the Dean of Faculty.
146. Build FSU-PC Campus Housing

**ACTION:** Expand the student housing at Florida State University Panama City and Gulf Coast State College. Recognizing their role in the response to Hurricane Michael, FSU-PC student housing is being looked at in a more resilient way to mitigate for future storms.

**TASK I:** Evaluate opportunities for expanding student housing at FSU-PC and the local colleges to determine the extent of student housing and what could have been achieved if more facilities were available post Hurricane Michael.

**TASK II:** Coordinate with FSU-PC and Gulf Coast State College to determine the best programs that could be implemented in support of the community with the expansion of student housing. This could include health, mental health, information technologies and other programs to increase economic stimulation to the area.

**TASK III:** Apply for a CBDG Grant to support housing around the university.

Primary Sponsor: Countywide
Estimated Cost: $26,392,000.00
Source of Funding: HUD CBDG-DR, Private Investment
Initiative: Special Purpose Community Housing Projects

147. Expand the Head Start Program

**ACTION:** Make the community more resilient by expanding the head start program to municipalities in other areas of the County that have low-income populations. The head start program is a nationally funded program that supports early learning, health and development screening and supports families with goals such as housing stability, continued education and financial security.

**TASK I:** Consult with the Department of Education and Early Learning Coalition of Northwest Florida on specifics to start the expansion process.

**TASK II:** Identify areas in the County that would support a population base for a head start program and survey for potential participants.

**TASK III:** Ensure infrastructure can support the program, materials, transportation and staffing.

Primary Sponsor: Bay County
Estimated Cost: $12,500,000.00
Source of Funding: HHS, DOH, DCF
Initiative: Community Resiliency

148. Expand Emergency Operations Centers

**ACTION:** The EOC should be expanded to include hardened resource pods in municipalities throughout Bay County activated for use within 72 hours of storm landfall. EOC resource pods should be hardened and contain generators, chainsaws and communication equipment. The EOC resource pods should all be networked for communication leading back to the main EOC.

**TASK I:** Work with community leaders looking to implement the EOC concept and ensure locations are hardened with communication back-up, generators, fuel, emergency supplies, chainsaws and adequate space for health personnel to triage if necessary.

**TASK II:** Meet with local health officials to determine what information should be stored or uploaded to the EOC support buildings prior to a storm to include records, medical supplies and Rx needed to triage and support patients.

**TASK III:** Ensure EOC appendages are following a structured call/communication chain that will disseminate all information up and down to the main EOC.

Primary Sponsor: Bay County
Estimated Cost: TBD
Source of Funding: HUD, DEO
Initiative: Public Safety and Mission Support
149. Create Business Recovery Center with Medical Grade Office Space

**ACTION:** Create 100,000 sq. ft. of medical grade office space to be activated within two weeks post storm. Each room used for medical purposes should have a sink and accommodate two beds. Ensure there is room to support minor lab work and rudimentary imagery equipment. Provide office space that would enable providers to receive patients and handle records and associated logistics to support patient caseloads. Facility will stay operational until conditions be returned to pre-storm patient care levels. Acquire portable clinics that have two beds, equipment and a fax machine to send and receive private patient data.

**TASK I:** Meet with local health care and mental health officials to determine the number and type of offices needed to support the medical space in a business recovery center.

**TASK II:** Identify a location and issue public RFI's on the design and construction of a medical clinic facility.

**TASK III:** Determine the costs and care requirements to develop mobile clinics that can be immediately deployed in the most affected areas of the community.

150. Standardize Water Connections for Hospitals

**ACTION:** Standardize the connectors used to connect water sources with intake to the hospitals to include hardened storage for materials when not in use. This may include connecting to the water tanks from trucks.

**TASK I:** Evaluate the various standards and connectors used for water delivery to medical care centers.

**TASK II:** Ensure the connectors ordered fit the intake for both the hospitals and water tanks.

**TASK III:** Communicate needs/standards to appropriate agencies to pass legislation ensuring the water delivery connectors are standardized and utilized.

151. Panhandle Aging Research Center FSU-PARC, FSU-PC

**ACTION:** This center will be a state-of-the-art research facility located in a planned residential community that primarily serves age 55 and older adults. The purpose of the center is to research and test initiatives that will promote “successful longevity.” Such research is fundamentally necessary as life expectancies increase and as those who live into their 70’s, 80’s and 90’s seek to maintain physically active and mentally stimulated lives. Upon build-out, the FSU-PARC will expand the housing market, will create more than 130 permanent jobs in the facility, will enlarge the regional tax base and will increase the health science curriculum and degree offerings at the FSU Panama City Campus. The center is intended to be a facility of regional significance in Northwest Florida and is therefore anticipated to serve all of counties in Northwest Florida as well as shape aging and caring strategies in the State of Florida and around the globe.

**TASK I:** Identify funding sources and apply for grants.

**TASK II:** Identify location for program.

**TASK III:** Initiate program.
152. Provide Enhanced Transportation for Hospitals

**ACTION:** Secure large passenger vehicles or buses that can be converted to transport or evacuate large numbers of patients to include those who cannot sit upright. Vehicles should be equipped with a communication source to facilitate contact with the main EOC during evacuation. Consider contracted services for transportation and drivers to cover a 24hr period. The State has some resources available (buses) on hand for use with prior authorization. Contracts with Air Support to facilitate the same need should be considered.

**TASK I:** Research large passenger vehicles that can accommodate non-upright patients available in the local community. Establish contracts specifically for emergency response use to include drivers to cover 12hr shifts.

**TASK II:** Familiarize procedures to access the buses in Tallahassee (state resources) and how to activate their deployment for use post-storm.

**TASK III:** Issue RFI’s for the design, construction and procurement of special purpose passenger vehicles for emergency mass transport.

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153. Enhance Security for Pharmaceuticals and Hospital Staff During Emergencies

**ACTION:** Provide security for staff and critical resources within 24 hours during emergency situations such as in areas of the medical system and hospitals that maintain class C pharmaceuticals post storm. These areas should have assigned armed security (supporting 12hr shifts) to fend off people who attempt to access prescriptions and may be violent.

**TASK I:** Establish areas within the medical system that need to be secured for protection of staff dispensing resources and medication.

**TASK II:** Identify potential armed services that can be contracted for emergency response to shelter in place at hospitals within 24 hours after a storm (plan for enough staff to cover 12-hour shifts).

**TASK III:** Establish and update databases of local patients with critical medical needs prior to a community emergency to be sure that medicines can be dispensed with accuracy. Inspect semi-annually.
154. Create and Provide Incentives to Attract and Retain Medical Professionals

**ACTION:** Establish tax or housing incentives for a specific time period to attract providers. Target younger physicians just coming out of school, married without children just starting their practice, and establish a "grow from within" approach. Establish a federally sponsored, 5-year hurricane write-off loan program, similar to the "service in rural areas" loan forgiveness program but with disaster terminology to support the pay-off of student loans. Consider student loan forgiveness, retention bonuses and sign-on bonuses.

**TASK I:** Conduct an inventory of all health care providers prior to and post Hurricane Michael in the Bay County area and determine staff shortages and disciplines where additional professionals are most needed.

**TASK II:** Interview health professionals and students to determine the most desired incentives and methods that could result in increased interest to move to the area and stay in the area.

**TASK III:** Establish a funding source or a specific pool of money in the County earmarked to support incentives.

155. Establish a New 150 Bed Micro-Hospital in Panama City Beach

**ACTION:** Build a micro hospital in PCB, possibly on Hwy 79 or 98. This area needs a 150-200 bed hospital to meet increased population needs in the area and to prepare for development supporting the growing 55+ (aging) community. Micro-hospitals are small facilities that focus on emergency or middle to medium high acuity care (higher than urgent care, but lower acuity than a trauma center). They have everything needed to operate an emergency department, imaging equipment and lab services. This would be a private venture, but the City and County should consider supporting the need due to current and anticipated growth (shift in numbers because of the storm). A research component to the hospital will attract specialty care providers, stimulate economic growth and provide service to the many veterans currently traveling to Biloxi, MI or Tampa, FL to receive specialty care.

**Primary Sponsor:** City of Panama City

**Estimated Cost:** $5,000,000.00

**Source of Funding:** HUD, DEO, HHS, DOH, DCF

**Initiative:** Economic Redevelopment

**Primary Sponsor:** Panama City Beach

**Estimated Cost:** $260,000,000.00

**Source of Funding:** Private Investment

**Initiative:** Health Care Facilities and Service Improvements

**TASK I:** Meet with local health care representatives and mental health officials to determine the number and type of services and care units needed to support the population.

**TASK II:** Consult with private investors to acquire potential location for the build.

**TASK III:** Issue public RFI's on the design and construction of a medical clinic facility within the County to address the current and future needs for the growing population.
156. Offer Incentives to Attract and Retain Behavioral Health Providers

**ACTION:** Create incentives to maintain and attract behavioral health providers at the various levels: doctor, master, 4-year and non-degree. Potential options are to increase salary range, offer tax incentives, pay relocation costs, establish a federally sponsored "five year" hurricane write-off loan program (similar to the "service in rural areas" loan forgiveness program, but with disaster terminology), student loan forgiveness, retention bonuses and sign-on bonuses. Requesting funding to cover two positions that can supervise upcoming staff for licensure. Request funding for a behavioral analyst.

**TASK I:** Conduct an inventory of all behavioral and mental health care providers prior to and post hurricane in the Bay County area and determine staff shortages and disciplines where additional professionals are most needed.

**TASK II:** Interview mental and behavioral health professionals and students to determine the most desired incentives and methods that could result in increased interest to move to the area and stay in the area.

**TASK III:** Hire supervisory staff (LCSW and marriage and family counselors) to oversee licensure of upcoming staff.

**TASK IV:** Establish a funding source or specific pool of money in the County earmarked to support incentives.

Primary Sponsor: Bay County  
Estimated Cost: $2,000,000.00  
Source of Funding: HHS, DOH, DCF, HUD, DEO  
Initiative: Economic Redevelopment

157. Establish Block Housing for the Behavioral Health Community

**ACTION:** Establish block housing for the behavioral health community, to prevent further attrition of staff. Establish block apartment rental agreements or earmark new community affordable housing, tiny housing or a trailer park community immediately, where an area is dedicated to house the behavioral health community. The ability to live by one another facilitates mental health support for compassion fatigue and stress from critical staffing levels. Many health care professionals are leaving the area due to no housing or no available rental options and lack of facility space to practice. Many of the providers used to live close to the epicenter of Panama City in order to serve disadvantaged populations but lost their houses or rental units during the storm. They are now forced to commute a considerable drive time because of rental costs. Due to spring break and summer tourism, they are losing their temporary back-up rental options because they are being forced out due to monetary rental increases exceeding their means.

**TASK I:** Conduct an inventory of all Bay County mental health care providers prior to and post hurricane then determine position shortages and identify accommodations.

**TASK II:** Interview mental and behavioral health professionals to determine the most desired locations and accommodations that could result in increased interest to move to the area and stay in the area.

**TASK III:** Fund a telemedicine system that can support staff during shortages to connect to licensed specialty providers across the state and nation that can support care. This system will also mitigate for future storms with care, records access and prescribing Rx.

Primary Sponsor: Countywide  
Estimated Cost: $9,720,000.00  
Source of Funding: Private Investment  
Initiative: Special Purpose Community Housing Projects
158. Conduct Assessment of Senior Programs and Facilities

**ACTION:** Recommend an assessment be done to identify the capacity needs for the elderly in Bay County and facilities to support independent, assisted living, nursing care and recovery care to bring capacity up to adequate levels for the current and rising elderly population. Nursing homes are at less than half their pre-storm capacity. Many elderly residents are still living out of the County.

**TASK I:** Conduct an inventory of all elderly health care facilities, assisted living facilities and nursing care providers prior to and post hurricane in the Bay County area. Determine staff shortages and accommodation shortages where additional capacity would have maximum positive impact on the community.

**TASK II:** Work with community planning officials in the County and municipal areas to establish proper zoning and legislation that would encourage the construction of permanent care facilities for the elderly throughout the area.

**TASK III:** Coordinate training programs with the local colleges and universities to produce professional nursing staff for the elderly.

159. Implement Telemedicine System for Mental Health Services

**ACTION:** Implement a telemedicine system for mental health providers to use to support mental health care, which provides connections to distant professional health care services to include diagnosis and prescription support. The InTouch system for example, supports inkstand file sharing, scheduling, credit card payment and is HIPAA secure. This can also support mental health operations during critical staffing shortages while awaiting the hire of specialist positions such as child psychiatrists.

**TASK I:** Evaluate local health care facilities and the shortages of equipment health records and health care providers whose services could be augmented and assisted by remote telemedicine technologies.

**TASK II:** Work with local and state health care officials to create a cost-effective plan for implementing telemedicine technologies throughout the Bay County area hospital and health facilities.
160. Build a Regional Hurricane Center

**ACTION:** Build a regional hurricane center designed with stringent ICC-500 design standards similar to the FASANO regional hurricane center built in 2009 in Hudson County Florida for $7,200,000. The facility would be self-sustaining for 72 hours, hardened to resist 190mph winds and the impact of wind-borne debris. It would be capable of housing 1,000 occupants, have a commercial kitchen, a health clinic, underground potable water tanks and a sanitary hold. This facility could support sheltering for the northern population of the state.

**TASK I:** Evaluate the need for a hurricane rated emergency center for the general public as it compares to existing emergency facilities such as schools and other public buildings.

**TASK II:** Coordinate with DEM, city and county officials on optimal locations and design specifications for an emergency facility.

**TASK III:** Work with local economic development and health care officials to evaluate possible uses for a community emergency center during non-emergencies.

Primary Sponsor: Bay County
Estimated Cost: $7,200,000.00
Source of Funding: DOACS, DEP, HHS, DOH, DCF, HUD DEO
Initiative: Public Sheltering Services

161. Expand Interdisciplinary Community Training Program for Health Care Staff and First Responders

**ACTION:** Expand current interdisciplinary community training program for medical, behavioral health and law enforcement personnel to include transportation, evacuation, contracted personnel, EOC operations, local radio stations, military and state disaster response components and other needed entities in a mock training scenario (to include Baker Act training for key personnel and volunteers).

**TASK I:** Meet with local chambers of commerce, colleges and universities to determine existing programs or new programs that could be added to assist with strategic community planning.

**TASK II:** Work with other strategic initiatives being investigated to support community innovation and health program development.

**TASK III:** Create a community grant assistance program with professional consultants to assist with SBA and FEMA grant application writing.

Primary Sponsor: County Higher Education System
Estimated Cost: $1,750,000.00
Source of Funding: FEMA
Initiative: Public Safety and Mission Support
162. Establish Med-Psych Crisis Unit

**ACTION:** At one of the hospitals, open an 18-bed med-psych unit to support the needs of the community and to prevent crowding in ER’s. Outfit the hospital with a social worker that can help with “Baker Acted” patients and a psychiatrist on call to diagnose patients and write the appropriate scripts for medication. This will free up beds in the hospital that are being filled by this population. Telemedicine option may be an alternate accommodation if a psychiatrist cannot be staffed.

**TASK I:** To reflect FTEs, design unit to support the following staffing for 18 beds: 1.5 psychiatrists, two ARNP, 11 Nurses, four licensed clinicians (one licensed person to supervise), two bachelor-level case managers and 15 techs.

**TASK II:** Coordinate with county and municipal health officials to determine the most optimal facility to support the med-psych unit. Current mental health in-patient facilities do not support medical care, only mental health care.

163. Expand Life Management Center and Step-down Care

**ACTION:** Expand Life Management Center’s 12 bed group home to 15 beds to facilitate more patients to adequately support the current population in a post disaster scenario. In conjunction, create a corresponding intermediate step-down care space or a supportive housing program that will help those leaving a medical setting, jail or substance abuse program. Consult with the Life Management Center to oversee support facilities that would be at scattered sites, with counseling to re-enter the mainstream society, i.e. fill out social security applications, fill out job applications, make doctor appointments, etc. Housing occupancy would be limited in duration.

**TASK I:** Evaluate existing short-term care facilities in the Bay County area and surrounding areas to determine capacity shortfalls and locations. Look to pre-hurricane, post-hurricane and future demand.

**TASK II:** Coordinate demand for facilities with Medicare and Medicaid stipulations and mental health requirements throughout the community.

164. Expand Mental Health Mobile Services to Mental Health Crisis Response Team

**ACTION:** Increase crisis intervention training and service to include treating patients over age 25. At present, this program only treats patients 0 to 25 years of age. Expand staffing and training of law enforcement officers; to include specific training on the Baker Act process.

**TASK I:** Take an inventory of law enforcement personnel and mental health professionals working in the community pre and post hurricane, and staff and train professional response personnel.

**TASK II:** Work with local colleges and universities to develop programs for education on crisis intervention.

**TASK III:** Expand the Mobile Mental Health Crisis Response Team directives to include treating patients of all ages.

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**Primary Sponsor:** City of Panama City  
**Estimated Cost:** $3,000,000.00  
**Source of Funding:** Private Investment  
**Initiative:** Mental Health and Community Support

**Primary Sponsor:** City of Panama City  
**Estimated Cost:** $8,921,000.00  
**Source of Funding:** Private Investment  
**Initiative:** Health Care Facilities and Service Improvements

**Primary Sponsor:** Bay County  
**Estimated Cost:** $1,500,000.00  
**Source of Funding:** HHS, DOH, DCF  
**Initiative:** Mental Health and Community Support
165. Build a 5,000 sq. ft. Facility for the Lifeline Drug Treatment Program

**ACTION:** Build a 5,000 sq. ft. stand-alone dormitory with minimum security for people with a substance abuse diagnosis who are currently being housed at the county jail. The stand-alone facility will allow for the expansion of the Lifeline Drug Treatment Program and facilitate the delivery in a more rehabilitative environment. Due to the lower level classification of participants in the program, the dormitory can be engineered at less cost than traditional jail dormitories.

**TASK I:** Interview local drug treatment program administrators to determine what additional capacity increases are likely due to the impact of the storm.

**TASK II:** Issue an RFI to determine the costs of designing and constructing a minimum security substance abuse facility and determine cost savings from including it alongside existing jail facilities.

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166. Harden Shelters for First Responders

**ACTION:** Harden current shelters or build new shelters for first responders; to include sleeping quarters, showers and power generators. Have these shelters in the larger municipalities located throughout the County. Shelters should account for pets if at all possible or have some component to support service dogs.

**TASK I:** Discuss plans with community professionals looking to deploy emergency management stations or operation centers to include some sleeping quarters and personal care facilities within or nearby. Include considerations and specifications for emergency first responder personnel to include service support dog facilities.

**TASK II:** Look at other initiatives available for sheltering first responders in the County to ensure best option is identified.

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167. Implement Counseling and Immediate Needs Distribution Program

**ACTION:** Assist county residents with disaster and mental health counseling and "immediate need" items and supplies. Distribute information and have several churches throughout Bay County serve as alternating points for gathering to host disaster counseling and mental health guided support groups twice a month as a post-storm response.

**TASK I:** Take inventory of church facilities in the Bay County area that are willing to assist and are capable of assisting with disaster counseling. Coordinate with mental health professionals to oversee counseling sessions and small groups.

**TASK II:** Determine the information and resources that are required to include churches in the community's plans for responding mental health concerns.

**TASK III:** Include and invite church officials to participate in new training programs offered by local colleges and universities for dealing with disaster and mental health within the community.
168. Establish a Private Endowment for Residents Awaiting Disaster Financial Assistance

**ACTION:** Establish a private endowment through a local non-profit organization to provide immediate financial assistance to eligible residents while their FEMA individual assistance claims are funded.

**TASK I:** Meet with local banks and non-profit associations to determine the possibility of establishing rapid short-term funding processes.

**TASK II:** Educate the public by disseminating information on available public financial assistance.

**Primary Sponsor:** Bay County  
**Estimated Cost:** $5,000,000.00  
**Source of Funding:** Private Investment  
**Initiative:** Community Resiliency

169. Create a Special Teen Center for Counseling and Other Services

**ACTION:** Create a 2,000 sq. ft. teen center for the high school population that will provide space to connect to include a technology area to accommodate studying, reading, conducting large support group meetings, and providing individual counseling and scholastic tutoring. Center can sponsor big brother and big sister programs and other volunteer activities. Location may be a part of another building but should consider the noise and energy level of age group (no overlapping space). The center should preferably connect to exercise facilities and outdoor recreation. Equip the center with couches, pool tables, foosball tables and two glass enclosed study/tutoring/counseling rooms.

**TASK I:** Identify best location for a teen center facility in the County.

**TASK II:** Work with local schools, colleges and universities to determine and establish framework for scholastic tutoring and career mentorship.

**TASK III:** Work with local mental health professionals to include tools and staffing to assist with programs for emotional grounding, counseling and substance abuse prevention.

**Primary Sponsor:** Bay County  
**Estimated Cost:** $200,000.00  
**Source of Funding:** HUD, DEO, HHS, DOH, DCF, DOE  
**Initiative:** Community Quality of Life

170. Build a Community Resiliency Center

**ACTION:** Build a Community “Resiliency” Center strategically placed in Bay County. This center can be designed to address the greatest needs of the area. This facility would serve to support the community with a hardened core that houses a teen center, senior center programming, a community wellness center (access to fitness equipment), childcare and have satellite elements for workforce readiness training programs, adult literacy programs, art classes, and/or medical and social services, private business (coffee shop/restaurants), and housing, depending on location needs. In a post storm scenario these core elements can support sheltering for all ages and childcare for first responders. Additional centers or elements to support community programming can be added or deleted according to the needs for that area. Key concept: should be located near public transportation and be interconnected with other resiliency centers via a communication network. Also, consider the POWER 52 design for solar power back-up.

**TASK I:** Conduct a study to determine the size and best location for a Community Resiliency Center facility in order to provide day care facilities, public showers, public Wi-Fi and common areas.

**TASK II:** Coordinate with various organizations in the community: Center for the Aging, United Way, Early Learning Coalition of Northwest Florida, Career source, health care facilities, Bay District Schools other business stakeholders to determine needs, staffing and program infrastructure that would be most beneficial.

**TASK III:** Work with local community professionals to establish demand and capacity constraints for the facility size and location in relation to other resiliency centers.

**TASK IV:** Contact an architecture firm that has experience with designing a coastal resiliency network to assist with planning.

**Primary Sponsor:** Bay County  
**Estimated Cost:** TBD  
**Source of Funding:** HUD, DOE, HHS, DOH, DCF  
**Initiative:** Community Resiliency
171. Enhance Parks and Playground Equipment

**ACTION:** Restore parks and playground equipment to create a safe play space for the community and youth. Pursue grants that improve park setting to include the provision of an amphitheater to be used for the performing arts and community events.

**TASK I:** Meet with municipal governments and county officials to map out existing parks and recreation areas in the facility.

**TASK II:** Determine the damage caused by the storm to existing parks and recreation areas and what is required to restore these areas.

**TASK III:** Meet with local public and mental health professionals to determine whether parks and recreation facilities could be included with other community infrastructure such as teen centers and community resiliency facilities.

172. Establish Childcare Business Training

**ACTION:** Over one year, provide/fund a quarterly business training opportunity "one-week workshop" for 20 citizens per session, for individuals interested in starting an in-home childcare business. Offer a 30 hour DCF family day care home training course + .5 hours of child literacy training and a six hour CPR course. Offer background checks (fingerprinting) and staff oversight to connect participants in a one stop workshop with potential financial partners offering micro-enterprise loans to individuals starting their own in-home childcare center. Requesting sponsorship of program offerings and participant application fees/background check to support a critical need for a pool of providers in the County. Small fees will be left for participants to pay for additional online class that rounds out training for licensure to work at a commercial childcare center.

**TASK I:** Create a study on demand and available daycare facilities before and after the hurricane.

**TASK II:** Work with local colleges to include childcare in local training programs.

**TASKS III:** Collaborate with chambers of commerce and municipal officials to sponsor a workshop until critical staffing pools are established, streamline licensing and inspection processes.

173. Enhance Security for Domestic Violence Programs

**ACTION:** Adding security measures to the Salvation Army facility in support of the domestic violence program will offer protection for domestic violence victims. Prior to the storm, the building had been hidden away by a large wooded area. The loss of trees now makes their facility visible from a great distance, thus making it easier for people and abusers to watch victims coming and going from the facility. This keeps victims at risk of being found by their abusers.

**TASK I:** Determine the extent of domestic violence program participation and facility requirements in the community by meeting with the Salvation Army facility and with local health and mental health organizations.

**TASK II:** Determine what security measures could be implemented to increase the safety of program participants.
174. Provide Training on Emergency or Strategic Operations Planning

**ACTION:** Provide free educational conferences or workshops to educate non-profit and private for-profit business leaders on how to develop effective strategic plans and emergency operation plans that include business continuity plans and clear steps for seeking assistance from SBA and FEMA.

**TASK I:** Meet with local chambers of commerce, colleges and universities to determine existing programs or new programs that could be added to assist with strategic community business planning.

**TASK II:** Work with other strategic initiatives being investigated to support community innovation and business expansion such as an IT/Entrepreneurship Center.

**TASK III:** Create a community grant assistance program with professional consultants to assist with SBA and FEMA application writing.

175. Designate Portable Housing Units for Disaster Relief Organizations

**ACTION:** Equip incoming volunteer groups with utility support for trailers, shelters or tents that can be set up in parking lots of churches. County support to provide generators, gas for generators, run power lines, provide shower and laundry trailers, toilets, outhouses or honey wagons will support a volunteer workforce that will help with clean-up after a storm. Alternatively, have portable housing in place to support a set amount of volunteer staff that the churches bring in for disaster relief. This should be provided for the first 60 days of a Cat 3 or higher storm. Many churches have volunteers that are sent from parent organizations outside of the area but these churches have nowhere to house them if the affected area’s church is damaged.

**TASK I:** Evaluate the demand for emergency support and volunteers post Hurricane Michael, where the demand was most critical and determine how many rooms were needed as a framework for future needs.

**TASK II:** Coordinate with local municipal and county officials, as well as hotel owners to create a new communications plan that will better match available facilities after the storm with volunteers and health care professionals.

**TASK III:** Conduct public hearings and RFIs for interest from the local community who may be interested in providing emergency housing support.

**TASK IV:** Connect with other churches that have portable housing units and land to support volunteers.
176. Harden Arc of The Bay Facilities and Integrate Electronic Records System

**ACTION:** The Arc of the Bay was severely damaged by the hurricane. They received $200,000 in damages with $150,000 financial loss in the 4th quarter of the calendar year of 2018. They also lost most of their files due to water damage. They are requesting hardening of their space or an alternate facility for their population who has special needs to enable Arc to shelter them with family members and/or care providers. An electronic file system is also requested to support protection of record keeping. A facility would require special lighting, rails, wider doorways and Hoyer lifts.

**TASK I:** Assess the damage incurred by the storm and get estimates for hardening the facilities, sheltering and expanding to support more of the disabled population.

**TASK II:** Establish plans that support evacuation of those not sheltering to pre-determine affordable locations as there are a lot of economically disadvantaged families.

**Primary Sponsor:** City of Lynn Haven  
**Estimated Cost:** $23,500,000  
**Source of Funding:** HHS, DOH, DCF, HUD, DOE  
**Initiative:** Health Care Facilities and Service Improvements

177. Provide Program and Transportation Support to the Elderly Population

**ACTION:** Fund programs, communication hot lines and transportation assistance specifically addressing the elderly population in Bay County. Such programs may include dances/socials. Can partner with churches and Council on the Aging. Landscape has changed and the elderly may be isolated in their homes after a major disaster. A Dial-a-Ride transportation system that can offer point of destination transportation for a scaled fee will enable the aging and disabled community to go to and from their destination.

**TASK I:** Conduct an inventory of all elderly health care facilities, veteran care facilities, assisted living facilities and nursing care providers prior to and post hurricane in the Bay County area. Identify what programs are currently being offered at these facilities. Examine and poll the usefulness, timeliness and interest in the current transportation support for the elderly and disabled.

**TASK II:** Work with behavioral health partners trained on the mental health needs of the aging community to design and coordinate: support hotlines, small groups and social interaction programs.

**TASK III:** Work with community planning officials in the County and municipal areas to establish proper zoning and propose legislation that would encourage the construction of permanent care facilities for the elderly throughout the area.

**TASK IV:** Coordinate training programs with the local colleges and universities to produce professional nursing staff for the elderly that can assist with providing programs and support to the elderly.

**Primary Sponsor:** Bay County  
**Estimated Cost:** $12,000,000  
**Source of Funding:** Income Security & Soc Svs HHS-2019-ACL-AOA-DASG-0313 Disaster Assistance for State Units on Aging (SUAs)  
**Initiative:** Community Resiliency
178. Establish an Effective Data Tracking System for County Mental Health Issues

**ACTION:** The system will increase accuracy pre/post storm to identify statistics regarding those Baker Acted, PTSD, deaths and time frame to storm ratio, (specifically elderly) and other occurrences of behavioral anomalies that may be attributed to the disaster. Partner with FSU-PC to acquire data to create preventive and treatment programs to accurately assess the mental health in the five divisions of the County’s population (with further regard to socio-economic status).

**TASK I:** Work with local health facilities and mental health specialists to determine how data is currently collected, who collects the data and gain insight into making the process more efficient.

**TASK II:** Implement a pilot project that collects and presents data to various mental health officials in a secure, accurate manner. Consider the use of a telemedicine program to track data.

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<td>Initiative: Mental Health and Community Support</td>
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179. Establish Centralized Feeding Capabilities

**ACTION:** Centralize feeding capability in kitchens in Panama City and Panama City Beach. Identified facilities would house a kitchen that could provide food (post disaster feeding) to many entities throughout the County. Mercy Chefs would run the facility. Such facilities would support any school that was unable to provide food at their institution because of disaster or construction and utilize excess food from schools in the Back Pack Program that sends food home with students in need. Designated facility or facilities would have the ability to support large community events as well.

**TASK I:** Coordinate with county and municipal officials to examine current food production facilities and community center activities that could support such programs. Research and train entities on Feeding America Backpack Program.

**TASK II:** Work with local restaurants, schools and the municipalities to create a program to utilize unsold food items produced each day and create a food pickup and distribution network.

**TASK III:** Coordinate this program with other programs in the community such as a community resiliency center.

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<th>Primary Sponsor: Bay County</th>
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<td>Initiative: Public Sheltering and Services</td>
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180. Create a Pet Shelter for Evacuations

**ACTION:** Create a pet shelter that would be sponsored by the County and provide care for pets of the citizens evacuating due to a hurricane or large-scale event requiring evacuation. When an evacuation order is issued, the citizen could drop off their pet for up to 30 days. Care would be paid for and subsidized for those who can’t afford it. This would also free-up space in other shelter areas across the County, which is some cases becomes the schools. By not having animals in the schools, it will reduce damage costs. The County can also consider an RFP for bidding purposes to prepare to receive animals. Farms along the evacuation route could bid with the County to house animals for a small fee per month. That would provide for larger animals like horses while not incurring the expenses to maintain this facility during none response periods.

**TASK I:** Create a study program to determine the feasibility of this project, what animals previously created the most challenges for shelters and the best location for this type of facility. Local animal care professionals such as veterinarians should also be involved to discuss health issues with local animals.

**TASK II:** Create an RFI with local farms and landowners to determine potential interest in creating animal shelters along with capabilities and credentials for animal care.

181. Expand Awareness of RxOpen Application

**ACTION:** Request funding to support education to providers and the general public on this internet application (App) RxOpen. Using training, billboards or commercial sources, provide education to health care providers and the Bay community regarding a smart phone application that can identify all open pharmacies in a disaster-stricken area, as well as Red Cross Shelters.

**TASK I:** Inform the community on the use of the RxOpen App through advertisements on billboards and through movie theaters ads. Work with the RxOpen organization to publicize their information.

**TASK II:** Create brochures and training clips that can inform health care providers on the potential use of the nationally sponsored application.

182. Expand the Living Free Community Training Program

**ACTION:** The "Living Free Community" (LFC), is a faith-based treatment program currently offered in the jail system that connects individuals and families who struggle with life-controlling problems, depression, substance abuse, etc. to counseling, education and connection to community outreach. LFC provides an avenue for local churches to join forces with the business community, law enforcement and the court system to use intervention techniques with a nationally recognized high success rate rehabilitation program. The project is looking to expand from 30 participants to 70.

**TASK I:** Contact the County Jail to ensure accurate expansion numbers and current space for expansion.

**TASK II:** Interview local drug treatment program administrators to determine what additional capacity increases are likely due to the impact of the storm.
183. Action: Fund or Waive Permit fees for Portable Housing Units for Post Storm Volunteers and RV Locations

**ACTION:** This is an effort to request or waive inspection fees for two portable housing buildings that were specifically obtained to support up to 30 people or volunteers post storm. These units were donated to a local church and were available shortly after the storm but went unused because of the hold-up on permitting. Also, request inspection and county support for a 20-acre lot that can support RV’s (with sewer and water hook-ups).

**TASK I:** Interview local county and municipal officials on the current processes and timelines for acquiring zoning and permissions for emergency housing.

**TASK II:** Work with local officials and faith based organizations to create special legislation that accelerates waivers of fees in cases of community disasters.

**TASK III:** Propose a committee comprised of local faith based organizations that can communicate availability of resources and requests to and from the County.

184. Construct Community Skate Parks

**ACTION:** Build four skate parks of varying sizes adjacent to parks around Bay County. Each park will utilize 3,000-6,000 sq. ft. and support vertical, street and open space obstacles, some with bowls, some with multiple bowls. They should be designed to invite people in. Each skate park can be of different sizes and located in relation to city parks and recreational facilities.

**TASK I:** Identify locations in the County for one large, one medium and two small skate parks.

**TASK II:** Obtain consultant to counsel on design elements.
The Housing Branch has been tasked with two primary objectives. The first objective is to find solutions for the immediate housing crisis created by the disaster. The second objective is to develop a long-term plan to provide sufficient housing units to the residents of Bay County. This includes low to moderate-income residents. The Branch has focused on actions that center around sustainable, resilient housing options for residents in all of the communities in the County. Housing is a critical component to the overall recovery effort that is foundational to the economic, social and health benefits of residents. Understanding the criticality of housing, this branch has attempted to identify actions that can be immediately implemented and are scalable for the long-term recovery. The actions identified and proposed also promise to mitigate blight from the communities and provide livable and safe neighborhoods allowing residents to return to normalcy and support the critical need for workforce growth and economic recovery.
The immediate focus of the local Housing Branch has been the identification of potential solutions for the short-term crisis. Hundreds of families were forced to seek shelter in tents and other temporary structures. Many school children were forced to finish the academic year in horrible living conditions. The Branch has sought both innovative and fast track solutions to return families to a normal and healthy living environment. This return to an appropriate living environment is critical to maintaining the health and well-being in the community.

The Housing Branch has been working with private companies exploring several solutions for both short and long-term challenges. Several companies are offering innovative technologies and platforms that will provide affordable housing options. The Branch has engaged private groups to explore all types of housing units including 3D printing, micro-housing, modular construction, container housing and building techniques which focus on expedited construction of homes that far exceed building codes (including the optimum codes of Miami-Dade County).

A key solution being explored for immediate housing includes maximizing available parcels of land that contain modular or mobile home parks, many of which suffered massive damage. The redevelopment of these properties can be accomplished by creating significant incentives which will encourage private investors to provide affordable solutions to those in need. Identifying sites where immediate housing stocks can be rebuilt on a short or long-term basis is one of the quickest solutions to mitigate the housing crisis. Several locations have been identified as immediate sites to address the most urgent needs and provide much more resilient housing than was present before the disaster. These sites not only include properties owned by, or under the purview of the housing agency, but also other sites that can be acquired by local governmental entities and the housing agency. Other solutions have included the use of FEMA-provided temporary travel trailers, the use of undamaged hotel/condominium inventory and the potential short-term use of abandoned structures, such as big box retail outlets and other facilities, to meet urgent and future housing needs.

In addition to identifying immediate solutions for the housing crisis and assessing the damage to the County’s housing inventory, the Branch is also focused on long-term housing initiatives and plans. With a median home value of $210,400 and a median income of $64,300 providing adequate market rate affordable housing is an ongoing challenge for the County.

In the first quarter of 2019, Bay County issued over 6,900 building permits valued at over $130 million in response to Hurricane Michael. This was in addition to 640 permits for construction of new residential units and over 700 additional residential related building permits. These permits have a combined value of work to be performed in excess of $170 million. During the combined fourth quarter of 2018 and first quarter of 2019, the number of permits issued for residential repairs related to Hurricane Michael exceeded 12,000. With an estimated 60,000 homes sustaining some form of damage due to Hurricane Michael it is expected that these numbers will continue to grow over the months to come.

It is anticipated that the total residential reconstruction effort could exceed $10 billion over the next ten years. This includes anticipated reconstruction and recovery demands, as well as growth objectives related to economic recovery and the workforce that will be needed. Moderate-income housing and reconstruction permits will require the greatest investment due to the number of homes impacted. Reconstruction of low-income housing units and investment in blighted areas would require significant investment amounts as well.

Working with the Planning and Capacity Building Branch, the Housing Branch seeks to create housing initiatives that consider factors such as walkability to amenities, aesthetics, infrastructure, proximity to schools, greenspaces and other livability metrics. The Branch will continue to explore innovative development concepts that include work-live development plans, purpose use housing (i.e., military, senior and student housing) and more robust and attractive affordable housing.

Innovations in housing have created an opportunity to explore cost effective construction techniques and more resilient housing solutions. With these innovations, emergency housing could potentially become more rapidly available and more affordable. Historically, stored housing that is deployed in the aftermath of a disaster has not been cost effective, nor fully consistent with the needs of residents. The Branch explored more promising solutions such as container homes, tiny homes, 3D printing dwellings and new technologies that allow very resilient homes to be built very quickly at affordable prices. These solutions are expected to allow rapid low cost and long-term housing solutions.
Due to the normal rising cost of housing in a post-recession economy, Bay County was experiencing a shortage of low and moderate-income housing units prior to Hurricane Michael. Important characteristics of the heavily damaged communities are that the majority of housing units were built before 1990 and over 13% of the population lived in mobile homes. Unfortunately, older homes and mobile homes are much more susceptible to damage during natural disasters. Over 60% of all homes in the County were damaged or destroyed.

This massive amount of damage has caused an immediate housing crisis for a significant portion of the population. Immediately after the disaster, residents were moving into tents and makeshift structures or continuing to reside in unsafe homes exposed to the elements, with rapidly growing mold, continued deterioration and other very unhealthy and unsafe conditions. The emergency housing crisis was further exacerbated by the influx of response and recovery volunteers and professionals in need of temporary housing.

Single family homes and the damage suffered is only a portion of the challenge. The communities in Bay County had a total of 8,308 multi-family units. Of this, 3,069 units were classified as low-income housing units. Immediately after the storm, of the 8,308 units, less than one-half, only 3,387, were habitable. These means that 4,544 families were displaced.

The agency has been very aggressive in identifying potential solutions for the housing crisis. Returning families to a normal and healthy living environment is critical to maintaining health and well-being in the community. This is and will be a continued focus of long-term economic growth and the creation of a sustainable and resilient community.

As the recovery progresses and the communities shift their focus from emergency needs to long-term rebuilding, the housing market recovery will require a multi-year, multi-prong strategy. To address this undertaking in the most efficient manner, the Branch has created several initiatives to address needs. This includes low-income housing, moderate-income housing, and military, student, senior and other specialty housing needs. In addition to creating new housing inventories, the Branch has placed an emphasis on cleaning and preventing blight and creating livable, walkable communities for members of all income brackets.
Education and Preparedness

Housing units totaling over $8 billion sustained at least some level of damage during the disaster. Over 42,000 residential insurance claims have been filed in Bay County. When combined with the uninsured damages, the total number of units likely exceeds even the 60% of home data that is widely reported.

Due to the sheer volume of damaged housing units, before a sustained rebuilding effort can be undertaken, many factors have to be addressed. This includes efforts to support the construction industry supply chain and workforce, implementing carefully planned rebuilding initiatives that allow for sustained rebuilding, and strong countywide planning that fosters connected greenspaces, walkable communities and live-work environments that support many levels of income earners.

Educating the citizens of Bay County about resiliency and emergency planning can mitigate damage during future disasters. Providing education on flood insurance programs, emergency planning, enhanced zoning bylaws and new building codes can all be effective in mitigation efforts.
Blight Remediation

Providing a plan for blight remediation and elimination is a cornerstone of a livable community. Blighted properties have a negative impact on the value of surrounding properties and the health of housing markets. Blighted properties increase crime, pose safety hazards, and can reduce critical local tax revenue through devaluation.

Property appraisal gaps and lack of stable buyers in blighted communities can further depress housing markets. In addition to paying social dividends, investing in blighted communities can create returns of 10-12% for tax-payers based on increased tax revenues.

In a report, “Understanding the True Costs of Abandoned Properties: How Maintenance Can Make a Difference,” the author estimates that each abandoned property costs roughly $155,000 in its first year. The study found that when a property is abandoned, crime is likely to go up by 10% within a 250 ft radius. This can cost taxpayers an estimated $14,000 a year in additional public safety costs, further constraining local budgets and contributing to a downward spiral of property values impacting neighboring areas.

In Bay County, certain areas have been identified as high-risk areas susceptible to blight. Further study needs to be done to identify specific parcels and parcel groupings for redevelopment. However, blight has been identified as a major contributing factor to the limitations on growth and expansion of the local higher education facilities and the redevelopment of the Panama City downtown corridors.

To address and mitigate the potential spread of blight created by the destructive forces of Hurricane Michael, the County can support the acquisition of blighted properties that can be redeveloped into low to moderate-income housing and community development projects. Parcels will be selected based upon their proximity to tipping point communities and their proximity to higher education facilities, industry, businesses and other employers. Other factors will be considered, such as location to planned future employers, ability to contribute to sustaining schools and proximity to health care and other human services.

Following acquisition of blighted properties, the jurisdictions will provide substantial incentives for private developers. These incentives will include tax incentives, waiver of easements, access to financing and other advantages. This effort will generally focus on low to moderate-income housing but will also provide housing development projects for other socio-economic groups that have a positive impact on workforce development and economic growth.

In addition to blighted property acquisition, the County and its inclusive jurisdictions can support the creation of incentives for private developers and landowners to invest in blighted properties directly. These incentives can be in the form of funded tax credits, permit cost exemptions, direct grants or other incentives that allow redevelopment of blighted properties.

Bay County continues to study the number of blighted properties that need investment and communities that require relocation from flood zones, and it is estimated that this number can easily reach 2% to 3% of housing units. This will require an estimated investment of $180 million through various loan and acquisition programs.
Low-Income Housing

As indicated previously, over 4,000 low-income housing units were damaged or destroyed by Hurricane Michael and prior to the storm there was an estimated shortfall of over 900 low-income housing units. With an estimated population growth rate of 1.5%, Bay County will need approximately 6,000 additional low-income housing units over the next ten years. At an average base construction cost of just over $100,000 per housing unit, this represents over $1 billion in low-income housing construction over the next ten years.

The Housing Branch defines affordable housing as a housing unit that costs its owner less than 30% of gross monthly income for all housing. In Bay County, this would represent a home purchase price between $90-145k for homeownership or a rental rate between $750-1,000 per month. The recent housing shortage crisis has pushed rental rates above $1,500 to $2,500 in many areas of Bay County.

The Housing Branch has been working with private companies while exploring several solutions for both short and long-term affordable housing enabled by new technologies. Concepts such as 3D printing construction, tiny homes, container housing, modular construction and expedited construction of resilient housing promise to accelerate the construction of new living quarters and homes. In addition to property availability and infrastructure costs, the largest hurdles for these efforts are permitting and zoning to accommodate new technologies. These challenges can be easily navigated with community support.

The cities located in Bay County, as well as Bay County unincorporated areas, have identified several projects, areas and parcels that require development or redevelopment that are best suited for providing additional low-income housing units. Some of these projects are sole purpose housing projects while others are mixed use projects and mixed-income developments serving both low and moderate-income housing needs. To best meet these needs, a per capita investment solution can provide federal funding and multiple incentives to the various cities, as well as to the County.
Moderate-Income Housing

Over 45,000 homeowners filed insurance claims after Hurricane Michael with over $2 billion in claims being paid through May 1st, 2019. It is estimated that total residential claim payments could easily exceed $3 billion. With an estimated 60,000 residential units sustaining some level of damage and the majority of residents requiring either low or moderate-income housing solutions, a robust platform of incentives and loans to support housing redevelopment will need to be managed to support a sustained recovery.

One of the most critical components of a recovery is ensuring the restoration of the economic flows of the community. This includes small business support and growth. The Economic Development Agency (EDA) is currently developing a robust pipeline of potential employers that are considering relocation to locations within Bay County. Providing workforce training and housing incentives for corporations, among other items, can make Bay County and all its communities very competitive for both these jobs. These opportunities include a significant expansion of the economic impact of Tyndall Air Force Base by attracting defense contractors and other business that would be related to this military operation. It has been estimated that this expansion could add an additional 5,000+ jobs in Bay County in the next ten years, adding to the economic recovery of Bay County. Housing for this new workforce will be critical.

Lack of low and moderate-income housing within close proximity to employment centers increases drive time which can disrupt a family’s lifestyle and otherwise disenfranchise workers. This trend was starting before Hurricane Michael impacted Bay County. As housing prices rose in the Panama City Beach area, service workers were being forced to locate further into the County. This places a disproportionate strain on the low and moderate-income earners. Ensuring that all members of a community are inclusive to a recovery is an important consideration when planning housing and economic recovery programs.

Moderate-income housing supports citizens that make up some of the most vital workforce in Bay County. National trends have shown that the housing markets will gravitate to higher income homebuyers and can leave moderate-income earners with few options for housing within the communities they reside. Creating housing availability that is affordable to the local workforce is critical to sustaining a long-term recovery and a stable community.
Special Purpose Housing

Bay County suffers from deficient housing projects designed for special use. This includes housing units that support the military and veterans, senior housing, special needs housing and student housing. These housing needs make up close to 20% of the housing needs for Bay County. Supporting the ability to provide specialty housing was an important component of the County's growth before the storm and is now a critical area of focus.

MILITARY AND VETERANS HOUSING:
Over 27,000 residents of Bay County are connected to the military. This includes over 7,000 active duty, 11,000 support persons, 10,000 retirees and 6,500 dependents. This represents approximately 15% of the total population. With over $600 million in annual contribution to the local economy, the military installations are an integral part of the community. The most critical need for the military community to assist in the recovery is housing. Entire commands were left without housing units and members remain in temporary housing almost eight months after the disaster. Due to the housing supply compression, many military and support personnel can no longer afford housing in the area. Being able to support this community is vital to a sustainable long-term recovery.

PERMANENT SUPPORTIVE HOUSING:
There is a strong need for accommodations that enable people with disabilities to live with dignity and independence within their communities by expanding the supply of housing that accommodates their special needs and provides them with necessary support. Special design considerations such as low countertops, wider doorways, wheelchair access and entrance ramps are critically important for this group. These types of programs typically deliver facilities targeted towards low-income residents, accommodations for special mobility needs and facilities for assisted-living care professionals. There is currently a need for an estimated 660 permanent supportive housing units in the County.

In addition to permanent supportive housing, there is also a need for transitional housing. Transitional housing provides temporary housing for certain segments of the working homeless population who are making insufficient wages and who have trouble affording long-term housing. Traditional housing is set up to transition residents into permanent, affordable housing. This is not typically an emergency homeless shelter, but usually a room or apartment in a residence with support services.

STUDENT HOUSING:
Student housing has also been identified as important for community resilience. Higher education is a growing part of the local economy. The local institutions of higher education provide significant employment opportunities, work force training programs and economic development opportunities. Creating affordable accommodations to replace facilities damaged in the hurricane, satisfying ongoing student housing demand and expanding training and community capacity are all important considerations.

Prior to the storm, the Florida State University, Panama City (FSU-PC) was seeking 600 student housing units to be built in two separate programs. In addition, both FSU-PC and Gulf Coast State College (GCSC) have identified the shortage of affordable student housing as one of the primary causes of enrollment stagnation. Over the next ten years, it is estimated that the combined campuses will have a need for at least 900 student housing units. The institutions are seeking funding mechanisms to secure grants and other funding to acquire blighted properties surrounding the campus. This will allow for the expansion of private student housing and student services. This would make GCSC and FSU-PC much more competitive and attractive on a state and national stage.

SENIOR HOUSING:
Over 16% of the population in Bay County is over the age of 65 and the population continues to age. Without providing housing units and services for this segment of the population, the recovery will be further hampered by the potential loss of population as this segment seeks more accommodating communities in which to retire.

The retiree housing and health care continuum covers a housing cycle that includes retirement housing, independent senior care facilities, assisted living facilities and acute care facilities. These facilities cover long-term living and short-term care facilities. Supporting the recovery and growth of this housing segment is an important component of the recovery.

EMERGENCY HOUSING:
Emergency housing was discussed in the Branch from two perspectives. This includes short term housing solutions needed immediately after an event and
emergency housing solutions that can be deployed to prevent the type of unmitigated emergency that occurred directly after Hurricane Michael.

Many options are being explored for emergency housing solutions that will assist in response to the current disaster. This includes a donation of mobile homes from the State of Florida to be located on homeowners’ properties during reconstruction, accelerated permitting of low-income single-family communities, and potential conversion of “big-box” retail spaces to emergency housing and accelerated partnerships to develop communities with grant support from the local housing agency.

To mitigate the effects of future disasters on housing and to avoid the crisis level impact Hurricane Michael created, the Branch is exploring emergency housing options that can provide rapid response housing unit deployments during future events. The advent of container housing allows for economical storage of multiple housing units that can be deployed quickly after an event. The housing units are self-contained with built-in utility solutions, such as solar panels and septic solutions. Storing multiple units in remote warehouses can provide an alternative to the FEMA trailer distribution system that exists today.

Creating a long-term, sustainable housing program to support the recovery of Bay County will require collaboration of all communities, extensive planning, long-term execution strategies and support from various sectors of the local, state and federal governments. This will require a housing agency that is well staffed and prepared for managing long-term incentives program that range from private investment, loan guarantees, direct loan programs, grants and other incentives. Ensuring that all of the communities have this support is one of the most critical components of the housing recovery effort.
Based upon the extensive research and discussion occurring within the Housing Branch, the following specific actions and tasks will assist the communities of Bay County to achieve maximum recovery. These major action items (and associated tasks) will be accomplished based upon a distribution of $2,738,005,000 in requested funding to address the critical housing (and related infrastructure needs) for all of the communities in Bay County. This distribution is based upon population as well as damages suffered. It is anticipated that these actions and allocations will be refined by the Task Force and local leadership as funding is available over the next five to seven years.

<table>
<thead>
<tr>
<th>Local Government Entity</th>
<th>Housing Development &amp; Redevelopment Funding</th>
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</thead>
<tbody>
<tr>
<td>Bay County (Unincorporated)</td>
<td>$995,500,000</td>
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<tr>
<td>Panama City, City of</td>
<td>$752,000,000</td>
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<td>$68,250,000</td>
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<td>Panama City Beach, City of</td>
<td>$36,500,000</td>
</tr>
<tr>
<td><strong>Total Housing</strong></td>
<td><strong>$2,738,005,000</strong></td>
</tr>
</tbody>
</table>

**185. Blight Acquisition and Redevelopment Program**

**ACTION:** To address and mitigate the potential spread of blight created by the destructive forces of Hurricane Michael, the County will support the acquisition and/or redevelopment of blighted properties that can be developed into low to moderate-income housing and community development projects. Parcels will be selected based upon their proximity to tipping point communities and their proximity to higher education facilities, industry, businesses and other employers. Other factors will be considered, such as location to planned future employers, ability to contribute to sustaining schools and proximity to health care and other human services.

Following acquisition of blighted properties, the jurisdictions will provide substantial incentives for private developers. These incentives will include tax incentives, waiver of easements, financing and other advantages. This effort will generally focus on low to moderate-income housing, but also provide housing development projects for other socio-economic groups that have a positive impact on workforce development and economic growth.

**TASK I:** Complete survey of specific lots and blocks of redevelopment and acquisition based on the program criteria.

**TASK II:** Secure Community Development Block Grant-Disaster Recovery funding.

**TASK III:** Create incentives packages and redevelopment criteria for each site and corridor.

Primary Sponsor: Countywide
Estimated Cost: See chart on pg 151
Source of Funding: HUD, CDBG-DR
Initiative: Affordable Housing Redevelopment
186. Identify Housing to Transition from Relief Workers to Residents

**ACTION:** Identify housing units that are currently being occupied by contract workers who may be able to be relocated. Some of the earliest contract workers in the event cycle may not need to be located in the immediate proximity of the community. We are recommending that we identify the location, make a count of these contractors and speak to the companies to determine if a re-location plan can be explored. This would potentially free up a number of temporary units to shelter families in need that may be losing shelter at the Beach in the near future.

**TASK I:** Contact various hotels and contractor groups to identify workforce housing units.

**TASK II:** Locate potential remote locations in neighboring counties for workforce housing.

**TASK III:** Create proposal to move any workforce members if possible.

187. Identify Currently Vacant Mobile Home Lots for New Housing Units

**ACTION:** It is estimated that a range of 25-50 mobile home lots may be vacant in various communities throughout the County. These lots can be immediately occupied by a housing unit. It is recommended that a survey of these available units be completed and tracked. The Branch should work with FEMA, HUD and local investors to find programs to place housing units on these sites. It may be possible to place modular or container homes on these sites that are later transferred to a planned community for permanent housing.

**TASK I:** Survey housing lot inventory throughout the County.

**TASK II:** Identify housing units to be placed in location.

**TASK III:** Identify potential subsidies, grants, incentives and donations to secure housing.

**TASK IV:** Identify potential structure to work through private investors in placing the units.

188. Actively Pursue Property Reuse

**ACTION:** There is a growing trend of property reuse in the County, such as utilizing old malls to convert to mixed use residential properties. We recommend the County seek to identify any abandoned large platforms and vacant "big box" style facilities that may be able to be converted to short-term housing units while longer term solutions are obtained. Approaching the existing property owners with incentives may convince the reuse of the properties to immediate housing structures. Permits could be issued for various temporary living facilities while permanent lofts are being converted. Usually, these structures can be converted to dorm style or loft style apartments with relative ease.

**TASK I:** Survey building profile inventory throughout the County.

**TASK II:** Identify potential subsidies, grants, incentives and donations to secure housing.

**TASK III:** Meet with property owners to discuss interest in participation.

**TASK IV:** Identify potential structure to incentivize program.
189. Aggressively Pursue Sites for Immediate Development

**ACTION:** There are three sites that have been identified for immediate development with specific tasks associated to each project. In addition to these sites, the Housing Branch should work with the Housing Authority to begin assessing other sites in the County that are available for emergency housing or for a long-term housing program. The three sites that have been identified are as follows (and tasks to be completed):

**23 Lots Located in Panama City**

**TASK I:** Complete pricing model for RFP.

**TASK II:** Complete RFP announcement.

**TASK III:** Identify permits, process and documentation to ensure project commences with no delays.

**6.5 Acres of Raw Land**

**TASK I:** Complete entitlement assessment.

**TASK II:** Complete infrastructure assessment.

**TASK III:** Create incentives package for program.

**TASK IV:** Identify permits, process and documentation to ensure project commences with no delays.

**60 Acre Site in Bay County**

**TASK I:** Complete negotiations.

**TASK II:** Complete infrastructure assessment.

**TASK III:** Create incentives package for program.

**TASK IV:** Identify permits, process and documentation to ensure project commences with no delays.

Primary Sponsor: Countywide

Estimated Cost: See chart on pg 151

Source of Funding: HUD, CDBG-DR

Initiative: Affordable Housing Redevelopment
190. **Action: Examine the Potential Deployment of New Building Technologies**

**ACTION:** The communities of Bay County have an opportunity and should review new and emerging technologies that enable developers to construct resilient, affordable, energy efficient and smart homes. New technologies also promise to utilize techniques to significantly expedite the construction time of a structure. Advanced cement materials ensure the homes are built strong and sustainable to survive storms up to 200 mph winds. These homes and developments could target all income brackets, including low and moderate. These technologies could also apply to government-subsidized housing throughout the County.

**Primary Sponsor:** Countywide  
**Estimated Cost:** See chart on pg 151  
**Source of Funding:** HUD, CDBG-DR  
**Initiative:** Affordable Housing Redevelopment

191. **Action: Set up Transitional Housing Services that Prioritize Veterans and Other Moderate to Low-Income Families**

**ACTION:** Develop a non-profit organization working directly for a veterans’ housing community and a center for community care. Creating transitional and temporary housing for those struggling with financial instability, prioritizing veterans and single parents.

**Primary Sponsor:** Countywide  
**Estimated Cost:** See chart on pg 151  
**Source of Funding:** HUD, CDBG-DR  
**Initiative:** Affordable Housing Redevelopment

192. **Action: Provide Public Awareness of Flood Insurance**

**ACTION:** Develop a project to increase public awareness of the benefits of flood insurance through public education. This will increase the number of people who will be able to obtain flood insurance. The people will be provided knowledge of the factors in obtaining flood insurance, when to obtain it, where to obtain it and how to obtain it.

**TASK I:** Research and identify possible training materials.  
**TASK II:** Set dates and place for trainings.
193. Action: Plan for and Execute Property Buybacks for New Development

**ACTION:** The purchasing and demolition of properties in the floodplain will help with the development of property buyback. This idea will help to increase greenspace and reduce recovery costs from damaged structures. The reuse of land space from storm locations will not only help save money, but also keep those safe in their own communities.

194. Examine and Work to Increase Base Level of Building Codes

**ACTION:** Develop the strength of regulations for building codes to mandate additional storm mitigation accessories on residential structures. Homes built to increase storm protection standards will have fewer recovery costs.

**TASK I:** Work with code departments to ascertain the current building codes.

**TASK II:** Identify key areas related to storm protection.

**TASK III:** Look at other municipalities who have been through similar storms to see how they changed their codes.

**TASK IV:** Formulate and implement proposed changes.

195. Action: Establish a Community Land Trust

**ACTION:** Establish a Community Land Trust (CLT) that will own land on which homes for home ownership can be built and allowing long-term leasehold of the land by reducing costs of home ownership. Bay County could subsidize the creation of the CLT and restrict home sales and leases based on individual AMI restrictions, both on initial and resale of homes. A limit of maximum increase equity on the home should be restricted to preserve affordability.
196. Develop and Deliver Education on Resiliency

**ACTION:** Development of education on push for neighbor envy resiliency. Educate the push for hurricane roof straps or storm windows vs granite counter tops or high-end appliances. Focus on desired items for immediate needs post disaster.

**TASK I:** Research and identify possible training materials.

**TASK II:** Set dates and place for trainings.

197. Action: Establish an Affordable Housing Development Lending Fund

**ACTION:** Development of an organization whose focus is affordable housing for early funding. Subsiding some of the potential loss could gather financial institutions and/or national non-profits to invest in a fund, which would speed up and increase the number of affordable housing developments. Once developers obtain early financing, the quicker traditional funders are able to provide both short-term and long-term financing.

198. Action: Examine the Potential of Shipping Container Housing

**ACTION:** Shipping container housing is a quick and affordable solution to short-term and long-term housing recovery. The design options are limitless and can be made to fit all types of income. They are similar to that of a mobile home but are more sustainable and can be made to be eco-friendly. The availability of the containers is a quick process which can provide fast turnaround to those communities who are in need.

199. Develop and Deliver Education on Disaster Preparedness and Recovery

**ACTION:** Providing education on disaster recovery prior and post storm can help save time and money for those communities.

**TASK I:** Research and identify possible training materials.

**TASK II:** Set dates and place for trainings.
200. Action: Create Strong Policies that Result in Significant Increase in Affordable Housing Countywide

**ACTION:** Creation of policies that require affordable housing to be included integrally in all major new developments over a threshold of the number of units called for affordable housing advocates. Disburse affordable housing across Bay County and their communities.

201. Action: Consider and Plan for the Potential Use of Innovative Temporary Housing

**ACTION:** Floating hotels, cabin riverboats and smaller cruise ships have been utilized after a number of natural disasters in place of temporary housing. Bay County can take advantage of its vast shoreline by coordinating with organizations that own these vessels to provide immediate housing.

202. Senior Housing Support

**ACTION:** Over 16% of the population in Bay County is over the age of 65 and the population continues to age. The retiree housing and health care continuum cover a housing cycle that includes retirement housing, independent senior care facilities, assisted living facilities and acute care facilities. These facilities cover long-term living and short-term care facilities.

**TASK I:** Work with local hospitals and developers to identify final sites and unit counts best suited for each sector of the senior housing community.

**TASK II:** Secure Community Development Block Grant-Disaster Recovery funding.

**TASK III:** Create incentives packages and redevelopment criteria for each site and corridor.

203. Action: Examine Utility and Pursue “Tiny House” Developments

**ACTION:** Development of a tiny housing community is a potential. Communities would offer laundry services, walking trails, community centers with food service as well as on-site staff. They are smaller homes which allow quicker development. Variety of floor plans are offered with low rental/ownership opportunities. The tiny homes are built sustainable, eco-friendly and handicap accessible, targeting all residents.
204. Rebuild and Sustain Bay Area Nursing Homes

**ACTION:** Rebuild sustainable nursing homes to avoid the displacement of patients prior or during storms. Provide the ability of safer housing for the elderly to return if displaced. The Bay County area lost four nursing homes due to the hurricane, which resulted in the elderly being transported to other areas of the state away from their family and community.

**TASK I:** Research incentives for nursing home companies.

**TASK II:** Work with city governments to make these facilities a priority.

205. Support for Student Housing Development

**ACTION:** Prior to the storm, the Florida State University, Panama City (FSU-PC) was seeking 600 student housing units to be built in two separate programs. In addition, both FSU-PC and Gulf Coast State College (GCSC) have identified the shortage of affordable student housing as one of the primary causes of enrollment stagnation. Over the next ten years, it is estimated that the combined campuses will have a need for at least 900 student housing units.

**TASK I:** Work with the cities to prioritize properties, complete survey of specific lots to support student housing.

**TASK II:** Secure Community Development Block Grant-Disaster Recovery funding.

**TASK III:** Create incentives packages and redevelopment criteria for each site and corridor.

206. Action: Examine Options for Better Shelter Temporary Housing

**ACTION:** There are new and innovative solutions being developed for temporary sheltering. These are low cost (around $1,500) easily constructed shelters for those that are displaced from their homes. Built from wind, rain and UV-resistant materials, these shelters can be constructed in around five hours by four people. At almost 200 sq. ft., the shelter provides a safe environment for those that are looking for temporary housing solutions. The anticipated life of these shelters is up to three years.
207. Development and Redevelopment of Low-Income Housing Projects

**ACTION:** To address the serious shortage of low-income housing for residents of Bay County, the County will work with the jurisdictions to establish a per capita based investment and incentives program. Through this program, each city will aggressively pursue the projects best suited for their cities. This will include the acquisition of property within the jurisdiction that is suitable for development and redevelopment. Parcels will be selected based upon their proximity to services that will allow residents to become more economically mobile and to participate in the services enjoyed by all residents of the County.

**TASK I:** Secure Community Development Block Grant-Disaster Recovery funding through the allocation provided to Bay County. This allocation will be based upon population.

**TASK II:** Survey cities and identify property to be acquired for development. Work with the County, other cities and the School Board to prioritize properties.

**TASK III:** Identify specific project specifications and requirements.

**TASK III:** Complete transactions and issue documents to select developers and other investors.

208. Development and Redevelopment of Moderate-Income Housing Projects

**ACTION:** To address the serious shortage of housing for moderate income residents of Bay County, the County will work with the jurisdictions to establish a per capita based investment and incentives program. Through this program each city will aggressively pursue the projects best suited for their cities. This will include the acquisition of property within the jurisdiction that is suitable for development and redevelopment. Parcels will be selected based upon their proximity to industry, businesses and other employers, need for mitigation, location to planned future employers, ability to contribute to sustaining schools and proximity to health care and other human services. Following acquisition of this property, the cities will provide substantial incentives for private developers. These incentives will include tax incentives, waiver of easements, financing and other advantages. This effort will generally focus on low to moderate-income housing, but also provide housing development projects for other socio-economic groups that have a positive impact on workforce development and economic growth.

**TASK I:** Secure Community Development Block Grant-Disaster Recovery funding through the allocation provided to Bay County. This allocation will be based upon population.

**TASK II:** Survey cities and identify property to be acquired for development. Work with the County, other cities and the School Board to prioritize properties.

**TASK III:** Identify specific project specifications and requirements.

**TASK III:** Complete transactions and issue documents to select developers and other investors.
209. Military and Veterans Housing Support

**ACTION:** Over 27,000 residents of Bay County are connected to the military. Hurricane Michael destroyed 100% of housing units located within Tyndall Air Force Base. In addition, most housing units available to junior NCO and enlisted personnel located outside of the base was destroyed. This combined with escalating rental rates due to the storm and the pre-storm housing developments, the military personnel of Bay County are left with few housing options. Bay County will work with the jurisdictions that are home to the various military institutions to develop housing incentives for developers to provide suitable cost-effective housing units for this vital sector of the economy.

**TASK I:** Work with the cities to prioritize properties, complete survey of specific lots and blocks of redevelopment and acquisition based on the program criteria.

**TASK II:** Secure Community Development Block Grant-Disaster Recovery funding.

**TASK III:** Create incentives packages and redevelopment criteria for each site and corridor.

210. Create Availability of Permanent Supportive Housing Units

**ACTION:** There is currently a need for over 600 permanent supportive housing units in the County with accommodations that enable people with disabilities to live with dignity and independence within their communities through expanding the supply of housing that accommodates their special needs and providing them with supportive services. Special design considerations such as low countertops, wider doorways, wheelchair access and entrance ramps are critically important for this group.

**TASK I:** Work with the cities to prioritize properties, complete survey of specific sites best suited for the supportive housing units.

**TASK II:** Secure Community Development Block Grant-Disaster Recovery funding.

**TASK III:** Create incentives packages and redevelopment criteria for each site and corridor.
The Economic Recovery Branch was tasked to assist the Bay County business community with recovering normal business operations and aiding in the development of new economic opportunities to grow capacity and increase future resiliency. Over 40 local community leaders representing all sectors of the economy met over a period of 90 days to brainstorm ideas and nominate projects that were used to develop the long-term plan for economic recovery. The Branch members have researched and discussed the current state of the economy, considered different long-term visions and have submitted over 50 specific actions to restore and grow the economy.
Prior to the devastating impacts of Hurricane Michael, the Bay County Economic Development Alliance, Bay County Chamber of Commerce, Panama City Beach Chamber of Commerce and other public and private entities were working on many economic development initiatives. These initiatives would primarily foster a budding, advanced manufacturing industry as well as enticed other new businesses to capitalize on the area’s ideal geographic location, leverage the local port, marine facilities, airports and nearby highway transportation corridors.

Like many communities around the United States, the Bay County area local economy is very complex with many facets. A relatively unique element of the local economy is the substantial dependency on tourism, which has been severely affected by Michael’s impact. To create a more resilient economy, steps must be taken to ensure the economy is more diverse, which will increase economic output and improve both the health and welfare of the communities.

After the completion of the official public meetings, as well as many research sessions with branch members, community leaders and the general public, over 50 new and expanded initiatives were created. These projects, ideas and initiatives look to improve the economic health of the community and significantly improve economic resiliency, diversity and inclusivity.

As presented earlier in this plan, the scale and magnitude of the damage caused by Hurricane Michael was absolutely stunning. Due to inoperable communication systems, broken infrastructure and wide-scale debris scattered throughout the communities, citizens were unable to begin damage assessments and initial clean-up of personal property until weeks after the storm. This delay resulted in a domino-type effect, slowing the reopening and resumption of normal operations of those businesses that were still able to operate. Once the first pass of debris was cleared and power was back on, businesses had to deal with major shortages of facilities, housing and workforce.

While large scale disasters such as this massive hurricane have proven difficult to overcome, they also provide a distinct opportunity for growth and revitalization. Long-term recovery plans include implementing strategic initiatives to grow current business sectors and invite new business sectors. Economic initiatives discussed in detail through this branch include business incubators, innovation centers, high technology research and manufacturing facilities and alternative energy opportunities. More immediate needs also include a business recovery center and improvements in access to capital to rebuild sections of the community most impacted by the storm.

In order to increase economic activity and diversify the economy, workforce development programs along with training and education will be critical to attracting new industries and businesses to the area. Enacting business friendly legislation, green energy and recycling programs can also be positively impactful. Community-wide programs that increase the availability of wireless internet through public Wi-Fi hotspots, high speed fiber optic infrastructure and “state of the art” 5G wireless cellular networks have also been discussed at length. The role of Tyndall Air Force Base, the Naval Support Activity Panama City and surrounding military presence should be strongly considered as there are a number of supportive industries that could be expanded by cooperative business initiatives. Lastly, existing industries such as farming and agriculture could also be promoted, leveraging the large tracts of arable land, excellent climate, access to shipping, use of highway transit systems and available workers.
Bay County Pre-Disaster Economy

Prior to Hurricane Michael, Bay County and its municipal partners were emerging as one of the best areas for business expansion and growth in the state and the country. Capitalizing on the beautiful beaches, superb climate and strategic position on the Gulf Coast, Bay County community leaders were actively engaged working to strengthen the pillars of the local economy--tourism, military and industrial/manufacturing.

The Emerald Coast has long been a destination for tourists from across the country. The white sands and warm waters of Panama City Beach and Mexico Beach have attracted families and other visitors on vacation for many years. This annual visit by millions in spring and summer months has created many jobs in hotels, restaurants and entertainment venues. In fact, over 30% of the area’s employment is driven by the hospitality and retail sectors. The tourism industry is also the sector that experiences the largest inflow of workers crossing county jurisdictional lines, impacting neighboring economies.

While tourism is the largest economic driver and employer by sector, the single largest employer is Tyndall Air Force Base, followed by Naval Support Activity (NSA) Panama City. The Bay County community revels in the long-standing relationship with their military partners. Tyndall Air Force Base has been a staple of the community dating back to World War II, employing over 11,000 (military and civilian), while employment at NSA Panama City has reached over 3,200. The strong military presence contributed to the growth of military support businesses and contractors that further add to the local economy.

Beyond tourism and the military, the community has a growing industrial and manufacturing sector. Companies such as GKN Aerospace, Eastern Shipbuilding, General Dynamics, Trane, WestRock, Berg Steel Pipe Co. among others, have capitalized on the availability of the transportation modalities provided through the Bay Line Railroad, Northwest Florida Beaches International Airport and the Port of Panama City.
Hurricane Michael Effects

Recent economic progress is evidenced by the Port Authority’s East Terminal expansion, the USCG contract with Eastern Shipbuilding and the construction of GKN’s new manufacturing facility near the airport. These successes contributed to the buoyant economic outlook for Bay County.

Impacts of Hurricane Michael on October 10, 2018, changed the narrative significantly. The damage and destruction have reverberated throughout the community. The number of downed trees, destroyed buildings and shattered communication systems make the recovery painstakingly slow. The local government response was swift and decisive, but the magnitude of the job at hand is massive.

The most immediate areas of economic impact could be seen in the housing market and workforce. Many homes were damaged and destroyed, causing residents to temporarily relocate. Even before the disaster, affordable housing supply was low, but Michael’s damaging effects, as well as the influx of disaster workers, absolutely decimated the supply of housing. This situation has pushed many residents out of the County, greatly reducing active participants in the local workforce. For small business owners, they face the compounded problem of trying to recover from their personal damages and losses, while also working to bring their businesses back online. As businesses begin to re-open, the labor supply is so crippled that many restaurants, stores and other businesses are forced to close early or work single long shifts instead of the usual two or three shifts. Supply chain and logistics also quickly became a problem including a decrease in warehouse and storage space, blocked transportation routes and damaged goods. Compounding the challenges of the business community to reopen was the disruption of communication and internet service. Prescriptions could not be filled; credit card transactions could not be processed, and many retail points of sale systems did not work. These are just a sampling of the problems and issues the Economic Recovery Branch has been tasked to address and for which it offers recommended solutions.
General Discussion

The Economic Recovery Branch is led by the Chairman of the Board of Directors for the Bay County Chamber of Commerce. In addition, members of the Branch included many other community leaders and business owners from all sectors of the economy. This included bankers, land developers, real estate agents, builders, attorneys, educators, government employees, small business owners, military representatives and many others.

Discussions in the initial meeting with Economic Recovery Branch members revolved around two primary topics. First, the Branch needed to have a clear understanding of its goals and definitions of success. A detailed review of FEMA’s National Disaster Recovery Framework (NDRF) led Branch members to understand that their overall purpose was to identify measures that could be taken to stabilize and sustain current local economic activity, as well as identify ideas, projects and actions that would create opportunities to build an economy that is more diverse and resilient. Second, the Branch members needed to understand the current state of the economy. When comparing other post-disaster economies, history provides proof of the typical recovery profile. This includes a period of devastation followed by reconstruction and then resilient growth. However, history has proven that this doesn’t always occur in the same manner or caliber. When it does, the time which the cycle takes can vary greatly. There are many economic factors that drive a fast and full recovery. The factors include the region’s demographic and socio-economic base, literacy rate, median age, per capita income and others. The Branch members recognize that the Bay County area demographic and population structure could possibly put the region at risk for a slower than otherwise possible recovery. As a result, prompt measures must be taken to ensure businesses stabilize and quickly recover from not only direct physical damage but also from the business interruption and market fluctuations.

In subsequent Economic Recovery Branch meetings, the focus remained on finding solutions in the short-term for the sustainability of businesses throughout Bay County. Using preliminary data from surveys taken by Bay County Chamber of Commerce and the International Economic Development Council (IEDC), the Branch discovered a few basic issues.

In the days and months following the Hurricane, many smaller businesses in the area were having a difficult time funding basic operation. Some planned or considered closing. Costs related to insurance deductibles, business interruption and repairs were making it difficult for these businesses to stay open. Business owners often commented that the Small Business Administration (SBA) disaster loans involve a very cumbersome application process and many could not get an approval.

The Florida Small Business Emergency Bridge Loan Program is a short-term, interest free loan managed by the Florida Department of Economic Opportunity (FDEO). This bridge loan is often very helpful to businesses impacted by disasters. However, due to the widespread destruction caused by Hurricane Michael, many business owners were still working on recovering with their families and personal property and missed information on the availability and details of this loan program. In fact, for many business owners, the Bridge Loan application period closed even before they were aware of the program or were able to fully comprehend their need for the program.

Another immediate need discussed during the Branch meetings was that businesses were having a hard time understanding the shift in the customer base or the changing demand for new or different products and services. This expansion and contraction affecting different markets is often misunderstood after a disaster. Studies conducted by Rand Corporation Gulf State Policy Institute regarding Hurricane Katrina reveal that these shifts generally tend to be temporary, similar to the reconstruction that is ongoing. Changes in markets and workforce availability generally normalized within 12 to 18 months. However, these changes can be permanent, while certain sectors of the economy relocate, and others in the region may even cease to exist.

The most recent Economic Recovery Branch meeting topics pivoted toward future economic development. The Branch members focused efforts on generating ideas and community projects that will create a more diverse and resilient economy.

The principles behind the creation of a more diverse local economy are really no different than diversification of a personal investment portfolio. It can be very risky to have an economy based solely on a single or few sectors. Risk avoidance is not the only benefit to economic diversity. When local
economies are diversified and participate in many different business sectors and there is an expansion of particular markets or sectors, the local economy will not miss out on the benefit of this opportunity. Creating this diversity requires teamwork and coordination between local governments, chambers of commerce and the Economic Development Alliance. Specific target industries or sectors should be identified up front.

As previously discussed, the largest single pillar and driver of the Bay County economy is tourism, primarily related to spring and summer visitors of Panama City Beach. In addition, there are a substantial number of winter visitors with extended stays. While the impact of Hurricane Michael to Mexico Beach and Tyndall Air Force Base on landfall was devastating, many branch members and community leaders understand how fortunate the County was that the hurricane did not make landfall closer to the economic stronghold of Panama City Beach. Even though tourism numbers may be negatively affected, the tourism industry is expected to be a strong driver of the County’s economy during the recovery. Case in point, a large number of hotels and vacation condominiums are being rented to shelter many displaced residents and disaster workers. If the storm’s track had been further west, many contend that Bay County would be even more seriously challenged to make a fast and full recovery. Coming out of the discussions, the Economic Recovery Branch agreed that major efforts need to be made to diversify the local economy. By growing multiple economic pillars, growth rates can become more stable, diverse, predictable and the economy at large will become stronger. There are many opportunities to diversify through growth in manufacturing, logistics, military support and aerospace industries.

The Branch members’ second major goal for future economic development is to cultivate ideas that create a more resilient economy. Bay County is a member of the West Florida Regional Planning Council and has been included in their Comprehensive Economic Development Strategy (“CEDS”) for 2018-2022. This type of coordination and specific action planning is vitally important to not only growth but also the resiliency of the economy. Branch members feel that the regional CEDS will be very helpful. However, a more “Bay County specific” CEDS would have a much greater impact on building new businesses, leading to greater economic resilience. By creating a more defined and detailed development strategy, local businesses can play a much larger role as economic champions and help to identify the economy’s deficiencies and vulnerabilities.

Many of the challenges faced by the business community in the aftermath of the storm may have been preventable or lessened by improved pre-disaster planning from the business community. Resilience is built not only through the development of a diverse multi-sector economy but also with very detailed preparation and coordination across the community and its residents. Training and increased funding availability from federal, state and local governments have consistently been improving pre-disaster planning and continuity of operations. However, businesses usually spend very little time planning for or mitigating disasters, and even less for natural disaster recovery planning. In fact, businesses have historically been a very small part of the local government plan. Branch leaders and members strongly suggest that this situation change.

During multiple Economic Recovery Branch meetings and research sessions, members continued to return to the idea of a Business Recovery Center (“BRC”) when discussing solutions to post-disaster problems. The issues faced by businesses, both large and small, were seemingly related to immediate funding challenges, communication and internet outages, workforce shortages, supply chain interruption, etc. If a single hardened location were to be established, business leaders will know where to report for assistance with these and other issues. Federal and state partners would be able to quickly communicate any business loans or grants made available. These Business Recovery Centers, with partners from local chambers of commerce and economic development corporations, become the basis of communications for programs regarding disaster business interruption continuity.
Bay Economic Development Alliance (Bay EDA)

The Bay Economic Development Alliance (Bay EDA) is a Florida 501 c(6) not for profit with a public/private alliance with Bay County, City of Panama City, City of Panama City Beach and City of Lynn Haven. Bay EDA’s mission is to assist in the attraction of new and diversified employers, to retain and encourage the expansion of existing diversified employers and to work to improve the business environment in Bay County. Prior to Hurricane Michael, Bay EDA had been working diligently to diversify the local economy and bring quality, high paying jobs to Bay County. Bay EDA has had some excellent recent success.

Eastern Shipbuilding, located in eastern Bay County, was awarded a $10.5 billion contract to build new United States Coast Guard Offshore Patrol Cutters resulting in an additional 1,000 jobs. Despite heavy impacts from Hurricane Michael, Eastern Shipbuilding began cutting steel for the construction of the first cutter in January. They are currently hiring for multiple positions due to the workforce shortage.

Bay EDA, working together with GKN Aerospace, St. Joe Company and White Construction was also successful in completing the first 135,000 sq. ft. facility in the new certified industrial park, Venture Crossings, anchored by the Northwest Florida Beaches International Airport. GKN will be manufacturing aircraft structural and engine components. Harris and ITT Exelis are two other large companies that have joined Venture Crossings.

Bay EDA is currently working through proposal submission and will be seeking funding for multiple facility and infrastructure projects to entice other aerospace manufacturing companies to Bay County. These companies could bring over $700 million in capital investment as well as over 2,800 jobs, with an average salary of $65,000 per year, well over the current median income for Bay County.
The Military

Bay County is home to three major military installations. These include Tyndall Air Force Base, Naval Support Activity Panama City and the United States Coast Guard Station. The importance of the partnership between the Bay County community and the military cannot be overstated. Tyndall was recently selected as the location for the MQ-9 Reaper installation. This will bring with it 1,600 new jobs and millions of dollars in construction on base (added to the 11,000 military and civilian personnel prior to the disaster). Unfortunately, Tyndall suffered catastrophic damage from Hurricane Michael, and with the high costs of repairs on base as well as additional construction for the new Reaper Wing, this targeted expansion could be in jeopardy. The estimated cost to repair damages to Tyndall is $4.7 billion.

The Bay Defense Alliance is a non-profit organization developed for the purpose of researching, supporting and adding value to the missions of Tyndall Airforce Base and NSA Panama City. Bay Defense Alliance, in coordination with Tyndall Air Force Base, City of Parker and City of Callaway, are working together on a masterplan to redevelop the Tyndall Parkway (U.S. Highway 98 Corridor) just west of the base. The cities of Parker and Callaway also suffered severe damage from the storm but hope to utilize the influx of federal dollars as an opportunity to encourage new affordable housing development as well as business investment. Additionally, the community has shown interest in creating a defense contractor hub just outside the base as an anchor for other needed economic investment.
The Port of Panama City

Located just inside the St. Andrews Bay pass, The Port of Panama City is a deep-water port covering over 138 acres in a Foreign Trade Zone. Another very important benefit to the local Economy is the Port is part of the Strategic Intermodal System connecting some of Florida’s most valuable transportation systems. Many imports that are distributed throughout the Country come through The Port of Panama City. Over 50% of the Country’s imported copper arrives in St. Andrews bay and is handled by the port. Other bulk commodities such as wood pellets and molasses remain a large part of the port’s revenue. The Port of Panama City continues to grow year after year. Millions of dollars have been invested into expansion projects, but much more is needed to keep up with demand and create higher paying jobs in Bay County. The jobs that are directly related to the port currently average over $6,000 and 19% higher than the Bay County average. The port’s current economic impact to the region is over $1.4 billion. The future expansion projects proposed by the port could add an additional $1 billion in economic influence. Branch members view this expansion as a key to the economic recovery of the region.
Based upon the extensive research and discussion occurring within the Economic Recovery Branch, the following specific actions (and associated tasks) are recommended to assist the communities of Bay County achieve maximum recovery.

### 211. Prepare a Bay County Economic Development Strategy

**ACTION:** A cohesive economic development plan is an important tool for identifying opportunities, attracting new industries and providing guidance for existing businesses to thrive and expand. The project has significant community recovery value as it will provide guidance on investment for the economic benefit of the entire community.

This strategy will need to consider multiple strategies in the creation of an economic development plan, passing legislation and local ordinances to encourage new businesses, and development of a skilled workforce. The strategy will guide the County and the cities in its efforts to retain and attract new businesses, increase tourism and diversify the local economy.

**TASK I:** Prepare an Economic Evaluation and Market Assessment. Assess the political framework and the physical, social, human, and cultural assets to determine the economic competitiveness of the County and cities.

**TASK II:** Evaluate business sectors in the County including service, retail, and tourism to identify market vulnerabilities and how to increase demand.

**TASK III:** Identify strategies to benefit existing small businesses and provide value-added benefits from community-generated services and products.

### 212. Create a Business Incubator and Research Park

**ACTION:** Small businesses in the Bay County area were severely impacted and displaced by Hurricane Michael. A business incubator and research park would provide support for start-up businesses that include lower cost facilities, shared resources, management guidance, tax consulting, grant application assistance and technical assistance.

The business incubator can also provide a critical bridge to support small businesses while they recover from the disaster and expand, encouraging them to remain in the County. Working with local institutes of higher education would also assist with coordinating training programs for anticipated demand.

**TASK I:** Develop criteria for eligible small businesses that take into account the urgency of retail/professional services, pre-disaster small business status and administer application and review processes.

**TASK II:** Engage with local educational institutions on new training programs.

**TASK III:** Develop small business support/technical assistance programs.

**TASK IV:** Hire a staff person to provide project and program support to the incubators.
213. Develop a Community-Wide Wi-Fi Network

**ACTION:** INFORMATION is the engine that fuels our economy. Ubiquitous coverage and easy access to information can drive economic expansion, improve community resiliency and provide emergency communications when cellular networks fail during times of community distress. A wireless community network will improve the quality of life within the community by linking many individuals and businesses together regardless of income and education levels. The development of a community-wide network will be a positive addition to the community’s infrastructure, helping to make the Bay County area an even more attractive place to live and work.

The community-wide Wi-Fi network could also be deployed on new street infrastructure such as solar powered LED streetlights and municipal information kiosks. Municipal and county services could also be developed to provide better communication with the citizens, e-Government services and information to tourists. The community Wi-Fi network could also be deployed in conjunction with emergency service infrastructure such as new Emergency Operations Centers and mobile emergency communications vehicles.

New small business creation should also result from the initiation of new public services, e-governance, online advertising for kiosks and community business websites.

**TASK I:** Identify a lead company or group that can assist with the design and deployment of the Wi-Fi gateways around the community.

**TASK II:** Research infrastructure and specification requirements.

**Task iii:** Deploy pilot programs to test community use adoption.

**Task iv:** Partner with local universities, research centers, chambers of commerce and other community service and education organizations.

214. Build New Community Convention Center

**ACTION:** Convention centers, by design, are intended to serve as economic development tools for local communities. They are not intended to operate as stand-alone profit centers, rather, through modest up-front and ongoing public investment paid mostly through taxes visitors pay, their mission is to support local businesses and traded sector industries.

Leveraging the already significant accommodation facilities, airports and other seasonal tourism industry infrastructure, a new Bay County Convention Center is envisioned to bring additional visitors to the area, especially during low season and shoulder seasons to create new year-round jobs, generate new direct and indirect tourism spending and increase tax revenue.

**TASK I:** Develop a strategy to increase local tourism capacity in the “shoulder” seasons leveraging local community strengths and industries.

**TASK II:** Solicit community input on convention center location, size, and facilities.

**TASK III:** Identify funding sources, federal grants and private investment.

**TASK IV:** Prepare design and construction documents.
215. Rebuild and Expand Local Parks and Recreation Facilities

**ACTION:** Rebuilding and restoring parks have a great recovery value to the community by providing recreation and gathering places that enhance quality of life.

The rebuilding of local parks and recreation facilities will provide a holistic approach to park development as the community recovers from the hurricane and expands. The plan should be the results of a community-wide survey of recreation needs, and an implementation program for park and recreation facilities that will serve all residents of the County.

Streetscapes and greenways promote a healthy community and serve as assets to attract residents and businesses to the community. They provide pedestrian and bicycle connections throughout the community.

**TASK I:** Establish an inventory of existing park and recreation facilities/programs.

**TASK II:** Take inventory of the destruction to existing parks and facilities by the hurricane and create rebuilding priorities.

**TASK III:** Hold community forums for input on new parks and recreation facilities development.

**TASK IV:** Develop a coordinated land acquisition program for parks, open space and greenways with other public agencies.

Primary Sponsor: Bay County
Estimated Cost: $2,500,000.00
Source of Funding: DOC USEDA, HSS CED, FEMA, HUD CDBG, Private Investment Initiative: Parks, Trails, and Greenspace
216. Create Downtown Science and Technology Center

**ACTION:** The creation of a world class science center focused on interactive, STEM-based, locally-oriented and educational exhibits will be a significant economic driver.

A truly world-class facility would have far-reaching impacts in the community through job development, significant tourism east of the Hathaway Bridge, educational opportunities for local students, and provide a location for community events. The project would be a catalyst for other business growth in the downtown corridor and would be an enhancement to the recruitment of businesses and individuals looking to select Bay County/Panama City as a place to live, work, and play.

Discussions have been held with stakeholders, the City, SDC and other parties interested in collaboration on the project. The Branch has identified a few potential facilities that would be high-visibility locations for the project.

The economic impact of the project from center operations and visitors is far-reaching to include suppliers of goods and services to center; secondary and downstream suppliers of goods and services; accommodations, food, and travel; employee wages; increased economic activity due to spending of wages.

Other economic impacts would include contributing to neighborhood (re)development, attracting tourists, providing an educational resource, promoting research and innovation, offering opportunities to various sectors of the community, providing a meeting place and being a source of pride for the local community.

**TASK I:** Continue discussions with stakeholders.

**TASK II:** Initiate economic impact study.

**TASK III:** Understand and develop business plan for the center.

**TASK IV:** Look for funding sources.

**TASK V:** Select site and discuss site requirements.

**TASK VI:** Review zoning and permitting, development plans.

**TASK VII:** Create report to summarize opportunity for input.

Primary Sponsor: Panama City, City of

Estimated Cost: $20,000,000.00

Source of Funding: DOC USEDA, HSS
CED, FEMA, HUD CDBG, Private
Investment

Initiative: Economic Redevelopment
**217. Family Friendly Music/Food Venue**

**ACTION:** The creation of a family friendly venue for music and food for residents and visitors to enjoy also offers positive economic impact, including a potential location near the downtown marina area.

Frequented in other locations like the resort area on Highway 30A, these styles of venues offer family friendly atmospheres where people are able to shop, eat, and hold events creating an economic impact in the community as well as a source of pride for the area.

The 30A area has a few of these configurations and they are very successful in having strong turnout from residents and visitors to the area.

**TASK I:** Determine venue location and scope of the project.

**TASK II:** Determine project champion(s) and those that should be leading the effort.

**TASK III:** Determine zoning, health, and other requirements to host the venue.

**TASK IV:** Review security/first responder support requirements.

**TASK V:** Conduct a study on viability and support for the project from a venue perspective (What can be hosted? How many will attend? What are the economic needs and community impact?).

**TASK VI:** Investigate funding sources, private sector sponsor partners.

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**218. Free Internet for Residents**

**ACTION:** This action would encourage internet providers to allow free starter internet for residents, with the ability to upgrade service for higher speeds.

By providing a base-level of connectivity (5/5 suggested), it would be easier for residents to access pertinent information from the schools, cities/county, search for jobs, health care, etc. Some level of service (phone, TV) would need to happen for the ISP to provide the free internet portion of service. It could be for income levels below a certain threshold as an alternative. This would be greatly beneficial for the low-income student population as well as seniors.

**TASK I:** Determine scope of the project (cities, Bay County, or other) and select project owner.

**TASK II:** Discuss definition of “residents” and what is the offering at hand. Compare how this is similar to the Wi-Fi idea.

**TASK III:** Conduct an economic cost-benefit analysis.

**TASK IV:** Determine initial funding and future support funding included in ad-valorem, or sales tax.

**TASK V:** Review how to put an RFP together for a vendor to build infrastructure and last mile infrastructure to the homes, if needed.

**TASK VI:** RFP to determine provider of the internet access point.
219. Satellite Campus for College(s) Downtown

**ACTION:** The incorporation of a college campus and, potentially, dorms in the downtown Panama City area would provide a significant economic infusion.

Both local college campuses are very limited in space. Expanding to a satellite campus would allow for additional growth while infusing student life downtown, creating an economic impact in the community—instead of to an isolated campus. Savannah, Georgia accomplishes this with their SCAD program, and the culture is greatly enhanced with the presence of youthful energy and the artistry of their students.

Downtown has the space and availability to accomplish this goal. The location would also facilitate having a "walkable" campus area that includes restaurants, shops and entertainment. This would be potentially very attractive to a student. As the downtown corridor continues to push towards a "technology cluster," the campus could be in a related area.

**TASK I:** Determine if a downtown location meets the specific needs of FSU and/or Gulf Coast State College.

**TASK II:** Work with colleges to identify desired size requirements.

**TASK III:** Evaluate college needs, direct plans from the respective institution.

**TASK IV:** Review what other support is needed surrounding the college campus such as dormitories.

**TASK V:** Review desired spaces and if the City is willing to grant to the colleges.

**TASK VI:** Conduct environmental study and site plan study.

**TASK VII:** Examine funding sources.

**TASK VII:** Conduct economic impact study.

**TASK VIII:** Create report for public input, or college for execution.

220. Build Reinforced Deeper Bulkheads at Port of Panama City

**ACTION:** A project to increase the size of bulkheads at Port of Panama City will mitigate future damage and prepare for the critically needed port expansion. This effort will result in increased port capacity, increased amount of high paying jobs, and increased interest in private investment.

The Port of Panama City’s cargo operations and industrial tenants rely heavily on 2,700 linear feet of bulkheads that are vulnerable to failure from hurricane surge and rapid tidal drawdown. The deepening of the port in 2003 exposed the existing bulkheads to even greater danger of failure from hurricane-related surge and drawdown. As the bulkheads have gotten older (60+ years old), the risk has increased. The new bulkheads will be designed to withstand extreme surge and will be deep enough to allow the port to increase its channel to 40 feet in the future.

**TASK I:** Port of Panama City should build upon its initial studies.

**TASK II:** Ensure that necessary studies have been completed (environmental impact, resiliency impact, etc.).

**TASK III:** Review and identify all possible funding sources.

**TASK IV:** Aggressively pursue this action.
221. **Port Container/ Break Bulk East/West Terminal Expansion**

**ACTION:** The proposed improvements will nearly triple the Port’s container handling and storage capacity, adding 903 FEUs of storage, including additional support plugs for refrigerated containers. This increased capacity will greatly enhance revenue and create new jobs.

Additional break bulk cargo capacity at the East Terminal provides the Port with the opportunity to expand its container terminal capacity at the West Terminal. This provides needed capacity to expand the ports growing Mexico and Central American container markets. The container terminal capacity improvements at the West Terminal include the following:

- Third Container Handling Crane
- 60% Increase in Container Storage
- Additional Racks for Refrigerated Containers
- Additional Chassis Parking
- Rail Serviced Container Freight Station (CFS)
- Container Interchange Gate Expansion and Automation

**TASK I:** Port of Panama City has already done some initial studies.

**TASK II:** Review which studies have been completed (environmental impact, increased volumes, etc.).

**TASK III:** Review possible funding sources.

**TASK IV:** Work with the port to determine next steps for execution.
222. Port West Terminal - Bulk Terminal Expansion - Biomass Dome Storage Facility, Conveyance System and Access Roads

**ACTION:** To mitigate storm impacts in the future and to support growth of biomass exports, the Port of Panama City needs to construct a storage dome adjacent to the existing bulk warehouse. Storage domes are less vulnerable to high winds, providing the port the resiliency needed to mitigate future storm or disaster damage.

The wood pellet storage expansion will also provide Enviva with the security they need to proceed with an expansion of the Jackson County plant, providing significant economic benefits in the region, including increased jobs.

The new Biomass Dome would have a capacity of 20,000 tons and will increase the bulk cargo exporting capabilities by 300,000 tons per year, generating an estimated $50 million in new export activity per year for the region. The dome will be 150 feet in diameter and stand 105 feet high sitting on a pile supported foundation. Product receiving will be accomplished by high angle conveyor systems connected to adjacent rail dump station. The dome will include an aeration system to prevent self-heating. The building will have dust collection and control, heat monitors and fire suppression systems. The dome’s foundation includes automated doors leading to a reclaimed conveyor system that will connect to the existing ship loading equipment. The existing port’s wood pellet shipper, Enviva Partners, L.P., is eager for the expansion project which will allow them to expand their Jackson County mill production from 800,000 tons annually to 1.1 million tons annually.

**TASK I:** Closely review and finalize preliminary studies done by the port.

**TASK II:** Review which studies have been completed (environmental impact, economic contribution to increased business flows, etc.) and which are needed.

**TASK III:** Review and identify possible funding sources.

**TASK IV:** Work with the port to determine next steps for execution.
### 223. Build Top Quality Water-Front Parks

**ACTION:** As an economic driver, create riverfront parks with boat docks, restaurants and open greenspaces. This would allow the community and visitors to enjoy waterfront property, invite business investments and significantly increase values of surrounding areas.

The Branch encourages the creation of waterfront parks and unique areas similar to Pensacola, Tampa, Charleston, Savannah and Boca Grande.

**TASK I:** Define project scope, and locations.

**TASK II:** Work with possible development ideas relative to the location.

**TASK III:** Conduct economic impact study, cost-benefit analysis, traffic study, and determine environmental impact to the area.

**TASK IV:** Develop a master plan concept or renderings for review.

**TASK V:** Identify funding sources.

**TASK VI:** Determine if the owners of the project(s) are to be public or private entity.

**TASK VII:** Report findings for consideration and pursuit.

### 224. Implement a Business and Employment Incubator

**ACTION:** The incubator would combine an effort to develop school-to-work initiatives in the retail/tourism, technology, light industrial, construction and other high employment demand businesses with efforts to develop a business incubator for new business. The school-to-work initiative would involve partnering business sectors with employment demand using the Bay County School District, Gulf Coast State College and FSU-PC for the development of necessary training. It is anticipated that approximately one-half of student wages would be covered from the organization.

This effort would allow for long-term development of a trained workforce and support for startups and current businesses by providing subsidized trained labor. This promises to be a key economic driver.

Developing a trained workforce to supply growing employment sectors is key to fuel perpetual economic development. By training students in high demand areas and subsidizing local employment growth, we can develop an economic engine to fuel growth of more business.

**TASK I:** Determine scope of the incubator (Who are the target sectors?).

**TASK II:** Underwrite economic partners for training and management of the incubator.

**TASK III:** Determine training programs, education programs and incubation support.

**TASK IV:** Discuss businesses willing to support hiring people from the incubator.

**TASK V:** Explore existing funding sources such as U.S. Department of Commerce, Florida Department of Economic Opportunity, Dept of Labor and Department of State.
225. Establish a Disaster Recovery Fund for Charter Captains

**ACTION:** The NACO, a 501(c) (6) non-profit, has partnered with the International Game Fish Association, a 501(c) (3) non-profit, to raise monetary funds to distribute to those charter and head boat owners most in need of financial help. This effort applies to all “for hire” charter/head boat owners and crews who live and operate in the affected area from Panama City Beach to Steinhatchee, FL. A total of 461 owners have been identified and are currently being notified of the financial help available. This is an effort that promises to assist in business recovery and sustain this critical industry.

While this program has raised $28,000.00 from various sources (charter boat associations, IGFA, American Sport Fishing Association, Yamaha, and others) raised for substantially more funding.

The community would definitely reap the benefits from the additional jobs and related commerce associated with the restoration of this important enterprise. For hire charter/head boat operations also support the historical and cultural businesses that offer recreational opportunities to the public. These small family businesses help support their local fishing communities and bring tourists to the area. Financial assistance will help these small family businesses survive, rebuild and continue their services to the public.

**TASK I:** Determine the appropriate entity to administer the fund and develop operational guidelines. What are the events that trigger disbursements?

**TASK II:** Determine the appropriate entity to administer the fund and develop operational guidelines.

**TASK III:** Provide for the financial underwriting and a thorough verification process to include appropriate screening and any required followup expenditure audits.

**TASK IV:** Begin immediately to identify potential funding sources for the effort. Establish necessary work groups to assist the applicants in the ongoing process. Such groups should include assistance in completing the application and understanding the terms and conditions of the offering.


Verizon has promised to partner with the Bay County community to bring 5G technology to the area. Bay County is the only location in the Southern United States to benefit from this technology in the near future. Based upon the discussions to date, a key part of this program will be a demonstration of the capability and its potential. Once the Navy, Air Force, scientists, students, businesses and government sector fully see and understand what 5G offers, the opportunities will appear and the economic impact will be underway.

5G technology will be a key aspect in this long-term recovery. It will be unique and highly sought after as it promises to serve as a key facilitator of many aspects of society and business over the next ten years. This could include Virtual Reality (training at Tyndall), autonomous cars, robotic surgery (BayMed resurgence) and augmented reality. In addition, it offers opportunities like robotics development, cloud storage, gaming, etc.

During the effort underway prior to Michael, Verizon advertised $25 million commitment to fiber optics and infrastructure. Only five cities in America were selected--Panama City, Sacramento, Los Angeles, Houston, and Indianapolis. This offers Bay County a chance to boldly step into the 21st century ahead of most of the nation. This will enable our communities to become a showcase, promote entrepreneurship and significantly drive the future economy. Millennials will be greatly attracted to this technology. This effort has the potential of putting Bay County and the region on the technology map and jump-start the rebirth of communities after the devastation of Michael.
227. Provide Subsidized Childcare

**ACTION:** A critical shortage of labor, both skilled and unskilled, currently exists across much of Bay County. Employers across all industries are experiencing difficulty in staffing operations in the aftermath of Hurricane Michael. Childcare and after school care facilities are in short supply as many have closed or scaled back operations as an outcome of the disaster. It is commonly accepted that access to responsible and affordable childcare is vital to economic development.

This proposed economic development project is designed to help small business, large scale, and public sector employers staff up their operations by enabling workers to adhere to their work schedules, reduce absenteeism and improve workplace productivity. It is well documented that workers are more productive when they have peace of mind knowing their children are being cared for safely.

Funding is needed to help offset costs for working families with children and facility operators. Families with children, upon demonstrating employment, employment search, or student status, along with household income, would receive a monthly voucher allotment, in addition to any pre-disaster subsidy, to offset costs of childcare.

Facility operators would also receive a monthly subsidy based on average population count and enrollment capacity. These subsidies could be applied toward rent, electric and other operating expenses.

Lessons learned in economic recovery from Superstorm Sandy (Hurricane Sandy 2012), provide a key precedence for moving forward with planning and execution of this program for all Bay County communities and employers.

Many workers with young children confront multiple challenges and struggle with returning to the labor market either part time or full time due to inability to secure affordable childcare that is convenient to their home or workplace.

**TASK I:** Establish overall project scope and project champion.

**TASK II:** Discuss requirements of the idea, triggering events to support.

**TASK III:** Review funding sources to determine if private or public and identify the frequency of the ongoing contributions.

**TASK IV:** Establish board to oversee group.

**TASK V:** Write SOP of the group.

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**Primary Sponsor:** Bay County  
**Estimated Cost:** $12,000,000.00  
**Source of Funding:** HSS CED, County Initiative: Community Resiliency
228. Enhance CRA Funding and Coverage

**ACTION:** Current CRA budgets need to be enhanced to accommodate additional repairs needed for hurricane-damaged properties. This should include the ability for owners to get a special approval from CRA board for roof repairs for the next two years.

This program will enhance the ability to quickly repair and renovate damaged properties. By allowing investors to utilize CRA funds (potentially including roofs), the corridors covered under CRA would be highly desirable properties for improvement.

Current CRA budgets need to grow to avoid prolonged blight. Offering an enhanced CRA program would strongly encourage investors to purchase and renovate properties. If properties within the CRA district are not offered the ability to receive adequate funding from the CRA, they may continue to be blighted properties. By offering the ability for the CRA board to allow support of roof repairs for a temporary period of time, it would help cover a significant impediment to purchase and renovate the affected CRA district’s properties.

**TASK I:** Determine need for the enhancement of the CRA, which cities are included or unincorporated areas.

**TASK II:** Analyze economic impact from investors coming into CRA, tax collection consequences.

**TASK III:** Find funding sources to support the enhancement of the CRA.

Primary Sponsor: Countywide  
Estimated Cost: TBD  
Source of Funding: HUD, CDBG  
Initiative: Economic Redevelopment
229. Establish Advanced Manufacturing Innovation Institute

**ACTION:** When GKN Aerospace was looking for a place to expand, they informed Bay County that they needed two things. Those were an advanced manufacturing workforce pipeline and a collaborative partnership in which to perform their future research and development efforts. Upon working this request for over two years, signing up additional partners looking to move to or expand in the region, and visiting multiple similar facilities worldwide identified as exemplary, Gulf Coast State College (GCSC) is partnering with education, government and industry to create the Advanced Manufacturing Innovation Institute or AMI2. The AMI2 will leverage Bay County’s and the region’s network of educational institutions, world-class research facilities, industry and military bases to build a sustainable hub of advanced manufacturing training, development and production.

The GCSC Advanced Manufacturing Innovation Institute (AMI2) will be a public-private partnership of industry, local/state/federal agencies and academia that work together and invest in the development of world leading facilities, technologies, capabilities, education, training and workforce development/recruitment. Our stakeholders will jointly design, acquire and equip world-class research, development and production facilities to create a global center for advanced manufacturing excellence! In addition, our stakeholders are working to identify and recruit the best industry talent essential to drive our innovation and success.

AMI2 is designed to integrate and expand the work of current and developing regional Advanced Manufacturing (AM) partners. These partners will make extensive use of computerized and highly automated, high precision technologies and techniques, combined with a high performance workforce, in furnishing a heterogeneous mix of products (in small or large volumes, and with both the efficiency of mass production and the flexibility of custom manufacturing), in order to quickly respond to customer demands.

Our workforce education partners, as previously identified for AMI2, are Bay District Schools (career academies, certifications, dual enrollment, student internships), Gulf Coast State College (pre-employment training, A.S. Engineering Technology, college credit certificates, industry certifications, research support, student internships), Florida State University Panama City (materials research, B.S. Mechanical Engineering, M.S. Systems Engineering, student internships), CareerSource Gulf Coast (pre-employment selection, training scholarships, and internship placement with industries), and advanced manufacturing industries in Bay County (all participating industries will provide multiple internship opportunities for students annually). Our industry partners will guide AMI2 in curriculum development, equipment selection, and evaluation of students to ensure that the students in our internship, certificate and degree programs have the required skills. Gulf Coast State College guarantees that graduates of an Associate of Science degree, college credit certificate or non-credit training course included in the Advance Manufacturing Innovation Institute (AMI2) will have the general and technical skills outlined in their program of study, including program objectives. If there are skill deficiencies identified by the student’s first employer in the related field, the college will provide additional instruction to address the skill deficiencies at no cost to the student or employer.

The project has been included on the list of Triumph requested projects by Bay County, FL and Advanced Manufacturing is listed as a strategic priority in the Northwest Florida Forward document developed by Florida’s Great Northwest.

GCSC has also received a grant from the Florida Job Growth Grant Fund (before the storm). The College has received commitments of matching funds in the amount of $24,389,485.

**TASK I:** Coordinate with professionals and organizations that have been working on the idea.

**TASK II:** Determine next steps to establishing the Advanced Institute.

**TASK III:** Conduct site selection process.

**TASK IV:** Conduct site study, economic analysis and promote idea with potential companies looking to establish inside the Institute.

**TASK V:** Charter the institute, create organizational structure.

**TASK VI:** Examine funding sources.

**TASK VII:** Report progress to stakeholders.

**Primary Sponsor:** Gulf Coast State College

**Estimated Cost:** $29,000,000.00

**Source of Funding:** HSS CED, County, State, Private Investment

**Initiative:** Private Sector and Small Business Expansion
**230. Port Industrial Park**

**ACTION:** The Port of Panama City is completing the necessary groundwork to make the 80 acre industrial site shovel ready for a development partner.

Once this is done, a commercial development partner can build distribution, storage or logistics centers, increasing trade volumes in the area.

**TASK I:** Discuss with Port Authority the status of the project to date.

**TASK II:** Review opportunity to work with the EDA as an immediate project opportunity.

**TASK III:** Review zoning and permitting requirements.

**TASK IV:** Look for other potential funding opportunities as an alternative.

**TASK V:** Determine best use for the site and begin process to attract partners to the project.

**Primary Sponsor:** Port of Panama City  
**Estimated Cost:** $50,000,000.00  
**Source of Funding:** HUD CDBG, HSS CED, Private Investment  
**Initiative:** Port of Panama City Expansion

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**231. Bay County Area Roadside Beautification Project**

**ACTION:** This effort will improve bridges and roads to make the drive from Tyndall to the beach easier and visually appealing as well as spruce up area entrance to the community along Highways 231 and 79 and 23rd Street.

**TASK I:** Determine scope of the project.

**TASK II:** Select project owner and determine costs and funding sources.

**TASK III:** Determine if it can be part of other beautification projects on a smaller scale.

**TASK IV:** Seek private sector sponsors, local business that may be participants of the project.

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**Primary Sponsor:** Bay County  
**Estimated Cost:** $10,000,000.00  
**Source of Funding:** USDOT  
**Initiative:** Transportation Improvements
232. Build Conference Center on Panama City Beach

**ACTION:** This is a critical need that will be a major part of economic recovery. The need is to develop a comprehensive and modern conference center to hold major events, take advantage of the large inventory of rooms in the area and stabilize the local hospitality industry during the “off-peak season” months.

In the event of future hurricanes or other disasters, the conference center can also serve as a shelter for residents, visitors and response and recovery personnel.

This center could be aligned with a large hotel development or adjacent to another major attraction.

**TASK I:** Conduct a review of the idea with Panama City Beach Conference and Visitors Bureau.

**TASK II:** Determine desired size, location and offerings.

**TASK III:** Select project champion, conduct economic impact study, resiliency and mitigation plan analysis.

**TASK IV:** Review funding sources, business review.

**TASK V:** Look at shelter function of the site, mitigation planning.

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233. Build “City Walk” Style Development at Downtown Marina

**ACTION:** This project would develop and construct an area for multiple venues, including hotels, restaurants, shopping, and nightlife near the downtown marina.

This area would provide an economic opportunity in the form of creating construction jobs during the development phase, as well as multiple permanent service jobs for residents. It would also attract tourism.

Developing and constructing an area similar to Universal’s City Walk in Orlando, Florida could include hotels, restaurants, shopping, a movie theatre and nightlife venues. Permanent condominium residences and/or apartments could also be considered for this project. Something of this magnitude would require several acres of land to house the venues. Several service industry and hospitality jobs would be created for local residences, as well as some higher-level management positions. Further economic impact would include revenue from the venue's leases. Therefore, obtaining long-term lease commitments from vendors would be crucial. The different venues would provide a tourism attraction, including an outdoor shopping area with multiple high end and medium price point restaurants to choose from. The nightlife venues and movie theatre would also create a tourism attraction.

**TASK I:** Define project scope and location.

**TASK II:** Work with possible development ideas relative to the location.

**TASK III:** Conduct economic impact study, cost-benefit analysis, traffic study and environmental impact to the area.

**TASK IV:** Do a master plan concept or rendering for review.

**TASK V:** Identify funding sources.

**TASK VI:** Determine if the owner of the project is a public or private entity.

**TASK VII:** Report findings for consideration.
234. Implement Research Park at Airport

**ACTION:** The development of a research park at the airport will create jobs and attract new businesses and industry to Bay County. This clean energy would provide key growth potential.

This development would drive the local economy by creating short-term jobs for the construction industry, as well as long-term jobs within the research park. The types of jobs would be dependent on tenants of the research park.

Creating a research park at the airport would result in Bay County being an attractive location for businesses to move to the area. In similar scenarios, the airports have maintained ownership of the land, but allowed developers to construct offices for the use of future tenants. This would require a long-term partnership between the airport and developers, as well as long-term leases for tenants. Such a facility could result in the creation of thousands of jobs for Bay County residents, positively affecting the local economy. A research park could include office buildings, solar fields, industrial park, etc. dependent on which companies were included.

**TASK I:** Determine base line scope of the research park and owner of the research park.

**TASK II:** Conduct a business analysis of the research park, including cost-benefit, size of building, location, occupancy levels, possible anchor tenants and land acquisition strategy.

**TASK III:** Review zoning and permitting requirements.

**TASK IV:** Understand funding sources, development team, pre-marketing strategy, property management group.

**TASK V:** Develop metrics of success and expected economic contribution to the local economy and job drivers.

### Primary Sponsor: Bay County
**Estimated Cost:** $6,500,000.00
**Source of Funding:** HUD CDBG, Private Investment
**Initiative:** Private Sector and Small Business Expansion

235. Provide a Cruise Ship Port

**ACTION:** This action calls for the development of the existing port and canal to accommodate large cruise ships. Another location could also be considered. Bringing the cruise ship industry to Bay County will provide a significant boost to the tourism business (including east of Hathaway Bridge) and provide a tremendous boost to the economy.

Developing the port to accommodate cruise ships would require significant accommodations to the existing port and canal due to the size of the ships. Part of this would also include developing the areas surrounding the port to include restaurants, shops and other venues that attract cruise lines to make Bay County a destination for cruise ships. There would also need to be a parking area near the port to accommodate the vehicles of the cruise ship passengers while they are traveling. The surrounding venues would create retail and service jobs in Bay County, while the fees charged for parking would create a source of income for the area.

**TASK I:** Determine the port’s ability to support cruise terminal or cost to build cruise terminal.

**TASK II:** Discuss with cruise lines possible interest and highlight which ports can be reached.

**TASK III:** Conduct an economic impact study.

**TASK IV:** Conduct an environmental impact study.

**TASK V:** Review zoning requirements.

**TASK VI:** Conduct a cost-benefit analysis, including break-even rates.

**TASK VII:** Determine funding sources to develop cruise terminal.

### Primary Sponsor: Port of Panama City
**Estimated Cost:** $25,000,000.00
**Source of Funding:** HUD CDBG, HSS CED
**Private Investment**
**Initiative:** Economic Redevelopment
236. Information Technology (IT) Entrepreneur Center

**ACTION:** There is a strong desire and need to develop an IT/Entrepreneur Center offering individuals and small businesses a collaborative effort for business development. This resource would allow individuals and small businesses to obtain mentorships, advice, education and investment opportunities on how to start and or grow their businesses. It would impact Bay County by helping small businesses to prosper and create economic growth.

An IT/Entrepreneur Center would allow individuals and small businesses to purchase a membership to use the center. A membership would provide the opportunity for mentorships, start up support, classes, meet with other like-minded people within a specific area, pitch to investors, etc. There could be a tiered level of membership with each tier offering different benefits. The center could partner with colleges and universities providing access to students, as well as internship opportunities. The center would need to pair with several organizations and individuals to create a network of mentors, advisors and potential investors. Classes would explore how to start a business, obtain investment funding and basic business principles.

**TASK I:** Determine scope of the project, understand how the center will be established, managed and where it will be housed.

**TASK II:** Conduct a business plan analysis of the concept. Can it be self-sustaining, or does it need to be subsidized by a source?

**TASK III:** Determine location, establish sponsors, list of possible mentors open to the idea, how many people will use the center.

**TASK IV:** Review concept to stakeholders for further consideration.

237. **Action:** Build Boardwalk Systems (PCB and Mexico Beach)

**TASK I:** Understand the extend of the boardwalk to be built along the beaches.

**TASK II:** Review zoning and cost requirements.

**TASK III:** Determine funding sources.

**TASK IV:** Prioritize project to other projects.
238. Grow the Ecotourism Aspect of the Community

**ACTION:** This is a need to develop and execute a plan to expand ecotourism in Bay County, which would allow tourists to visit Bay County's undisturbed natural lands with minimal impact while educating the tourist and promoting conservation. This could be done by creating a marine wildlife rehabilitation center and/or sea turtle education center open to the public, along with constructing kayak launches and biking trails for both tourist and residents.

**TASK I:** Review feasibility of idea.

**TASK II:** Understand requirements to open and operate rehab center and turtle education center.

**TASK III:** Explore locations for site, including area for kayak launch.

**TASK IV:** Review environmental impact, operating challenges.

**TASK V:** Funding options.

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239. Develop Kayak Launch, Conservation Area, Eco-Learning

**ACTION:** Developing kayak launching areas in the West Bay area would promote ecotourism in Bay County. It would allow both residents and tourists to take an up-close tour of the natural beauty of Florida’s undisturbed treasure.

**TASK I:** Develop an economic analysis on the idea.

**TASK II:** Understand market analysis.

**TASK III:** Conduct environmental impact study on increased traffic along West Bay.

**TASK IV:** Review staffing needs, security concerns.
240. Establish and Operate Concert Venues

**ACTION:** As a business driver, develop and construct an area with multi-dimensional venues, including a concert venue, shops and restaurants. An area including restaurants, shops, recreation and a concert venue would impact the area by providing economic opportunity to residents in the forms of service jobs, as well as create a tourism destination. Such an impact would be widespread through cross demographics. Creating this area would result in hospitality jobs, which would positively affect the area economically. This development would be similar to the Wharf in Orange Beach, Ala or Bricktown, Oklahoma.

A multi-dimensional venue for restaurants could be anchored by an outdoor concert amphitheater on or near the water. Such an area could include a walking and/or bicycle path along the water. Additionally, a kid’s park area or splash pad could be added to entice families to venture to the park. In addition to concerts, it could also be used to host other events for the public, such as art festivals, outdoor yoga, food truck rallies, etc. An ice-skating area could be set up during the winter to draw people outdoors in cooler weather. Dependent on the location, a firework show for New Year’s Eve or Fourth of July could be considered. Boat docking could be added in select places to allow additional accessibility. This venue could become an anchor for the PC area residents and a tourist attraction for visitors, providing visitors a destination other than the PC beaches.

**TASK I:** Define project scope and location.

**TASK II:** Work with possible development ideas relative to the location.

**TASK III:** Conduct economic impact study, cost-benefit analysis, traffic study, environmental impact to the area.

**TASK IV:** Do a master plan concept or rendering for review.

**TASK V:** Identify funding sources.

**TASK VI:** Determine if the owner of the project is a public or private entity.

**TASK VII:** Report findings for consideration.

241. Build an Artist Village to Capitalize on Industry

**ACTION:** The creation of an artistic village to allow artists to display their work could become a key part of Bay County as a destination. An artistic village would impact the community in a cultural aspect and create a destination inviting tourism.

This artistic village (with painted or mural walls) would provide a location for artists to display their works. Such a village would include rotating exhibits from both local and non-local artists. It would provide an opportunity to enhance the culture in the area, as well as encourage new residents to move to the area. Monthly art festivals could be held. Such a village could also promote tourism by providing a destination for photo opportunities.

**Primary Sponsor:** Bay County  
**Estimated Cost:** $4,500,000.00  
**Source of Funding:** HUD CDBG, HSS CED, Private Investment  
**Initiative:** Economic Redevelopment

**TASK I:** Review idea scope and project champion.

**TASK II:** Understand zoning requirements, economic impact, participation mix between public and private sector (e.g. is it industrial or residential mix with commercial).

**TASK III:** Review potential master planning needs, key people to engage to understand demand for the idea and the sustainability of the idea.

**Primary Sponsor:** Panama City, City of  
**Estimated Cost:** $1,200,000.00  
**Source of Funding:** HUD CDBG, HSS CED, Private Investment  
**Initiative:** Private Sector and Small Business Expansion
**242. Food Truck Area/Park**

**ACTION:** Develop a park with space to accommodate multiple food trucks and seating for patrons.

Such a food truck park would provide a location where the community could come together to enjoy an assortment of cuisines. It would also provide a family friendly place for residents and tourists to congregate for entertainment.

A food truck park would include a picnic area outside with a family friendly playground where multiple food trucks would offer a variety of options. It could include a stage for live music and entertainment. The trucks would pay the City a flat fee for renting or leasing a space at the event. In addition to providing a revenue stream for the City, it would also impact the economy by providing a customer location for the small businesses. In the event live music would be available, the City could require tickets to be purchased for admission.

**TASK I:** Discuss idea and review stakeholders.

**TASK II:** Review zoning requirements, health department regulations, desired site, traffic study.

**TASK III:** Review other desired uses of the area and other amenities such as a concert venue.

**TASK IV:** Review possible demand from residents and how many food trucks would participate.

**TASK V:** Determine which agency will supervise venue, coordinate first responder presence.
243. Designate Photo Landmarks/Venues to Promote Tourism

**ACTION:** Develop a marketing/advertisement campaign geared towards tourism by promoting specific landmarks and/or places for tourists to use as a photo opportunity.

Tourism in Bay County would be impacted by marketing specific landmarks or iconic places linked to Bay County. By using such photo ops in a tourism campaign additional tourism would be driven into the County.

Creating a marketing and advertising campaign through the use of iconic Bay County Landmarks and/or places as a photo op would drive tourism to the area. This effort would be similar to the famous ”Welcome to Las Vegas” sign.

**TASK I:** Identify local landmarks/venues to be included in marketing campaign, who is the target, what is the budget.

**TASK II:** Determine marketing programs, including themes so that appropriate photos of landmarks can be married to the campaign.

**TASK III:** Determine budget, coordinate with Panama City Beach Conference and Visitors Bureau.

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244. Tyndall Parkway Masterplan

**ACTION:** Provide significant development along Highway 98 in Callaway and Parker.

**TASK I:** Review idea with key stakeholders.

**TASK II:** Discuss target locations, industry, size.

**TASK III:** Review zoning, conduct economic study, traffic impact, cost-benefit analysis.

**TASK IV:** Review site selection, select leader of the project to lead and manage the execution.

**TASK V:** Determine success metrics to the idea.
245. Build an Aquarium at the Downtown Marina

**ACTION:** The development of an aquarium downtown (near the marina) promises to increase tourism and provide educational opportunities related to marine life for local residents.

Upon completion, an aquarium would impact local residence by providing an opportunity for preschool, elementary and middle school student field trips, as well as create a destination for tourism. An aquarium built near the downtown marina would inspire tourism in this area, as well as create an educational opportunity as a destination for preschool, elementary and middle school field trips and summer camps. The aquarium could also be used as an event center. This project could have an effect on cross demographics of local residents, as well as visiting tourists. Programs for local conservation could also be incorporated to provide education on local marine life and what steps need to be taken to provide protection of such species.

**TASK I:** Discuss the expected impact to the community, the area and incoming visitors.

**TASK II:** Review expected amenities, project sponsor, targeted outcomes.

**TASK III:** Conduct environmental study of the location and of the aquarium residents. What are the educational outcomes?

**TASK IV:** Conduct economic costs of the aquarium, staffing requirements, direct and indirect economic impact.

**TASK V:** Discuss funding options.

**TASK VI:** Review zoning and permitting requirements or changes needed to support idea.

**TASK VII:** Publish report to discuss idea for public input.

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**Primary Sponsor:** Panama City, City of  
**Estimated Cost:** $100,000,000.00  
**Source of Funding:** HUD CDBG, County, Private Investment  
**Initiative:** Economic Redevelopment

246. City Marina Convention Center

**ACTION:** The establishment of a Downtown Convention Center will be a key element to economic recovery and job creation. Project visioning has been completed and stakeholders, including FSU-PC has been contacted regarding collaboration.

**TASK I:** Scope out idea, how big of a convention center, amenities, alternative use, etc.

**TASK II:** Conduct environmental study, traffic study, economic impact of the convention to the neighboring areas.

**TASK III:** Who is the champion of the convention center, review funding options, what is the economic model to sustain the convention center.

**TASK IV:** Determine project plan, metrics of success, zoning, permitting requirements, architecture (energy efficiency).

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**Primary Sponsor:** Panama City, City of  
**Estimated Cost:** $25,000,000.00  
**Source of Funding:** TBD  
**Initiative:** Economic Redevelopment
247. City of Panama City Visitor Center

**ACTION:** The proposed location of this Visitor Center is Parcel ID 27929-000-000 in Bay County Florida. This request would seek a 99-year lease from FDOT with permission to construct a Visitor’s Center on their parcel at the western gateway to the City of Panama City.

A long-term (99 Year lease) with Florida Department of Transportation would eliminate the land acquisition expense. Destination Panama City would contribute $100,000 to the construction of the facility.

**TASK I:** Determine location and conduct traffic study of the site.

**TASK II:** Do a feasibility study, and success metrics of the Visitor Center.

**TASK III:** Prepare budget, staffing plans, and determine how the Visitor Center will function within the City’s organization.

248. Action: Establish Defense Industry Hub

**TASK I:** Define “Defense Hub” and what is included to be participants of the hub.

**TASK II:** Assemble project team and stakeholders, members of the bases in the area.

**TASK III:** Review requirements, targeted sectors, best locations.

**TASK IV:** Conduct feasibility study, including economic analysis on marginal contribution on the area’s economy.

**TASK V:** Select execution team, prepare report for public input.

249. Build New Lynn Haven Commerce Park

**ACTION:** Develop next generation commerce park. This will provide commercial space for relocating businesses.

**Primary Sponsor:** Bay County

**Estimated Cost:** $35,000,000.00

**Source of Funding:** HUD CDBG, Federal Grants, Private Investment

**Initiative:** Military Economics

**Primary Sponsor:** Lynn Haven, City of

**Estimated Cost:** $20,000,000.00

**Source of Funding:** HUD CDBG, Federal Grants, Private Investment

**Initiative:** Private Sector and Small Business Expansion
250. Business Accelerator

**ACTION:** The Accelerator will provide an important “coaching tool” for emerging businesses. This will provide significant assistance to businesses wanting to grow.

Project visioning for this effort has been completed and FSU-PC has been contacted for collaboration.

**TASK I:** Review FSU’s vision for the accelerator, resourcing required.

**TASK II:** Review location and economic requirements.

**TASK III:** Develop economic study on the benefits of the accelerator to the economy.

**TASK IV:** Discuss opportunities of the accelerator program.

Primary Sponsor: Panama City Beach, City of
Estimated Cost: $3,000,000.00
Source of Funding: HUD CDBG, Federal Grants, Private Investment
Initiative: Private Sector and Small Business Expansion

251. Enhance NSA Panama City Turning Basin

**ACTION:** The proposed turning basin would allow for larger vessels to safely enter and exit NSA Panama City in a designated charted area just outside the entrance to NSA Panama City. Due to channel width and depth constraints, large vessels have to exit fully in reverse, or they opt to use the Port of Panama City facilities. As missions continue to expand, a turning basin provides the safe opportunity for Navy and Coast Guard vessels alike to transit safely in and out of Alligator Bayou.

This project would increase the Navy's ability to conduct research and testing on platforms currently transiting to Pensacola due to their size. Bringing ships to NSA Panama City increases work opportunities in our area and increases the installation's overall economic impact to our community. NSA PC is in possession of the 2016 Feasibility Study.

**TASK I:** Speak to stakeholders and interested parties to gain better understanding of needs.

**TASK II:** Review current depths, waterways, and environmental conditions.

**TASK III:** Understand traffic flows that are constraint by current turning basis, how many ships use the turning basis, and potential enhanced patterns.

**TASK IV:** Do a feasibility study, environmental impact study, economic study on the cost-benefits of the basin.

**TASK V:** Review laws and ordinances, zoning and other legal considerations.

**TASK VI:** Review funding sources and disruption from building the turning basin.

**TASK VII:** Do a report for public hearing and consideration.

Primary Sponsor: Port of Panama City
Estimated Cost: $6,000,000.00 Source of Funding: DOD, USCG, USACE, FDEP, WMDs
Initiative: Military Economics
252. Build a Farmer’s Market and Community Gardens

**ACTION:** A farmer’s market and community gardens would help the community and local agricultural farmers. One could be developed in each section of Bay County to service the surrounding areas.

**TASK I:** Review idea, market requirements, target products, size consideration, hours of operation.

**TASK II:** Conduct location scouting, feasibility study, economic contribution, costs, traffic impact, benefit to community.

**TASK III:** Prepare idea for report and consideration, target hosted locations to gain support.

Primary Sponsor: Panama City, City of
Estimated Cost: $3,000,000.00
Source of Funding: Private Investment, CDBG, USDA
Initiative: Economic Redevelopment

253. Build and Operate a Downtown Outdoor Amphitheater

**ACTION:** An outdoor amphitheater in Downtown Panama City would be a great addition and a draw for visitors. This will allow for a place on the water for the community to gather. A place for events around the marina and convention center.

**TASK I:** Review amphitheater requirements, events to be hosted, alternative use options, location.

**TASK II:** Conduct a feasibility study, environmental impact study, noise levels in the neighborhood, zoning and traffic issues.

**TASK III:** Prepare report for public review and input.

Primary Sponsor: Panama City, City of
Estimated Cost: $15,000,000.00
Source of Funding: HUD CDBG, Private Investment
Initiative: Economic Redevelopment
254. Provide Water Transit for Residents and Visitors

**ACTION:** Water based mass transit from available locations throughout Bay County. This would include Lagoon Marinas to Tyndall, PC Marina, St Andrews Marina, Sun Harbor and Lynn Haven. Also, local schools could potentially utilize the system.

This service could reduce bridge degradation and congestion, while re-employing marine based operators. Also focuses attention on improving marinas and landings for longer term uses (Wuber-water/boat version of Uber). Increases and diversifies housing opportunities for Tyndall and Eastern Shipbuilding and many others seeking stable housing.

**TASK I:** Conduct traffic and use study to understand feasibility and use of the mass transit.

**TASK II:** Conduct environmental impact study, traffic study and permitting/zoning requirements, financial resourcing and break-even (capacity utilization) analysis.

**TASK III:** Prepare report for public input and review.

255. Business Recovery Center

**ACTION:** A business recovery center is a one-stop shop set up to provide local, state and federal resources and services for businesses after a catastrophic event. Because their services are tailored to address business needs, they typically are established separately from the FEMA disaster recovery centers to avoid confusion with individuals needing social services.

Ready Business was created to educate and empower individuals, small businesses and interested parties to prepare for and respond to emergencies.

Small Business Development Centers (SBDCs) assist small business owners by offering technical assistance to individuals and small businesses both before and after a disaster.

**TASK I:** Conduct a review of services focused on business recovery needs, resources needed, and desired central location.

**TASK II:** Conduct a cost-benefit analysis, COPIS analysis, and determine who can host the center.

**TASK III:** Deliver a recommendation for consideration on the idea for consideration.
256. Central Center for Out of Town Contractors to Report, Register, Learn Laws, Educate on Number of Municipalities and Permitting, etc.

**ACTION:** Create a designated area for out of town contractors to become educated on how to register, report and learn the local laws and ordinances.

Designating a specific location for out of town contractors to become knowledgeable on the permitting processes, local ordinances and laws, as well as reporting requirements could be accomplished by providing a specified area, preferably near the permitting office or City Hall. As each municipality has its own ordinances and building codes, consideration that each municipality designate its own location should be investigated.

**TASK I:** Create a task force with members of each community and Bay County to aggregate what is the ideal set of information to register and disseminate for out of town contractors, cost-benefits analysis of a central location or repository, and how it would improve/streamline the entry of new out of town contractors.

**TASK II:** Explore central location (County Services Building) and economic allocation to maintain the office; and, maybe develop a website with an API to all city registration and permitting requirements, information, ordinances and local laws.

**TASK III:** Create action plan to execute on idea.

257. Action: Database of ALL Bay County Businesses (Partner w/ Power Companies)

**TASK I:** Assess what specific data set is sought to be aggregated and review what power companies may have available.

**TASK II:** Discuss potential challenges to maintenance, privacy rights, and reporting.

**TASK III:** Create plan to collect data and implement database.
258. Establish Better Traffic Planning and Public Transport Network

**ACTION:** The Bay County area has little public transport available, even in high traffic areas such as the Panama City Downtown and beaches. Public transport jitneys or a small low-cost rail could dramatically enhance business opportunities for restaurants, bars, hotels and enhance tourism traffic. Better access to hotels and restaurants could also enable more use of hotels and conference center to increase tourism in shoulder/off seasons. Public transport can also dramatically improve local environmental aspects including air quality, noise and community carbon footprints.

**TASK I:** Contact the County and municipality transport departments to develop a traffic and public transport study on existing and future community needs.

**TASK II:** Work with local economic development initiatives as well as community reconstruction plans to incorporate public transit into local business expansion concepts.

**TASK III:** Create a report on the economic impact of various types of public transport and the benefits to the community and the environment.

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259. Development of Fuel Depot Property (Lynn Haven)

**ACTION:** This project, which will cost approximately $1 million, will enable use of this highly desirable parcel. The project would include the offering of tax abatement incentives such as reduced property taxes for the commercial part of the development, revenue certificates in exchange for offsite utility improvements required, and assistance with the entrance boulevard, which benefits the entire City.

**TASK I:** Meet with municipal officials to evaluate needs, expectations, and the current status of the project.

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**Primary Sponsor:** Bay County  
**Estimated Cost:** TBD  
**Source of Funding:** HUD, DEO, FDOT  
**Initiative:** Transportation Improvements

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**Primary Sponsor:** Lynn Haven, City of  
**Estimated Cost:** $1,000,000.00  
**Source of Funding:** HUD, DEO  
**Initiative:** Economic Redevelopment
Bay County and the Communities within sustained significant environmental impacts, in the following hours, weeks, and months of Hurricane Michael’s October 10th landfall. Neighborhood tree canopies were reduced by the Category 5 force winds. The Gulf of Mexico sustained heavy damages to natural and artificial reefs as well as substantial sand loss and beach erosion. St. Andrews Bay filled up with approximately 3 million cubic yards of debris, including derelict boats, trees, and other debris from surrounding damaged structures. Blocked waterways caused rising water tables, floating septic tanks and releasing wastewater and storm runoff into surrounding estuaries, including the local canals and bayous.
Recreational Resources

Before the storm, Bay County and the surrounding communities supported some of the most robust recreational activities along the Northern Gulf Coast. Panama City Beach is the anchor to draw tourism into the area with its beautiful beaches, restaurants, night life, museums and other abundant activities for families, and it’s no surprise Panama City Beach is one of the most visited destinations in North Florida. However, after the storm, the goal is to increase tourism to all of Bay County, highlighting some of the other assets the County and cities have to offer. A revitalization of the downtown areas and waterfront areas could give the community the much needed economic boost it has been waiting on for many years. The area east of the Hathaway Bridge was left heavily impacted by the storm. Clean-up and a strategic revitalization are well within the grasp of the area. Many quality ideas and projects were generated through the Branch as well as public outreach efforts. Examples include development of new waterfront public parks with boat ramps, for motorized and non-motorized vessels that will get the citizens back on the water enjoying all it has to offer. Another example of a project with widespread consensus is the major need for specifically located Disaster Resiliency Centers. These four planned Disaster Resiliency Centers will become the primary sheltering locations throughout the County freeing up the schools to re-open for students as soon as they are able. Since much of the community is separated by St. Andrews Bay, it becomes clear to have these centers located on both sides of the bridge as well as in the northern and southern parts of the County. This will keep citizens close to their homes or places of business and will allow for more expeditious recovery. Four locations were identified for Resiliency Centers, all of which would double as an event space or community center, in non-disaster, “blue-sky” times. One of these centers will double as a recreation center, potentially including a swimming pool, indoor walking track, and indoor courts for recreational sports, but most importantly, enough space to house 500-1,000 citizens during and after a disaster.
Resiliency Centers

The dual-use resiliency centers are intended to address the needs of the community to shelter and host large groups and also provide a hardened shelter for residents and first responders use in the aftermath of a disastrous event. The normal use of these locations would be associated with participants in art shows, educational conferences, sport teams and large business conventions. They could also support the neighboring military establishments with fund raisers, social gatherings and other desired events. These facilities would host conferences and large meetings during “normal” times and provide critically needed shelter for citizens, visitors and first responders after a disastrous event. This effort envisions athletic events, large scale entertainment and hotel convention centers. This can also facilitate the need for recreation centers and use by other non-profit organizations. These centers can be expanded and developed to serve a variety of community needs within the communities.

Following is an overview of the four centers that are planned to be strategically located around the communities of Bay County:

A COMMUNITY "RESILIENCY" CENTER (CENTRAL BAY COUNTY)

The first resiliency center would support a teen center, senior center programming, a community wellness center (access to fitness equipment), childcare with satellite elements for workforce readiness training programs, adult literacy programs, art classes, medical and social services, private business (coffee shop/restaurants) and housing depending on location needs. In a post storm scenario, core elements can support sheltering for all ages and childcare first responders. Additional centers around the County can add or delete elements as needed for that area. It is critical that this center be located near public transportation. The use of solar power technology is also planned, as well as emergency back-up generators.

Citizens would utilize this center as a hub, with teens and seniors each having their own separate entrances to ensure quality care and access to wellness facilities. As identified by the student group, these facilities should be adjacent to sports fields, skate parks and other similar amenities. The center may encompass more than one building but would have a hardened core built to code to support childcare for first responders in the event of an emergency. Facilities would also be designed to serve as emergency shelters for people of all ages and abilities. This facility should be completely ADA compliant and include showers designed to support people with disabilities (wider doorways, ramps, grab bars, etc.) and basic kitchen services. It should also include the latest in varied communication options in the event of another significant loss of communication services. The facilities could be owned and operated by the cities or county or managed through a public/private partnership for sustainability.

EVENT CENTER (CENTRAL PANAMA CITY BEACH)

The second proposed resiliency center is an event center that would be located west of the Hathaway bridge. It would support workers and citizens living and working on the west side of the bridge, keeping major thoroughfares free from heavy commuter traffic. The removal of such traffic time would allow for first responders, utility workers and other response personnel to commute within the area, minimize recovery time and enhance the overall result of efforts. It would also provide sheltering to families and employees close to their homes or place of business, allowing them to focus on their personal recovery.

In non-disaster time, the center would function as an event space for local gatherings, performances and public assemblies, or be rented out to larger groups or companies for conventions and other events. This space would draw a new market into this already thriving environment by having the opportunity to host large events and conferences on “the Beach.”

ATHLETIC CLUB RESILIENCY CENTER (BACK BEACH ROAD)

The third resiliency center, also located on the beach, is the athletic club located on Back Beach Road and what is soon to be Chip Seal Parkway. This location, also west of the Hathaway Bridge, would be utilized as a first responder staging and housing area after a disaster. More than 2500 first responders arrived in Bay County in the days and weeks following Hurricane Michael. They took up space in parking lots and on county and city parks for weeks. The location of the athletic center is ideal for first responders, beyond having a centralized location for continuity and execution of efforts, its access by two roads allows for the prioritization of their travel. It is located on the east end of the beach, and its proximity to the bridge would allow quick travel into Panama City and other parts of the County.

In normal times, the athletic center would be host to many different athletic sporting tournaments including basketball,
volleyball, tennis and pickleball. The creation of this space also allows for a new demographic of visitors; families with younger children.

CENTRAL RESILIENCY CENTER  
(DOWNTOWN PANAMA CITY)

The fourth proposed resiliency center would be located east of the Hathaway Bridge, potentially in Downtown Panama City. It would be a traditional hotel and convention center under normal conditions. During times of disasters, it would act as a business and community recovery center. One of the biggest issues immediately following Hurricane Michael was communications, or lack thereof. Creating a location where business owners, community leaders, and volunteer services can meet, and access unmet needs is paramount to a prompt recovery. The community experienced doctors without spaces to preform check-ups, assess their patients or provide treatment. There were also abandoned spaces, lying dormant. This business recovery center will centralize a location to house and meet with agencies such as SBA, (Small Business Association). It would also give local businesses the opportunity to meet face to face with agents for a more personalized approach to a complicated process.
**Marine and Coastal Resources**

Estuary water quality was a large community focus prior to Hurricane Michael. However, the huge amount of debris after the storm has made water quality the primary concern for the Marine and Coastal Resources Subsection. Over one third of Bay County’s total square mileage is made up of water; the 740,000 acre St. Andrews Bay Estuary is comprised of the Econfina Creek and contributing spring watershed, St. Andrews, North, West, and East Bays, including St. Josephs Bay. The watershed also includes Deerpoint Lake Reservoir, Lake Powell, other coastal dune lakes, and the contributing basins and tributaries of all of these waterbodies. (Nov 2017 Northwest Florida Water Management District, St. Andrews Bay SWIM Plan.) Approximately, three million cubic yards of Hurricane Michael debris filled the estuary. The environmental impacts of the mixed debris throughout the estuary could be catastrophic. Efforts and funding to clean these bodies of water need to be expedited.

An effective community initiative that would increase water quality long-term is to move homeowners off of septic systems onto the sewer utility system. Many homes have been identified that have access to public wastewater systems but have not connected. After the storm, the water table rose, floating septic tanks and flushing waste into surrounding waterbodies. Cleaning these community bayous, lakes and canals will encourage a return to bay-based activities, including boating, fishing, snorkeling, kayaking and paddle boarding. These activities are vital to the area’s return to normalcy.

The Gulf of Mexico sustained significant damages to the natural and artificial reef system. Projects to recreate and repair the reefs lost or damaged by the storm were proposed to reestablish the commercial and recreational fishing and diving industries. In a community so reliant on commercial fishing and diving, the restoration of these reefs, is as much a financial recovery as it is an environmental one.
Waterbodies

THE BEACH

Hurricane Michael also took a toll on the beaches of Bay County. From Panama City Beach to Mexico City Beach, the erosion and reconfiguration of key waterway entries into the many bays and inlets has warranted the need to restore and protect the beautiful white sandy beaches that are the trademark of the County. The beaches not only protect the County’s people and infrastructure of roads, buildings and key military assets, but support one of the County’s most economically impactful industries; tourism. Hurricane Michael’s extraordinary combined storm surge and wave action of upwards of 15-20 feet caused significant erosion along the coastline of Bay County. Boasting an impressive 22.5 mile shoreline, 18.5 miles in Panama City Beach, three miles in Mexico Beach, and one mile in St. Andrews State Park, the stakeholders responsible for maintaining the coastline have a daunting project ahead of them. The total loss of sand due to Hurricane Michael is just under a million cubic yards. In particular, the dune system was severely impacted, affecting the main road which is now vulnerable to future small storm events in many locations. Bay County assesses a bed tax of which every 3rd penny collected goes toward the maintenance of the Beaches. A proposal has been presented that will support a full beach restoration of the entire 22.5 mile stretch of shoreline, from the Walton County line to the Gulf County line. Other initiatives have been designed around enjoying the beaches and supporting ways to view and access the gulf front with walkways, trails, boardwalks, gazebos, boat landings and research facilities that will both restore and protect the beaches.

Related to the beaches are the environmentally critical reefs and estuaries that support and protect them. Attention has been given to projects that can restore and protect the reefs and estuaries surrounding Bay County beaches. Reefs are the first line of defense from storm surge in a hurricane. Without the reefs to slow and breakup the flow of currents, the beaches receive the full impact of the storm surge. The reefs also support an ecological component to the fishing industry and aspects of local tourism such as scuba diving and recreational fishing. Estuaries play an inland role in the beach ecosystem.

Consideration has been given to opening the East Pass to connect the St Andrews Bay estuary to increase marine life, help with the dunes, create more space for endangered species and improves the overall quality of the St. Andrews Bay estuary’s water. It also provides a secondary entry to the Gulf of Mexico that enables access for commercial and recreational fishermen and divers. Furthermore, it can improve water quality in the disturbed coastal ecosystem. Instituting conservation efforts to restore and protect the beaches, reefs and estuaries will provide critical upland storm protection to protect infrastructure and support the wildlife native to the region.
THE ESTUARY

The importance of the Estuary Study Program is immense, not only does the St. Andrews Bay/St. Joseph Bay Estuary and watershed span more than 740,000 acres, it includes 36 habitat types recognized by the Florida Natural Areas Inventory (FNAL), including open bay waters, seagrass beds, shorelines, intertidal mud flats, salt marsh wetlands, bogs, swamps, upland meadows and forests. The St. Andrews Bay watershed is unique in Northwest Florida in that no major river flows into the system. As a result, waters of the bays are deep, clear and of relatively high and consistent salinity. The watershed includes both St. Andrews Bay, a 69,000 acre estuary and one of the most biologically diverse bays in North America, and St. Joseph Bay, with the richest and most abundant concentrations of marine grasses along the Northwest Florida coast. The St. Joseph Peninsula also supports the highest density of nesting loggerhead sea turtles in the Florida Panhandle. This pilot initiative will focus on the St. Andrews/St. Joseph Bay Watershed and develop a Comprehensive Conservation Management Plan (CCMP) grounded in science. Monitoring and studying this unique environment will give Bay County recognition in this field and make Bay County a national leader in comprehensive conservation management. The preservation and success of this waterbody is intrinsically linked to the success and preservation of the area, focusing on its rehabilitation and nurturing should be a primary priority.

In addition to the Estuary Study Program, it has been suggested that Bay County become a leader in the field of Marine Research and Technology. Access to various types of waterbodies, some only found in Bay County, tidal lakes and the abundance of stakeholders in the community makes this an ideal environment for a research center. The area is host to two higher education facilities, houses both the Navy and Air Force, is home to the National Oceanic and Atmospheric Administration and is adjacent to other technology research centers (Institute for Human and Machine Cognition) willing to partner in the expansion of Oceanographic Research.
Forestry and Upland Resources

While the Marine and Coastal Branch focused on the local bodies of water, the Forestry and Upland Resources Subsection narrowed their focus to the devastating loss of trees and other vegetation and the related consequences. Beyond beautification and shade, the loss of trees impacts stormwater runoff most significantly. Where tall pine trees once stood and soaked up to 100 gallons of water a day, large patches of standing water remain, creating breeding grounds for insects and other predatory nuisances as well as creating toxic run off that impacts the bay and surrounding estuary. This loss of trees impacts the psyche of all citizens as well as compromising their extracurricular activities, but most importantly the downed trees have become a fire hazard. While planting trees is of the utmost importance, it is also imperative that the planting be completed in a strategic way and that it be specifically executed, as to mitigate infrastructure loss in the future.

The community is also interested in developing an active outdoor lifestyle away from the beach. This would include a rehabilitation of community and municipal parks, as well as the identification and creation of additional greenspaces, including the addition of urban forests to expand and enhance community gathering and connectivity. The identification and acquisition of conservatory easements for passive parks and water shedding, while simultaneously using this land to connect communities with walking and bike paths.
Panama City Crayfish

The Panama City Crayfish is a species of freshwater crustaceans that is only found in and around the Panama City/Bay County area. In an effort to sustain their existence and allow the specie communities to grow as needed, the acquisition of land to provide a safe and viable habitat is proposed. The acquisition of 2,000 acres of habitat for the crustaceans would allow for other capital projects to proceed without fear of their endangerment. The land would also act as a stormwater runoff field, with recreational aspects as a passive park.

Trees and Greenspaces

Culture has a critical role to play in creating greenspaces for work, recreation and making communities more sustainable. Greenspaces also are important in the provision of safe access to water, preserving valuable resources such as the gulf, bays and other bodies of water. They are, of course, the key to healthy forests and the resilience of communities in the face of disasters.

The devastation of Hurricane Michael across the communities of Bay County will impact and be clearly visible for many years to come. The rebuilding of damaged infrastructure, buildings, homes and businesses will be relatively quick, but the natural environment will take many years to fully recover. For perspective, 6.2 million cubic yards of vegetative debris has been picked up across the communities of Bay County. This number does not include the estimated 2.8 million acres of downed trees that are so critical to the timber industry, of which only a small percentage can be salvaged and used.

The loss of trees has seriously changed the landscape of the region, but it’s not just the beauty of the trees that is a problem. The trees in the region have many purposes. For example, scientists have concluded that each large pine tree absorbs an average of 100 gallons of water per day and discharge that moisture into the air. Without the significant number of trees to absorb the water this area will see a significant impact. This situation will result in much more standing water during the spring and autumn rainy seasons. This will bring a great increase in mosquitos and other dangerous pests and greatly increase the chance of flooding as trees are an important tool to prevent the backup of floodwaters into lakes, streams and other waterways.

Without the extra moisture in the air that is produced by trees, it is anticipated that the upcoming dry season, prompted by summer temperatures, will put the area at a high risk for forest fire. This would further jeopardize the remaining forests and, more importantly, enhance risk to public and private property and lives. The loss of trees has also impacted the mental health of the community due to the loss of shade, wind protection, wildlife and flora that live under the canopy of the forest. In reaction to this aspect of the disaster, there are several campaigns to strategically replant trees and create more greenspaces across the County and within all municipalities.

It is currently estimated that more than 60% of the communities’ parks and recreational facilities were damaged, exceeding over $10 million in damages. The need for recreation and connectivity is more important than ever as the region recovers. The residents and visitors desire and need these critical resources. In addition to rebuilding what was lost, there is a great need for additional space for various outdoor activities.

Greenspaces such as walkable trails, boardwalks, passive parks, urban forestry and playgrounds not only benefit the mental health of citizens and visitors, they also contribute to a healthier eco system. To start the process of bringing back vitality and sustainability to a once thriving community is monumental moving forward and it starts with the natural resources that are foundational to all of the communities.
Cultural Resources

Prior to Hurricane Michael, Bay County benefited from a robust creative and cultural environment. Creative industries employed 3.2% of the business located in Bay County and 1.0% of the employees, this is just under the national average of 4.0% of businesses listed as creative industry and 2.0% of national employees (America for the Arts/Creative Industries 2017). The Marina Civic Center hosted a myriad of events. Using impact modeling tools, it was established that the Marina Civic Center brought in $1.6 million dollars in event receipts and had an additional local economic impact of $1.8 million dollars in hotel and restaurant dollars. The closing of that event space has greatly impacted the entertainment economy, as well as the leisure and hospitality sector (Jennifer Jones).

In addition to the main Civic Center, all of the local theaters were heavily impacted by Hurricane Michael. The Kaleidoscope Theater and Martin Theater sustained extensive structural damages and losses of revenue, but they are committed to rebuild. The Kaleidoscope Theater is an all-volunteer staff that have experienced a 70% reduction in revenue since October 10, 2018 (Kaleidoscope Staff). The rebuilding and revitalization of local theaters will assist in the reestablishment of the suffering preforming art ecosystem and spur other economic activity.

Along with the strengthening of the established theaters, the County should look into the expansion of performing arts centers that incorporate an indoor and outdoor experience with an open-air feel. One of the easiest ways to encourage public art throughout the community is through city ordinances and requirements. Lifting any ordinances that prohibit outdoor art such as sculptures and large public murals, will create an art centric community, as well as increase public beautification at low costs. Encouraging new and remodeled buildings to incorporate an art feature will further bolster an art ecosystem that collectively benefits all sectors of the community.
Historical Preservation

In order to enhance the resiliency of a community to disaster, it is important to take into account the conservation of historic locations and environments, specifically cultural landscapes, including historical sites, while safeguarding the relevance of local traditions, values and practices. There is an important relationship between culture and environmental sustainability due to its link to cultural diversity and biodiversity. The County’s ability to influence responsible consumption and its sustainable management practices result in an enhancement of local and traditional knowledge. This focused connection to community and local culture provide a connection and shared history encouraging a stronger sense of community needed in the aftermath of a major disaster.

Bay County has a rich history, noted by its locally recognized historical sites. There are also multiple sites on the Florida and national registers. It is important to continue to grow and foster the preservation of these sites and to encourage the growth of local connectivity, not only through physical contact but also through the expansion of shared historic and local values and practices. It is also imperative to control and enforce the remediation of such sites, to preserve and protect their cultural and historical relevance.
Based upon the extensive research and discussion occurring within the Natural and Cultural Resources Branch, the following specific actions (and associated tasks) are recommended to assist the communities of Bay County achieve maximum recovery.

260. St. Andrews State Park Button Bush Trail

**ACTION:** Construction of a new boardwalk trail around Button Bush Marsh will be accomplished. Currently there is no trail at that site. The plan is for a boardwalk in low areas plus an observation deck and a trail in higher areas. It would be constructed with accessibility as a goal.

**TASK I:** Contact DEP to get permits.

**TASK II:** Research the environmental impact. Environmental impact would be to reduce intrusion and trails formed by visitors walking on unmarked trails and damaging natural resources.

**TASK III:** Find contractors. Repair and rebuild.

261. St. Andrews State Park Gun Mount/Overlook

**ACTION:** Replacement of the historic World War II Gun Mount/Overlook roof that was torn off by the hurricane. It was a metal roof that met park standards and added to the park’s aesthetics. The historic gun mount overlook pavilion was used by the community for viewing the pass, jetty area and gulf, birding, photography, weddings and had a kiosk of cultural and educational information about the gun mount.

**TASK I:** Identify the owner. The roof was two years old and partially funded by donations from the Friends of St. Andrews State Park, a tax-exempt 501(c)(3) organization.

**TASK II:** Consult DEP to get permits to move forward.

262. St. Andrews State Park Turpentine Still

**ACTION:** Restoration and repair of the historical turpentine still. The historical turpentine still provides an opportunity to explore what once was a working still, which was an important cultural aspect of this community. It provides an educational and cultural experience with interpretive signs throughout. Before the hurricane, there were some repairs required with the top floor being closed, but after the storm, major work and renovation will be needed. The goal would be to once again have this as an asset to the park.

**TASK I:** Identify the owner.

**TASK II:** Consult DEP to get permits to move forward.

**TASK III:** Get a budget to move forward.
263. St. Andrews State Park - 30 foot Landing Craft

**ACTION:** 30 foot landing craft to be used for park operations with the primary use being for operations on Shell Island. Operations on Shell Island include cultural resource monitoring (archeological sites), sea turtle nesting surveys, Choctawhatchee Beach Mouse monitoring (a federally endangered species), shorebird monitoring, prescribed fire, volunteer work events and emergency transport. The park often responds, alongside first responders, to medical emergencies and missing persons calls on Shell Island and the mainland of St. Andrews State Park.

**TASK I:** Fees ability/impact study.

**TASK II:** Location. A landing craft would enable park staff to operate a vessel in more inclement water conditions and would enable them to carry additional equipment and personnel when responding to emergency situations as well as providing a greater level of cooperation with FWC, Coast Guard and Bay County Sherriff’s Department.

**TASK III:** Acquisition of property.

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264. Recreational Facilities at Parker Senior Center

**ACTION:** Providing additional designated sports courts and an updated recreational facility that would include restrooms, water and lighting by the courts. This will be a safe-haven for residents and tourists during storms and bad weather. It will provide health benefits from the physical activity of the recreation complex, both outdoor and indoor.

**TASK I:** Get a plan and budget on cost.

**TASK II:** Schedule a time to talk with those on the local recreation committee, city councils or management at the local recreation center to present a plan and budget.

**TASK III:** Involve enthusiasts from different sports communities (including Pickleball) and hire a qualified installer.

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265. Sunshine Art Center Project Jumpstart Art

**ACTION:** An arts program designed to grow the arts in Bay County. Step one is already in progress, getting artists back to work by providing supplies, workshops and opportunities to sell their work. Step two would be an art center on the beach that would act as a hub providing programs and arts opportunities on site and in the community while supporting activities of other art venues in Bay County. This center will increase tourism, making Panama City Beach an arts destination and creating events and activities to attract tourist year-round.

**TASK I:** Establish POC for our community.

**TASK II:** Identify locations that will attract new businesses by providing cultural opportunities to entice employers to choose Bay County.

**TASK III:** Locate resources to distribute supplies.

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**Primary Sponsor: St. Andrews Park_DEP**  
**Estimated Cost: $120,000.00**  
**Source of Funding: FDEP**  
**Initiative: Natural Resource Preservation and Education**

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**Primary Sponsor: City of Parker**  
**Estimated Cost: $25,000.00**  
**Source of Funding: Private Investment**  
**Initiative: Sports and Recreation Facilities**

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**Primary Sponsor: Bay County**  
**Estimated Cost: $750,000.00**  
**Source of Funding: GUGGENHEIM-Foundation**  
**Initiative: Community Quality of Life**
266. PCB Sports Complex Recreation Center

**ACTION:** Building of multi-use sports fields for the community to help alleviate pressure on Frank Brown Park Fields. Possibly includes an indoor recreation complex for additional sporting events in phase II such as basketball, volleyball, badminton and pickleball. Also, to be used as a community shelter during times of emergency weather. Provide community activities, tourist participation and regional/national tournaments.

**TASK I:** Schedule a time to talk with those on the local recreation committee and city council members to present a plan and budget.

**TASK II:** Identify locations and acquire land.

**TASK III:** Permits and project supervisor to begin build.

267. Property Protection

**ACTION:** Plans need to be made to protect property from potential wildfires. With the forest and timber lands damaged as they are, it is prime for wildfires. Plans need to be made to clean up these areas of the large amounts of dead and dying trees. Fire protection methods need to be established in just a short amount of time and these areas will be infested with bugs/beetles that will cause future problems for the citizens of Bay County and the surrounding areas.

**TASK I:** Contact local firefighters/forestry to assess the needs.

**TASK II:** Systematically educate the public on how to deal with excess vegetative debris.

**TASK III:** ECEC bags and invasiveness.

268. Deerpoint Lake Cleanup

**ACTION:** Deerpoint Lake should be made so it could be "drawn down" to kill/destroy the noxious/invasive plant life that now exists. A "draw down" of at least four feet would benefit the entire area. Cleanup of the lake must include removal of trees and debris produced by Hurricane Michael. Large areas of the lake which were accessible prior to the storm are now blocked and inaccessible.

**TASK I:** Study to establish draw down depth to medicate impact of invasive species.

**TASK II:** Obtain permits to lower the lake.

**TASK III:** Draw down the lake to eradicate invasive species in increase water quality.
269. Park Project

**ACTION:** Create greenspaces, like a mini Central Park, in the downtown plaza area to hold events. Possibly use vacant lots near the new city hall along Jerks Ave. Include water features to add to the aesthetic. Many epidemiological studies have demonstrated various positive health effects of urban greenspaces, including reduced depression and improved mental health, reduced cardiovascular morbidity and mortality, improved pregnancy outcomes and reduced rates of obesity and diabetes.

**TASK I:** Survey and identify property to repurpose or make new greenspace.

**TASK II:** Acquisition of land.

**TASK III:** Conversion of greenspace for Bay County.

Primary Sponsor: Countywide  
Estimated Cost: $18,000,000.00  
Source of Funding: HUD, DOE  
Initiative: Parks, Trails and Greenspace

270. Neighborhood Based Job Training, Maker Space, and Garden

**ACTION:** Seek funding to enhance community centers in impoverished neighborhoods with job training for technical careers, access to a “maker space” and a community garden. Offer job training, hands-on tool training (computers to construction) as well as nutrition and garden training.

**TASK I:** Identify stakeholders in each community to establish the needs.

**TASK II:** Create programs in models to assess the needs.

**TASK III:** Create programs to assess the needs for each community and build a plan to sustain.

Primary Sponsor: Bay County  
Estimated Cost: $2,500,000.00  
Source of Funding: DOL, HUD, DEO  
Initiative: Community Quality of Life

271. Bay Families with Dogs, Inc.

**ACTION:** Provide disaster resiliency, offload the crowding in other parks after disasters, and reducing post-disaster traffic on our roads. Reduce the number of lost/escaped/injured dogs by giving owners a way to exercise their pets while their yards have compromised fencing. Lessen the strain on local government resources by reducing post-disaster misplaced and injured dogs. Create a new visitor attraction to help the economy. Include a dog beach at the park, as in Pensacola.

**TASK I:** Acquisition process.

**TASK II:** Check ordinances. Provide activities that will increase adoptions of homeless pets. Increase resiliency during recovery from future disasters by providing additional park space and reducing traffic.

**TASK III:** Implement rules and guidelines.

Primary Sponsor: Countywide  
Estimated Cost: $200,000.00  
Source of Funding: HUD, DEO, DOI, DOACS, FDEP, FWCC  
Initiative: Community Quality of Life
272. Mexico Beach Restoration Project

ACTION: Hurricane Michael’s extraordinary combined storm surge and wave action of upwards of 15-20 feet caused significant erosion along the Mexico Beach shoreline. In particular, the dune system was severely impacted, with the main road now vulnerable to future small storm events in many locations. A full beach restoration of the entire three mile Mexico Beach shoreline from the channel to the Bay County/Gulf County line will consist of beach placement of approximately 1.5 million cubic yards of sand dredged from an offshore sand borrow source. The project will consist of a beach berm averaging 150 feet wide and an upland double dune system, with 95 cy/ft being placed.

TASK I: Revaluate the Florida Beach Restoration and inlet.
TASK II: Amend the study to today’s needs post storm to budget the findings.
TASK III: Obtain permits for the truck haul sand bypass project.

273. Panama City Beach Shore Protection Project

ACTION: Hurricane Michael’s combined storm surge and wave action caused erosion of approximately 650,000 cubic yards along the 18.5 mile Panama City Beaches Federal Shore Protection Project. This sand loss must be replaced to restore the project to the desired level of upland protection. The U.S. Army Corps of Engineers’ (USACE) preliminary calculations indicate approximately 1.2 million cubic yards will be needed over the 18.5 mile project area to restore the project to its full benefit. It is anticipated that the project will be contracted, built, and managed by the USACE. The offshore sand sources have already been identified and fully permitted.

TASK I: Use the study from Mexico Beach Restoration to help evaluate the beaches’ needs post storm. Work with the Panama City Beaches Federal Shore Protection Project to help aid U.S. Army Corps Engineers calculations for what’s now needed post storm.

TASK II: Secure the sand borrow sources. Reach out to Mexico Beach for possible collaboration on projects.

TASK III: Budget new plan and get permits to build and restore.
274. Community Heart and Soul Project

**ACTION:** Before Michael, some residents were gearing up to help PCGS bring in a Family Foundation to do a Community Heart and Soul project. With the rate of 'project ideas' coming in on social media and raising the unproductive dialogue, now more than ever, we need to help everyone lead and participate. Partners and residents work together to take action and ownership. Heart and Soul Statements are applied to future decision-making and become part of the fabric of the community.

**TASK I:** Identify partners and leaders, spread the word, and develop a road map for successful Heart and Soul community engagement.

**TASK II:** Explore Your Community: Gather residents’ stories and build relationships across divides. Identify what matters most, which leads to the creation of Heart and Soul Statements. Examine how statements are affected by community trends and conditions.

**TASK III:** Make decisions guided by Heart and Soul Statements, identify options for the future and base decisions on what matters most to everyone and best enhances and preserves the community’s “Heart and Soul.”

275. Right-of-Ways Cleanup

**ACTION:** Plans need to be made to start a continuing project of gathering all trash that has been produced by Hurricane Michael. The large equipment can only do so much. There will need to be a plan in place that will pay for manual labor needed to clean up all rights-of-ways in the area.

**TASK I:** Charities looking for community projects

**TASK II:** Possible work release.

**TASK III:** Community service probation.

276. Ecosystem

**ACTION:** Trees create an ecosystem to provide habitat and food for birds and other animals. Trees absorb carbon dioxide and potentially harmful gasses, such as sulfur dioxide and carbon monoxide, from the air and release oxygen. One large tree can supply a day’s worth of oxygen for four people.

**TASK I:** Schedule a time to talk with those on the local recreation committees, U.S. Fish and Wildlife Service, Harbor Day community and city council members.

**TASK II:** Do a study or inquire if one has been done to evaluate the needs of the current ecosystem.

**TASK III:** Plan and apply for grants for addressing findings.
277. Hentz Lake, Pretty Bayou

**ACTION:** This pond, or “Hentz Lake”, is situated behind Oaks Plantation and is connected to Pretty Bayou. Unfortunately it has become blocked by debris causing it to become stagnant and now is nearly overgrown with algae, grass and such. This pond was inhabited by waterfowl, those who fish and enjoyed a natural oasis in the community. The biggest concern is of mosquitoes that will become unbearable, along with other insects.

**TASK I:** Do a study on the water quality.

**TASK II:** Establish a plan to remove debris.

**TASK III:** Replenish vegetation.

278. Make the Greenprint the Blueprint”

**Primary Sponsor:** Countywide  
**Estimated Cost:** TBD  
**Source of Funding:** EPA, USACE, HUD, DEO, FDEP  
**Initiative:** Environmental

**ACTION:** GIS technology available to design around the amazing natural features of Bay County. Protect and expand natural areas that buffer storm surge, moderate flooding and provide habitat. Identify areas to prioritize for public land acquisition, protect the watersheds with adequate riparian buffers that can double as recreational/transportation pathways, protect the coast, protect existing parks and greenspaces and try to add a park in every neighborhood. Taking care of the land, water and people makes for a place where entrepreneurs and young talent want to be. Protection of “ecosystem services” helps people survive in a future where we expect more challenges to the resilience of people and natural areas together.

**TASK I:** Contact Greenprint partners.

**TASK II:** Schedule discussions with those on the local recreation committee, city council members.

279. Maker Spaces and Growing Spaces at Community Centers

**Primary Sponsor:** Countywide  
**Estimated Cost:** TBD  
**Source of Funding:** HUD, DEO  
**Initiative:** Community Quality of Life

**ACTION:** Seek funding to enhance community centers in impoverished neighborhoods with job training for technical careers, access to a “Maker Space” and a community garden. Offer job training, hands-on tool training (computers to construction) as well as nutrition and gardening training. Also, the community gardens would offer actual food. Use some of the wood chips to help build soil for gardens. Give those with fewest life chances actual tools to have better lives.

**TASK I:** Hold community meeting and communicate with local organizations to identify the stakeholders.

**TASK II:** Locate a space to build this community. Reach out to the community for input and build a plan for moving forward.

**TASK III:** Provide training and support.
280. St. Andrews State Park Beach Restoration Project

**ACTION:** Hurricane Michael’s combined storm surge and waves caused erosion along the one mile St. Andrews State Park shoreline. The shoreline is immediately adjacent to the 18.5 mile Panama City Beaches Federal Shore Protection Project and restoration of the one mile park shoreline has become more and more critical. A full beach restoration of the one mile shoreline beginning at the federal Panama City Beaches eastern terminus to the jetty at St. Andrews Inlet will consist of beach placement of approximately 600,000 cubic yards of sand dredged from the same offshore sand borrow source already permitted for the Panama City Beaches project. The project will consist of a beach berm averaging 190 feet wide (to tie into the Panama City Beaches project), with 115 cy/ft being placed. It is anticipated that the project can be contracted, built and managed by Bay County, and significant savings on mobilization/demobilization can be achieved if the project can be bid out at the same time the U.S. Army Corps of Engineers is contracting the Panama City Beaches nourishment project.

**TASK I:** Assess needs post storm to cultivate plans and budgeting moving forward.

**TASK II:** Hold a meeting to materialize findings.

**TASK III:** Permits for findings and hire contractors.

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281. Complete Streets

**ACTION:** Build “complete streets” with street trees. Improve aesthetics, transportation functionality, and opportunity to introduce street trees along roads that have been eyesores.

**TASK I:** Identify roads with issues or that qualify for “complete street” opportunity.

**TASK II:** Plan types of upgrades that can be made by GIS Mapping.

**TASK III:** Set a budget and a plan for expansion of Complete Street Program.

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282. Philanthropic Pursuit

**ACTION:** Invest in a development/fundraising effort to acquire more funds from philanthropic sources.

**TASK I:** Identify the communities in need.

**TASK II:** Test in finding non-profit (501 C3).

**TASK III:** Publicize through any means necessary, multimedia. All avenues available.

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Primary Sponsor: St. Andrews Park DEP  
Estimated Cost: $7,500,000.00  
Source of Funding: FEMA, USACE, FDEP  
Initiative: Beach Restoration and Marine Protection  

Primary Sponsor: Bay County  
Estimated Cost: $1,500,000.00  
Source of Funding: HUD, DEO, USDOT, FDOT  
Initiative: Transportation Improvements  

Primary Sponsor: Bay County  
Estimated Cost: TBD  
Source of Funding: Private Investment  
Initiative: Economic Redevelopment
283. Public “Map and Think” Forums with GIS Decision Support

**ACTION:** Take time to involve the public in considering plans. Put the geographic features of the place on big screens for all to see and to help inform planning options. Ask consultants to offer various "build out scenarios" that take different approaches to transportation, land conservation, and compact vs. dispersed housing density. Consult the many good resources out there, including a detailed analysis of coastal systems and populations from https://nemac.unca.edu.

**TASK I:** Utilize the county GIS Specialist.

**TASK II:** Generate an internet active map.

**TASK III:** Create a viable sustainable platform for a forum in the map to continue.

284. Historic Preservation and Education of the Governor's Stone

**ACTION:** Restoration and repair of the Governor’s Stone. This historical 1877 schooner sail ship is one of the last vessels of its kind. Governor’s Stone was featured in Travel Pulse as the Most Historic Tall Ship. Hurricane Michael capsized the vessel, leaving it in need of being rolled over and rebuilt.

**TASK I:** Restoration of the vessel.

**TASK II:** Identify a permanent location for vessel education moving forward.

**TASK III:** Evacuation plan for future storms and storage.

285. Conservation, Recreation and Flood Protection

**ACTION:** Permanent protection and management of 2,000 acres of targeted forests, fields and wetlands will simultaneously benefit the Panama City Crayfish (PCC) remove regulation, provide flood protection for the community and filter water that feeds our bay. It removes the PCC from the U.S. Endangered Species Act (ESA) which removes ESA permitting for development.

**TASK I:** Work with USFW and FWC to identify land appropriate for a crayfish habitat.

**TASK II:** Acquire land for conservation.

**TASK III:** Follow legal guidelines and establish space for crayfish.
286. Protecting Our Bay, Improving Our Economy, and Beautifying Bay County

**ACTION:** Create structures to mimic natural water filtration processes, use natural wildlife habitat (such as Panama City crayfish lands) and absorb flood waters via “Green Street Practices,” a term deemed by the U.S. Environmental Protection Agency (https://www.epa.gov). Permitting and financial incentives at the county and city levels can inspire developers and homeowners to use permeable parking lots, rain gardens (also called bioretention/filtration), and bio or vegetative retention swales. Initially we recommend setting the tone by retrofitting city and county buildings with Green Street Practices but moving towards integration at a countywide level is ideal, especially with new developments.

**TASK I:** Identify opportunities to acquire land.

**TASK II:** Utilize conservation easements for passive parks and stormwater runoff.

**TASK III:** Review and revise city stormwater plan.

287. Bring Back the Stars! —via Reduction of Light Pollution

**ACTION:** Through examples and incentives, cities and the county can begin to reduce unnecessary night light pollution by following FWC’s document labeled “Rebuild with Wildlife in Mind” and examples given on International Dark-Sky Associations website (https://www.darksky.org). At a minimum, these governments should switch from a higher color temperature to a lower color temperature light, as they are less harsh and therefore less harmful to human health and the natural environment (sea turtles, Panama City Crayfish, migratory birds, etc.). This will reduce energy waste, reduce crime, reduce light pollution effects on wildlife and natural habitats, and improve human health.

**TASK I:** Pursue an ordinance to reduce light height and limit hours of usage.

288. Opening of East Pass

**ACTION:** Reopen the pass along the historic channel linking St Andrews Pass and the Gulf of Mexico. Opening East Pass will bring improvements such as, but not limited to, increased marine life, help with dunes, creating more space for endangered species and improving the overall quality of the St. Andrews Bay estuary’s water. It also provides secondary access to the Gulf of Mexico for commercial and recreational fisherman, as well as divers.

**TASK I:** Revisit the study.

**TASK II:** Establish a process.

**TASK III:** Plan.
289. Man In The Sea

**ACTION:** A new facility to preserve and interpret the history of how we have learned to live, work and play underwater. The expansion of libraries, archives and international collections through donations from all over the world. This would be an educational complex to teach about the history and activities that have made significant contributions to science, engineering, exploration and the development of an underworld. A place for seminars on electronics and research in marine science. An international place to store artifacts. An IMAX theater would give both tourists and locals something more to do. This would help encourage families to get out and be a part of the community.

**TASK I:** Identify space and acquire land.
**TASK II:** Pull permits.
**TASK III:** Build.

Primary Sponsor: City of Panama City Beach
Estimated Cost: $18,415,000.00
Source of Funding: HUD, DOE, DEO
Initiative: Economic Redevelopment

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290. Bay County Indoor Recreation Center 1 of 4 (Resiliency Center)

**ACTION:** Located off U.S. 231 and Transmitter Road, this would be one of four buildings to provide a variety of benefits to the community before, after and during the next storm. When not in use as a storm shelter, the recreation center will be used as an amenity for residents, and to generate incremental sports tourism demand for Panama City and Lynn Haven. Loosely modeled after the Kenyon College Athletic Center in Gambier Ohio, the recreation center will include athletic courts, running track, aquatic center, locker rooms, medical facilities, commercial kitchen, small conference rooms and training rooms. The land surrounding the recreation center will be converted into a public park to assist with stormwater mitigation and natural filtration from the nearby water treatment plant. The public park will also provide walking and biking paths as well as other amenities.

**TASK I:** See plan description. Acquire land.
**TASK II:** Pull permits.
**TASK III:** Build.

Primary Sponsor: City of Panama City
Estimated Cost: $50,000,000.00
Source of Funding: DOC EDA, HUD CDBG
Initiative: Community Resiliency
291. Downtown Conference Center 2 of 4 (Resiliency Center)

**ACTION:** Located in the downtown core of Panama City landward adjacent to the full-service hotels being developed at the marina, this would be one of four buildings to provide a variety of benefits to the community before, after and during the next storm. The ground floor will consist of parking, street-front retail space, an entry atrium and loading docks. All of the public assembly and support space will be on the upper floor(s) to mitigate the impact from storm surge. The public assembly space will consist of ballrooms, conference rooms, reception areas, commercial kitchen and other amenities traditionally found in full-service conference centers. The facility will be connected to the adjacent hotel(s) by a sky bridge. During a storm event, the conference center will service as the county’s business recovery center. The center will also be connected to the county’s internet backbone through an in-ground fiber optic connection to the Government Center.

**TASK I:** Acquire land.

**TASK II:** Pull permits.

**TASK III:** Build.

292. Panama City Beach Special Event Center 3 of 4 (Resiliency Center)

**ACTION:** Located in the Middle Beach area (Signal Hill or Miracle Strip) it will be used as a post-storm shelter for Panama City Beach residents. The ground floor will consist of parking, street-front retail space, an entry atrium and loading docks. All the public assembly space, except for the arena floor will be elevated to mitigate impact from storm surge. The 250,000 sq. ft. facility will consist of an arena, ballrooms, conference rooms, reception areas, commercial kitchen and other amenities traditionally found in full-service special event centers. The center will also be connected to the county’s internet backbone through an in-ground fiber optic connection to the Government Center.

**TASK I:** Acquire land.

**TASK II:** Pull permits.

**TASK III:** Build.

293. Panama City Beach Indoor Sports Center 4 of 4 (Resiliency Center)

**ACTION:** Located at the Panama City Beach Sports Complex on the east end of the beach, it will be hardened to serve as a post-storm shelter for first responders assisting in the recovery efforts. With its proximity and convenient access to the Hathaway Bridge and the proposed Bay Parkway, this center is uniquely situated to aid communities on both sides of the bridge.

**TASK I:** Location.

**TASK II:** Partners/Investors.

**TASK III:** Budget/Plan/Build.

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**Primary Sponsor:** City of Panama City

**Estimated Cost:** $25,000,000.00

**Source of Funding:** Private Investment, HUD CDBG, DOC EDA

**Initiative:** Community Resiliency

**Primary Sponsor:** City of Panama City Beach

**Estimated Cost:** $37,500,000.00

**Source of Funding:** Private Investment, HUD CDBG, DOC EDA

**Initiative:** Community Resiliency

**Primary Sponsor:** City of Panama City Beach

**Estimated Cost:** $25,000,000.00

**Source of Funding:** Private Investment, HUD CDBG, DOC EDA

**Initiative:** Community Resiliency
294. Heritage Preservation Plan

ACTION: Preserve the heritage of the community. This plan would be to keep heritage sites protected before, during and after the storm. The plan would keep the sites safe, so they are not ruined. It would promote education of history and science which benefits the community and tourist. Create a city mandated Art Incorporation Clause for new and existing specified areas by adding a POC that is solely responsible for historical and heritage preservation including but not limited to murals, sculptures, art inspired landscaping and incorporate local artists work.

TASK I: Locate a place to hold meetings. Find invested people in the community to plan.

TASK II: Identify the POC.

TASK III: Set up possible reoccurring charities or grants to help pay for the position needed.

295. Reforestation Support Plan

ACTION: This plan is to educate the community on urban forest and to aid in stormwater management, visual aesthetics, air quality as well as temperature moderation. Partner with Arbor Day and the Agricultural State Forestry to assist with the planting of non-invasive trees to rebuild what was lost. Plan workshops and events that bring the community together in rebuilding efforts.

TASK I: Identify local arborist to identify planting zones, based on countywide infrastructure and utility plans. They should also identify what species would best benefit local communities and municipalities, along with which plants, trees and shrubs should be avoided.

TASK II: Educate the community on the study, offer workshops that allow community participation and to have them explore what plants would best benefit their private property and local neighborhood.

TASK III: Locate donated or discounted trees to distribute to community members. Set up dates for local events. Set reminders for forest grants to apply for annually.

296. Bay County Reef Restoration

ACTION: This plan impacts all of Bay County’s fishing, diving, marine life and sustainability of the underwater eco system.

TASK I: Evaluate and identify reef condition plans and budgeting (Reef Exploration Program).

TASK II: Restore and rehabilitate the reefs that can be rehabilitated.

TASK III: Creation and placement of new artificial reefs.
297. Reef Exploration Program

**ACTION:** Develop and identify snorkel reefs to aid in education and access to our marine environment. This plan will provide residents and visitors with another way to enjoy our coastal and marine resources.

**TASK I:** Get together with Reef Restoration as a combined effort restoration/exploration.

**TASK II:** Plans and budgeting.

**TASK III:** Implementation.

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298. Fisherman Directory of Support

**ACTION:** To establish a directory of fisherman and deckhand crews to aid with information on financial grants and ways to provide resources after the storm.

**TASK I:** Use multiple forms of media to locate all the captains and crews in the commercial and diving industries to identify these members of the community.

**TASK II:** Gather all information to put in the database.

**TASK III:** Contact the members after a disaster to identify post disaster conditions.

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299. Rails to Trails

**ACTION:** Identify and establish a way to connect walkways, bike paths and parks. Identify which railroads are no longer being used and turn them into trails. This gives communities a way to connect to each other while giving residents and visitors a way to better enjoy Bay County.

**TASK I:** Get map laying out where all the railroads are to identify non-working rails.

**TASK II:** Get the community and community leaders together for a meeting to get input on placement.

**TASK III:** Get a budget and plan to connect the county.

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**Primary Sponsor: St. Andrews Park DEP**

**Estimated Cost: $1,500,000.00**

**Source of Funding:** USACE, FWC, USFW

**Initiative:** Environmental

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**Primary Sponsor: Bay County**

**Estimated Cost: $25,000.00**

**Source of Funding:** DOC, DEO, DOL, HHS, DOH, DCF, FDEP, FWCC

**Initiative:** Private Sector and Small Business Expansion

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**Primary Sponsor: Countywide**

**Estimated Cost: $2,000,000.00**

**Source of Funding:** Department of Interior

**Initiative:** Parks, Trails and Greenspace
300. Coastal and Marine Technology Center

**ACTION:** A plan to build a multifunctioning innovative center to help commercialize marine centered technologies and develop an interactive, experimental, interpretive education research facility. This could also provide a great way to involve K-12 Stem initiatives. This is an opportunity to make Bay County the leading research and development destination for military diving, marine resources and coastal technologies.

**TASK I:** Identify space and acquire land.

**TASK II:** Permits and funding.

**TASK II:** Build the facility.

Primary Sponsor: City of Panama City
Estimated Cost: $100,000,000.00
Source of Funding: DOE, HUD, DEO
Initiative: Economic Redevelopment

301. St. Andrews Bay Estuary Plan

**ACTION:** The acquisition of land to protect, restore and maintain the quality of natural functions and water wetland systems. To increase natural resources, public recreational and educational opportunities. Acquiring the project area would contribute to the protection of the natural shoreline, water quality and aquatic resources.

**TASK I:** Identify space and acquire land.

**TASK II:** Permits and funding.

**TASK III:** Build.

Primary Sponsor: Bay County
Estimated Cost: $13,500,000.00
Source of Funding: TDC, USFW, FWC
Initiative: Environmental
302. Dedicated Arts Venues

**ACTION:** Restore and/or create facilities dedicated to the presentation of all disciplines of the arts; music, drama, visual (sculptural) and literary. Several local non-profits have been operating such spaces in partnership with municipal, corporate, philanthropic and individual stakeholders. Although the arts must certainly be integrated into other spaces and programs, they are not a mere enhancement or added value to other sectors. They must be supported for their intrinsic value in a way that leverages audience behavior to their fullest potential. The spaces need to have the technical capacity to accommodate current and future demands of professional productions/exhibits. They must also encompass sound and light technology, climate control, security and support changeability. The venues require the crowd capacity to facilitate economically viable endeavors. (Adequate seating, square footage, support service spaces which make admission accessible for guests and the investment risk for operators and presenters is profitable).

**TASK I:** Identify and Consult with those who have been in these businesses to gain historic data on the economics of their operations as well as the required technology and staffing to operate.

**TASK II:** Permits.

**TASK III:** Secure funding to move forward.

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303. Public Art and Greenspace

**Primary Sponsor:** Countywide  
**Estimated Cost:** TBD  
**Source of Funding:** HUD, DEO  
**Initiative:** Community Quality of Life

**ACTION:** Integrate public art into greenspace development. Specifically, modify the small parking area in front of the Panama City Center for the Arts to become a greenspace that includes an aesthetically designed sculptural installation that also literally supports technology to project digital displays on the south facing wall of the existing lot. The “park” becomes an event space as well as a venue for regular, unmanned sight and sound scaping for the historic/arts corridor. Also include the “courting benches” that are iconic in our sister city Merida, Mexico as a practical, yet artistic, place for pedestrians to stop that will tell a story or at least beg a query.

**TASK I:** Survey and identify property to repurpose or make a new greenspace.

**TASK II:** Acquisition of land.

**TASK III:** Conversion of greenspace for Bay County.

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304. GPS Story Scaping

**Primary Sponsor:** Countywide  
**Estimated Cost:** TBD  
**Source of Funding:** N/A  
**Initiative:** Community Quality of Life

**ACTION:** Develop a program of content that is geographically relevant. Develop and market an application that is accessible to those at a specific location in real time. This will be made very efficient and accessible considering the new 5G technology installation already underway. Content would be the stories of place and time, a hurricane experience, an inspiring recovery event, something in our local history, relationship, etc. Much like story corps with National Public Radio.

**TASK I:** Contact the technology firm.

**TASK II:** Generate internet active maps.

**TASK III:** Create a viable sustainable platform for a forum in the map to continue.
305. Artist Live Workspace

**ACTION:** Convert or build space that houses residential artists as well as commercial engagement space for the arts/creative industries. Residential spaces are on upper levels, commercial engagement spaces (offices, shops, event space) are on the street level. Those who live there are participants in the activities on the street level.

**TASK I:** Contact the POC to write a plan and budget.

**TASK II:** Locate space to pull permits and hire contractors.

**TASK III:** Build.

306. City of Mexico Beach City Pier

**ACTION:** This project would replace the City of Mexico Beach’s pier with a pier of similar footprint but upgraded with more resilient construction such as deeper pilings, concrete substructure, break away composite decking and a taller structure above MHW line.

**TASK I:** Develop plan and budget.

**TASK II:** Locate space to pull permits and hire contractors. Conduct procurement.

**TASK III:** Build the pier.

307. City of Mexico Beach Jetty Expansion

**ACTION:** This project would include expanding the existing jetties in order to provide additional protection of the west side of Mexico Beach from storm surge and to minimize the sedimentation at the mouth of the city's marina.

**TASK I:** Contact DEP regarding environment permitting, etc.

**TASK II:** Conduct a study and specific plan of action.

**TASK II:** Plan and budget for permitting and construction.

308. City of Mexico Beach Parker Park Improvements

**ACTION:** This project would include repairing and expanding the city’s Parker Park to include additional amenities such as an observation tower, stage, and amphitheater. Currently, all the City's parks have been destroyed/heavily damaged.

**TASK I:** Create an extensive community outreach initiative to determine the needs and wants of the community.

**TASK II:** Create a plan and budget from feedback from municipalities and their community’s.

**TASK III:** Hire project manager and build.
309. St. Andrews Bay Real-Time Water Quality Monitoring

**ACTION:** St. Andrews Bay is a critical, integral component of the health, enjoyment and economy of Bay County. A stable, continuing water quality monitoring program that provides continuous data in critical areas will help provide actionable recommendations to protect and improve the health of the bay. This will also protect and improve the community’s quality of life and economy.

**TASK I:** All water quality monitoring efforts in the Bay system need to be compiled and described to help inform what additional monitoring is needed.

**TASK II:** Data needs to be shared and gaps in geographic coverage as well as parameter measuring needs to be identified and resolved.

**TASK III:** The data needs to be periodically analyzed to determine the health of the system and identify trends. The analysis needs to result in actionable recommendations to elected officials and agencies.

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310. Derelict Boat Removal

**ACTION:** The removal of approximately 80 heavily damaged boats. These boats do not qualify for the FWC derelict boat program and most of them cannot be deployed as artificial reefs, they nonetheless need to be removed from our shoreline.

**TASK I:** Identify all boats that are abandoned.

**TASK II:** Contact owners.

**TASK III:** Proceed with removal process.

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311. Estuary Research Center

**ACTION:** A research center dedicated to the study and preservation of the St. Andrews/St. Joseph Estuary. Any restoration and enhancement actions that improve coastal wetland and upland habitat quality and/or water quality. Including an interactive center for public education and outreach.

**TASK I:** Hold community meeting and communicate with local organizations to identify the stakeholders.

**TASK II:** Identify a location for the center.

**TASK III:** Implement a study plan.
The static resilience of a community is the ability of the community to maintain a high level of function when shocked. Over the last few months, the Planning and Capacity Building Branch has been focused on finding ways to add capacity to the system and provide planning abilities that will improve this static resilience.

In the days and months after the storm, the community’s ability to recover and rebuild after a natural disaster is dependent on its efforts to review affected areas, determine improvements needed and rebuild the community to be more resilient to future natural disasters.

The Planning and Capacity Building Branch has been focused on reviewing the County’s hardest hit areas, working on the redevelopment of flood hazard areas and conducting community meetings for input. In the process, the Branch has worked to get stakeholders involved to develop strategies to rebuild the community, improve planning, mitigation and education, and increase resiliency to future natural disasters.
In the time after Hurricane Michael, Bay County officials have worked tirelessly with and for the community and its citizens to find near term solutions, including:

- Return some normalcy to its businesses and residents
- Work to expeditiously draft planning rules and regulations to address temporary housing, temporary debris management, commercial development and signage
- Begin rebuilding efforts, incorporating opportunities to:
  - Improve infrastructure
  - Clear blighted areas
  - Support economic development
- Review future options to
  - Find hazard mitigation opportunities
  - Improve its resiliency to natural disasters
  - Consider environmental changes, including increasing floodplains

Leading up to the storm, the County was focused on developing and supporting rules and ordinances to foster the area’s growth, expand balanced housing stock and review infrastructure needs to support Bay County's long-term strategic vision. Immediately following the storm, a major initiative was undertaken to review zoning codes, land use plans, resiliency planning and mitigation plans.

During a recovery of this magnitude it is imperative that all areas of planning are being considered. The Planning and Capacity Building Branch has the ability to look across all other branches, assess the long-term capacity needs that will be required to meet the needs of all branches and then determine the best sponsor to execute on building out the capacity.

Some of the initiatives within the Branch will be under the direct purview of the Branch itself; however, many programs will only be addressed through a planning process and then assigned to the proper sponsor for execution. For example, the Planning and Capacity Building Branch may sponsor a plan to ensure the community has the tools required to meet long-term initiatives and completion of the study, and then may turn over the project to another branch or a specific institution for oversight and execution. In some cases, an initiative may be handled entirely by a separate branch or organization and its intent and effectiveness only communicated back to the Planning and Capacity Building Branch. Effective communication with the branches will ensure the needs have been considered across all major groups and organizations in the County.
The impact of Hurricane Michael on all communities in Bay County and the School District was massive and historic. This disaster greatly tested the capability and capacity of virtually every government service entity. Among the significant “planning and capacity” challenges addressed by this branch were the following topics:

- Historical preservation
- Strengthening pre-storm preparations
- Flood zone mitigation
- Providing new hurricane evacuation analysis
- Providing post disaster land planning and preparedness through comprehensive planning and land development regulations
- Review comprehensive plans and land development codes to increase coastal resiliency
- Establishing temporary housing and debris sites ahead of storms
- Promoting hardening efforts through eco-green sustainable building programs
- Utilities and local watershed mapping to support capacity planning
- An emergency response infrastructure/operations center

As a community recovers from a disaster, identifying and taking advantage of opportunities arising from the reconstruction efforts becomes a key focus. Public input and meetings with local elected officials and other professionals have led to significant commentary and ideas. The following section outlines the planned recovery actions and tasks related to planning and capacity.
Based upon the extensive research and discussion occurring within the Planning and Capacity Building Branch, the following specific actions (and associated tasks) are recommended to assist the communities of Bay County achieve maximum recovery.

### 312. Implement Program to Ensure Historical Preservation

**ACTION:** This concept provides a means of making sure the history of the community and residents stays intact. The historical preservation plan intends on making sure that future residents know exactly what has happened before in the area.

**TASK I:** Develop a resource toolkit for property owners with organizations, suppliers, etc. who can assist in the restoration and mitigation of historic properties.

**TASK II:** Develop and maintain a system to "flag" historically significant properties.

**TASK III:** Develop a list of archeological and historical resources countywide in the GIS system.

### 313. Strengthen Pre-Disaster Preparations

**ACTION:** As a consequence of the extensive damage from Hurricane Michael, the branch looks to improve the pre-storm preparation efforts across the community. The aim of the effort is to strengthen a process to communicate and prepare the community for natural disasters in order to mitigate damage that may come from the storm.

**TASK I:** Develop a resource toolkit for property owners with organizations, suppliers, etc. who can assist in the restoration and mitigation of historic properties.

**TASK II:** Amend comprehensive plans and land development codes to have a formal plan to address temporary housing, temporary debris management, commercial development, signage and other temporary regulations.

**TASK III:** Form a storm preparedness team from county resources.

**TASK IV:** Develop communication plan to the community.
314. Implement Flood Zone Mitigation Efforts

**ACTION:** Bay County saw incredible damage to its infrastructure, buildings and greenspace, affecting many of its residents and businesses. As community leaders review the damage and discuss solutions to strengthen the area’s resiliency to future natural disasters, an important consideration is to revise flood zone maps to mitigate against flooding risks resulting from storms.

**TASK I:** Review damaged areas to determine points where there was “substantial damage” to homes and buildings.

**TASK II:** Review current GIS mapping of floodplains and flood zones.

**TASK III:** Coordinate with FEMA personnel to consider adjustments to improve flood zone hazard management.

**TASK IV:** Develop a strategy to harden or relocate properties in adjusted areas.

315. Establish Temporary Housing and Debris Sites

**ACTION:** With each natural disaster comes a response from the leaders of the county. Preparations ahead of each disaster tends to take into account the forecast severity to the area. As a result, the resourcing and planning ahead of any storm and appropriate response has to be a dynamic process taking in to account the expected affected areas. With Hurricane Michael, it provides a clear example of how quickly a storm can manifest from a Category 1 hurricane to what now has been declared a Category 5 hurricane when it made landfall. The process of preparation includes designating areas for temporary housing and areas for debris collection.

Primary Sponsor: Bay County
Estimated Cost: $100,000.00
Source of Funding: USACE, DOACS, DOC, DEO, EPA, FDEP, FWCC, WMDs
Initiative: Building and Code Enforcement

Primary Sponsor: Bay County
Estimated Cost: $50,000.00
Source of Funding: HUD, DEO, DOI, DOACS, FDEP, FWCC
Initiative: Community Capacity Planning
316. Continue Enhanced Facilities Planning

**ACTION:** During a widespread reconstruction process, it is important to use the lessons learned during a disaster event to future improvements of building codes and standards. It is important to remember to incorporate a comprehensive sustainability plan in making the community more resilient and mitigating future damage. There are many aspects to consider under a facility planning program, including the following tasks:

**TASK I:** Review building code ordinances to include a comprehensive approach to hardened facilities, residential codes and commercial codes.

**TASK II:** Review facility use plans; Developing multi-use community facilities can be beneficial as community use spaces while providing secure infrastructure for shelter and emergency response use during disaster events.

**TASK III:** Adopt countywide document standards for government facilities. Managing all buildings in standardized BIM (building information modeling) systems will allow for much greater efficiencies in managing county facilities through their life cycle.

**TASK IV:** Offer consolidated BIM storage and management services for any local non-county government agency or city government that may choose to participate. This would allow for the use and management of all government facility information to remain in complete control of the owner but reduce overall management costs for government facilities on a countywide basis.

**TASK V:** Review countywide standards for all government owned facilities requiring critical infrastructure to be constructed to regulated levels of resilient code enforcement.

**TASK VI:** Review plan to introduce codes that encourage building more sustainable footprints including federal and state green building initiatives.

317. Examine Land Use and Watershed Planning

**ACTION:** Comprehensive land use planning, among other things, includes proper use of development zones, greenspace programs, watershed protection and community-wide stormwater management.

When reviewing land use plans for future growth it is important to look across all branches to understand and plan for a multi-decade growth plan. A natural starting point is a comprehensive review of countywide land use plans accounting for long-term growth according to the existing Strategic plans and Recovery plan. Collaboration with community neighbors where possible to create synergy in these plans is important.

This comprehensive review should account for updated flood plains, estuary protections, protections for the Deerpoint Reservoir watershed (the supply for the county’s source of potable water), major community-wide stormwater plans and future growth infrastructure systems. A forward-looking plan should contemplate the creation of more walkable communities, live-work communities and connected greenspaces and will include a review of current zoning rules for optimized land use in the new land use plan.

Due to flooding issues that were exacerbated during the storm, watershed mapping will be a critical part of mitigating future damage. Wastewater, stormwater and flooding were some of the most discussed ideas in public forums.

A watershed is a land area that directs rainfall to creeks, rivers and streams but will eventually lead to outflow points, such as bays and oceans. Not all water will flow directly to the larger body of water (the bays and oceans), and potentially will puddle or accumulate in areas, leading to other issues or concerns. In an attempt to prevent that, new mapping is needed for further studies and analysis.

Exploring the creation or expansion of a Land Trust is recommended to acquire land, create greater greenspaces for future mitigation and resiliency buffers in natural disasters.
318. Pursue Sustainability Programs

**ACTION:** The Bay County community expressed widespread interest in "eco-friendly," environmentally sustainable projects that both expand community capacity and resilience while also encouraging new business and economic activity. Creating innovative and favorable legislation in building construction methods, initiating new waste recycling programs and encouraging the use of alternative energy can dramatically alter the community's ability to rapidly recover and sustain economic activity despite community emergencies.

The transition towards a more sustainable city include the introduction of enhanced building codes focused on green-build methods and materials. The community should review its long-term strategic vision along with stakeholders to best determine adjusting to new codes, offering incentives to conform to green-build standards and long-term conversion strategies.

319. Continue Utility and Infrastructure Planning

**ACTION:** The infrastructure of the community including water, sanitation, natural gas, electrical, cable, cellular and roads sustained significant damage from the disaster. Restoration of the county infrastructure is underway with extra effort being focused on creating a viable, sustainable community with improved resilience from future hazards. Local comprehensive plans should help address coastal resiliency, sea-level rise and update hurricane evacuation planning.

Public consultation and meetings with local officials from the community indicated the need for significant planning and construction of more resilient systems. The interdependency of utilities, where the failure of one system affected the operation and recovery of others, added additional challenges. Potable water delivery for example, immediately failed when the electrical power grid went down and were further complicated when pumps came back online as the water needed to be flushed to prevent contamination.

320. Pursue Alternative Energy Programs

**ACTION:** Public consultation and meetings with local officials from the community indicate the need for more resilient and sustainable energy systems. Innovative projects like microgrids, which can operate independently, can reduce single points of failure in the system. Hybrid microgrids not only include back-up diesel generators that ensure energy needs are met in the event of outages but utilize solar panels and battery storage to inject low-cost, clean, renewable energy into the grid at all times.

Alternative energy programs can be addressed both on a microgrid and macrogrid level. Solar panels on homes and businesses can assist a community by recovering personal losses much quicker. Collaboration with Green-Build certification programs can bring much needed efficiencies to residential and commercial buildings. Creating resilient power systems for critical communications and utility infrastructure will provide greater resilience. This can be done on a utility scale or through commercial microgrid production and storage programs.
321. Examine Emergency Response Capacity

**ACTION:** Every branch in the task force noted multiple projects aimed at addressing the failure of communication systems and lack of operational capacity during the event. The widespread failure of electrical, wired and wireless communications severely hampered recovery efforts. By placing these facilities along county fiber optic routes and establishing backup power and redundant communications, emergency and municipal personnel would be much better coordinated and responsive.

One of the most actively discussed programs during the task force research period related to the creation of a decentralized Emergency Operation Centers (EOCs). An EOC as envisioned, would facilitate overall response operations by providing a network of emergency facilities, communications networks and first responder resources to support their efforts. These centers would also provide a physical location for all response personnel to stage recovery efforts in an efficient, safe manner.

322. Identify and Develop New Alternative Energy Programs

**ACTION:** A program to evaluate energy generation options focusing on renewable energy alternatives is important for the community during disaster recovery. This project would enable the county to become a national leader in sustainability. In order to make the best decisions regarding the selection of energy options at the lowest cost to residents, all options should be examined and a plan for utilizing resources in the most efficient manner developed.

Target development efforts in the community on the opportunities for renewable energy utilization such as new electric vehicle charging stations. These new alternative energy programs could also be connected with emergency operations centers and local fiber optic telecom networks to provide additional community resiliency during community emergencies.

**TASK I:** Evaluate renewable energy technology solutions, including distributed and centralized solutions, considering solar intensity, wind speeds, biomass resources, utility rates, regulatory and environmental policy, financial incentives, technology characteristics and current costs, to identify renewable energy technologies that are best suited to the area.

**TASK II:** Review performance of renewable energy systems already installed in surrounding communities to determine which technologies are performing as expected and to increase familiarity with these new technologies.

**TASK III:** Research grants and other federal and state organizations such as the Department of Energy and National Renewable Energy Laboratory.

**TASK IV:** Prepare feasibility assessment of each candidate technology and consider packages of bundled measures to improve cost effectiveness.

**TASK V:** Review alternative energy programs as they relate to new transportation opportunities such as electric vehicle charging stations and community telecommunications infrastructure.

**TASK VI:** Develop strategies for outside organizations to participate in research and development of sustainable energy programs in future communities.

Primary Sponsor: Bay County  
Estimated Cost: $20,000,000.00  
Source of Funding: DOE, EPA, HUD, DEO, FDEP  
Initiative: Alternative Energy Programs
When attempting to fund the recovery process, it is important to look beyond the standard disaster recovery programs. While FEMA and HUD are critical partners in recovery, other sources of funding should be aggressively pursued to achieve a highly effective and comprehensive recovery. Each initiative and action included in this plan will now be subjected to a rigorous capital expenditure review to ensure each project is financially viable and all sources of funding are considered. This effort will include not only existing funding options (including H.R. 2157 passed in early June) but also future funding opportunities. Approaching a funding program from all angles results in a higher probability of success. In many cases, funding sources can be combined and leveraged together to provide maximum return on investment in recovery efforts, such as the massive challenges now being faced in Bay County.

Due to the numerous available funding initiatives and programs, it is recommended the County and other jurisdictions create a custom, non-contiguous “recovery opportunity zone.” By using available resources to layer funding incentives on top of the “recovery opportunity zone,” private land owners and investors can be motivated to leverage public dollars. Additional “speed to market” incentives can be attached to the zones which will also incentivize expedited investment. Utilizing the Task Force to create such an incentive package could facilitate significant investment and support from the private markets. Flexible and creative programs such as this can have a material impact on the recovery effort.

It is important to note that this plan includes anticipated costs for direct stock losses. These costs do not cover nor directly related to the significant personal property losses or business interruption losses of the communities. While these costs and their impacts were reviewed in preparation of this plan, the recovery in those areas must be considered as indirect.
In order to ensure the most efficient use of capital, the Plan contemplates using layers of funding to leverage each dollar spent to a maximum capacity. In addition to ensuring an inclusive capital plan is employed, the Plan contemplates maximizing existing federal, state and local programs that may be underutilized or that can be further expanded.

These programs can often be tiered and then applied to capital resources that truly leverage every investment dollar. For example, if the Low-Income Housing Tax Credit (LIHTC) program is being used, the project can be located inside a qualified zone and applying a private dollar Tax Increment Financing (TIF) program can potentially be layered with Community Development Block Grant (CDBG) funds. In certain areas, the investment may also qualify for New Market tax credits, the Property Assessed Clean Energy (PACE) program and other incentives. By utilizing all resources, each investment can be maximized.

The federal programs contemplated in this section do not include standard FEMA Public Assistance nor Mitigation Programs. Rather, this section refers to other programs that are currently available and may be leveraged in the long-term recovery process. There are areas of the County where multiple programs apply. Some of these programs have been historically under-utilized and could be expanded. When creating an overall funding strategy, developing a balance of programs and funding mechanisms will be important to maximize funding.

Bay County enjoys a robust slate of both state and local initiatives that can be applied to economic development and redevelopment projects. The programs span several categories of incentives from TIF programs, to tax credits, job creation and low-cost housing loan programs. Coupled with private capital and federal resources, these incentive packages create powerful tools for development and redevelopment. Continued support from all levels of government will be important to fostering an environment of recovery and growth.

To promote the strength of its economic recovery strategy, the community will not only pursue an adaptive mix of financing solutions, but also look beyond public sector funds. The private sector can bring multiple solutions to our communities, looking to build greater resiliency to future natural disasters. Certainly, private investment will be a major stimulus for economic recovery and positive growth. It will also be important to stratify private sector financial resources to support short-term recovery efforts as well as long-term rebuilding and resiliency programs. Moreover, as evidenced by the slow appropriation of recovery funding from the federal government, private sector funds can come with greater speed and less bureaucracy than public sector sources. Given the nature of private sector investors and risk-reward orientation, projects with high resiliency and result potential will yield the greatest investor participation regardless of public sector contribution. The pursuit of private investment is a major priority for the communities of Bay County.
Federal Programs

FEDERAL QUALIFIED OPPORTUNITY ZONE (QOZ)

The Federal Qualified Opportunity Zone (QOZ) program was created by Congress in the 2017 “Tax Cuts and Jobs Act.” This program is designed to encourage economic growth in underserved communities through tax benefits to investors. This program presents many new opportunities for real estate investment and development in economically distressed communities such as Bay County.

Investors in QOZs can receive deferral, reduction or exclusion on capital gains taxes on investments. Investments in QOZs must be made through an Opportunity Fund (O Fund) which holds at least 90% of its assets in QOZ property. This can include stock, partnership interests and/or other tangible property used in a trade or business (e.g. real estate) within a QOZ.

While the program is promising and received significant coverage regarding the opportunities presented by QOZs, it is in the early stages of development. There has been relatively little transaction activity due to the fact that the IRS, which has to interpret and codify tax legislation via guidance and regulation, has only sporadically released information. This has left the bulk of investors to abstain from acting until receiving further direction. However, this is one program that the community will closely monitor over the multi-year recovery period.

The program allows each state to nominate up to 25% of their qualified low-income census tracts as Opportunity Zones. Former Florida Governor Rick Scott submitted a list of 427 potential Opportunity Zones, featuring at least one in every Florida county. In June of 2018, the U.S. Department of the Treasury certified the list designating all nominated tracts as Qualified Opportunity Zones.

The designated QOZs in Florida include three tracts in Bay County. In April 2019, Florida’s two U.S. Senators introduced the Disaster Opportunity Zones Act (DOZA). The bill, which is still pending, would create a new round of opportunity zone designations by allowing the governors of North Carolina, South Carolina, Georgia, Florida, and California to nominate up to the greater of 25%, or 25 qualified low-income census tracts affected by natural disasters in 2018. The goal of this Act is to stimulate local economies and encourage private investment for disaster recovery. The process would be identical to the opportunity zones enacted by the Tax Cuts and Jobs Act (TCJA), and certified tracts would be eligible for the same tax treatment as the TCJA opportunity zones.

The initial activity in QOZs provides insight into tips and best practices for local governing authorities over QOZs. These include the following:

- To actively seek strong real estate development/investment teams with substantial experience and a strong following of investors. Experienced investors know that while there may be substantial tax advantages in investing in QOZs, these wouldn’t make up for a poor real estate investment decision or for not having the right team to execute the business plan. A complete team should include members with investment, tax and finance experience.
- To promote local shovel-ready projects and actively coordinate and assist private developers with local ordinances and permits.
- To promote and assist private investors with additional incentives that can be combined with QOZ advantages. For example, most states have added incentives to QOZs by allowing project sponsors to take advantage of similar tax breaks involving state and local taxes.

PROPERTY ASSESSED CLEAN ENERGY (PACE)

The Property Assessed Clean Energy (PACE) financing is an innovative mechanism for financing energy efficiency upgrades, disaster resiliency improvements, water conservation measures or renewable energy installations on private properties via voluntary assessments. This type of financing has been around, under various names, since 2005, and has been adopted by most states.

PACE programs, generally based on an existing structure known as a "land-secured financing district," allow property owners to repay the up-front costs of energy or other eligible improvements on their properties with voluntary assessments over 10 to 20 years.

Some of the unique characteristics of PACE assessments include:

- It is attached to the property rather than to an individual, which makes financing easier and at lower interest cost.
- For commercial properties, such as lodging and retail, the assessments can partially or entirely be passed onto consumers as a below the line “tax.”
Although the assessments are paid as an addition to property owners’ property tax bills, they have no impact on the property tax of anyone else other than the properties that use PACE programs.

Florida passed PACE-enabling legislation in 2010 which allows individual residential and commercial property owners to voluntarily seek financing for energy or wind resistant improvements in the form of a special non-ad valorem assessment through their local government with payback occurring over a period of years. The payments are then collected on the same bill as property taxes. Furthermore, Florida local governments are prohibited from changing property value assessment based on energy or wind resistant improvements.

After resolving a Florida Supreme Court case regarding PACE bond validation, residential and commercial PACE is growing in the state, with participation by 32 out of 67 counties. In addition to covering energy efficiency and renewable energy improvements, many Florida PACE programs finance hurricane protection improvements.

The Florida PACE qualified improvements include the following:

- Energy conservation and efficiency improvement; including, but not limited to, air sealing, installation of insulation, installation of energy-efficient heating, cooling, or ventilation systems, building modifications to increase the use of daylight, replacement of windows, installation of energy controls or energy recovery systems, installation of electric vehicle charging equipment and installation of efficient lighting equipment.

- Renewable energy improvement, which is the installation of any system in which the electrical, mechanical or thermal energy is produced from a method that uses one or more of the following fuels or energy sources: hydrogen, solar energy, geothermal energy, bioenergy, and wind energy.

- Wind resistance improvements, which include, but are not limited to:
  - Improving the strength of the roof deck attachment
  - Creating a secondary water barrier to prevent water intrusion
  - Installing wind-resistant shingles
  - Installing gable-end bracing
  - Reinforcing roof-to-wall connections
  - Installing storm shutters
  - Installing opening protections

**NEW MARKET TAX CREDITS (NMTC)**

The New Market Tax Credit (NMTC) Program was established in 2000 by U.S. Congress to use federal tax credits to incentivize private investment in businesses and real estate in low-income communities. The program is administered by the Community Development Financial Institutions (CDFI) Fund of the U.S. Department of Treasury. The current program is set to expire at the end of 2019. However, it is expected to be extended by Congress.

Community development entities (CDEs) apply to the CDFI Fund to receive NMTC allocation. CDEs then sell NMTC to investors and use the funds to make debt or equity investments in entities located in qualified low-income communities, such as “qualified active low-income community businesses” (QALICBs).
According to Urban Institute's study based on data from the CDFI Fund, NMTC projects reporting from 2003 to 2015, 61% went to for-profit QALICBs and 31% to non-profits.

With regards to project type and purpose, the NMTC program is very flexible. It can be used to finance equipment, operations or real estate which can include purchase or rehabilitating retail, manufacturing, agriculture, community facilities, rental housing, for-sale housing or combinations of these.

According to New Market Tax Credit Coalition, in Florida, between 2003-2018, $1.3B in NMTC allocation leveraged an additional $876.1M from other sources for a total of $2.2B in project investments. A total of 156 businesses and economic revitalization projects received NMTC financing.

In May 2009, Florida’s governor signed House Bill 485 which authorizes the Florida New Market Development Program through Section 288.9912, Florida Statutes. In Bay County there are currently 11 NMTC qualified census tracks. Based on the information provided by New Market Tax Credit Coalition, Bay County has received none or very little NMTC.

COMMUNITY REINVESTMENT ACT
The federal Community Reinvestment Act (CRA) is designed to encourage lending institutions to make credit available to low- and moderate-income communities in which the lending institutions are chartered.

HUBZONE (HISTORICALLY UNDER-UTILIZED BUSINESS ZONES)
The 1998 HUBZone Empowerment ACT requires federal agencies of the U.S. to contract with HUBZone certified small businesses for more than 3% of their budget in the form of prime contracts. The HUBZone program is administrated by the Small Business Administration (SBA). Once certified by SBA, HUBZone certified businesses are recertified every three years.

LOW-INCOME HOUSING TAX CREDIT (LIHTC)
Low-Income Housing Tax Credit (LIHTC) was created under the Tax Reform Act of 1986 (TRA86) to give incentives for the utilization of private equity in the development of affordable rental housing for low-income Americans. LIHTC is attractive to private investors because of its dollar-to-dollar tax reduction, and thus accounts for approximately 90% of all affordable rental housing created in the United States today.

LIHTC allocates a fixed number of credits to each state (based on its population) and is administrated by the state’s housing finance agencies. In Florida, LIHTC is managed by the Florida Housing Finance Corporation. According to its 2017 report, a total of $83M was financed through this program to fund the development of 84,000 rental units.

CAPITAL MAGNET FUND (CMF)
The Capital Magnet Fund (CMF) was created to spur investment in affordable housing and related economic development efforts that serve low-income families and low-income communities across the country. Through the fund, federal Community Development Institutions Fund (CDFI Fund) competitively awards grants to non-profit organization operating with a principal purpose of developing or managing affordable housing solutions.
State and Local Programs

Bay County enjoys a robust slate of both state and local initiatives that can be applied to economic redevelopment projects. The programs span several categories of incentives from TIF programs, to tax credits, job creation and low-cost housing loan programs. Coupled with private capital and federal resources, these incentive packages create powerful tools for redevelopment. Continued support from all levels of government will be important to fostering an environment of recovery and growth.

TAX INCREMENT FINANCING (TIF)

Tax Increment Financing (TIF) is one of the most popular methods for local governments in the U.S. to redevelop blighted areas through improvements to infrastructure, public properties, as well as private properties conforming to government planning guidelines.

In tax increment financing, property values in a certain area defined by governing authorities are capped or frozen at the assessed value for a particular base year. Any or some tax revenues due to increases in value in excess of the base, as specified in each state’s TIF legislations, are dedicated to the redevelopment area. The governing municipality and the County both continue to receive property tax revenues based on the frozen value, available for general government purposes.

There are two fundamental ways TIF can be used. The more conservative approach is using TIF revenues on a “pay as you go” basis and the annual stream of revenue is used to fund small projects. The other method is “pay as you use” financing, where TIF revenues are used to pay debt service costs over the life of a project lasting 10 or more years. This latter option is more effective for attracting the participation of private developers.

Any funds received from a tax increment financing district must be used for the redevelopment of the area and not for general government purposes.

In Florida, the Community Redevelopment Act of 1969 was amended in 1977 to allow tax increment financing for the purpose of redevelopment of “blighted” areas. The Act defines a “blighted area” as an area in which there are a substantial number of deteriorated structures causing economic distress or endangerment to life or property.

The Florida Community Redevelopment Act places strict requirements for “blighted area” designation which is the foundation for creating TIF districts. After Hurricane Michael, the Governor’s certification of the entire Bay County as an area that needs federal emergency assistance may allow Bay County to designate the entire county as “Blighted Area” in accordance with Section 163.360, Florida Statutes. That section is as follows:

163.360 Community redevelopment plans.

(10) Notwithstanding any other provisions of this part, when the governing body certifies that an area is in need of redevelopment or rehabilitation as a result of an emergency under s. 252.34(3), with respect to which the Governor has certified the need for emergency assistance under federal law, that area may be certified as a “blighted area,” and the governing body may approve a community redevelopment plan and community redevelopment with respect to such area without regard to the provisions of this section requiring a general plan for the County or municipality and a public hearing on the community redevelopment.

There are five major types of expenses allowed under Florida Statutes 163.387(6) for tax increment revenues. They are as follows:

- Establishment and Operations:
  This funding can be used for the
implementation and administrative expenses of the Community Redevelopment Agency.

- **Planning and Analysis**: Funding to develop necessary engineering, architectural and financial plans.

- **Financing**: The revenues may be used to issue and repay debt for proposed capital improvements contained in the Community Redevelopment Plan.

- **Acquisition**: The revenues may be used to acquire real property.

- **Preparation**: Finally, the revenues may be used for site preparation, including the relocation of existing residents.

According to Florida Statutes 163.370(2), the funds may not be used for the following purposes:

- To construct or expand administration buildings for public bodies unless each taxing authority involved agrees.

- Any publicly-owned capital improvements which are not an integral part of the redevelopment, if the improvements are normally financed by user fees and if the improvements would have otherwise been made without the Redevelopment Agency within three years.

- General government operating expenses unrelated to the Redevelopment Agency.

In April 2019, the Florida Legislature passed HB-9 amending CRA ACT of 1969, which, among other changes, provides that the creation of new CRAs on or after October 1, 2019, may only occur upon approval at a countywide referendum held during a primary or general election and approved by two-thirds of the qualified electors. This legislation provides for the phase-out of existing CRAs at the expiration date stated in the agency’s charter or on September 30, 2039, whichever comes first, with the exception of those CRAs with any outstanding bond obligations. However, the governing board of a creating local government entity may prevent the phase-out of a CRA by a two-thirds vote to retain the agency.

Currently there are six CRAs in Bay County. This includes the Callaway Community Redevelopment Agency, the Community Redevelopment Agency of the City of Parker, the Lynn Haven Community Redevelopment Agency, the Panama City Beach Community Redevelopment Agency and the Panama City Community Redevelopment Agency.

### STATE APARTMENT INCENTIVE LOAN

The State Apartment Incentive Loan program (SAIL) provides low-interest loans on a competitive basis to affordable housing developers each year. This money often serves to bridge the gap between the development’s primary financing and the total cost of the development. SAIL dollars are available to individuals, public entities, non-profit or for-profit organizations that propose the construction or substantial rehabilitation of multifamily units affordable to very low-income individuals and families. A minimum of 20% of the development’s units must be allocated to families earning 50% or less of the area median income.

### ELDERLY HOUSING COMMUNITY LOAN PROGRAM

The Elderly Housing Community Loan (EHCL) program provides loans of up to $750,000 to developers that are making substantial improvements to elderly housing.

### GRANTS FOR HOUSING TO SERVE PERSONS WITH DEVELOPMENTAL DISABILITIES

The Florida Legislature has appropriated funding for a competitive grant program for housing developments designed and constructed to serve persons with developmental disabilities, as defined in Section 393.063, Florida Statutes. These grants are made available to private non-profit organizations with a primary mission that includes serving persons with developmental disabilities. Developments eligible for these grants include community residential homes (CRHs) as defined in Section 419.001, Florida Statutes, and licensed by the Florida Agency for Persons with Disabilities, individual supported living units, and apartment properties that provide permanent supportive housing units. Funds may be used to renovate existing CRHs or build new properties.

### HOME INVESTMENT PARTNERSHIPS PROGRAM

The HOME Investment Partnerships Program provides non-amortized, low interest loans to developers for acquisition and/or new construction or rehabilitation of affordable rental housing to low-income families. Loans are offered for the financing of first or subordinate mortgages with a simple interest rate of 0% to non-profit applicants and 1.5% per annual interest rate for-profit applicants. Loan terms are generally for 15 years for rehabilitation and 20 years for new construction.

The borrowers of HOME funds are for-profit developers, non-profit housing providers, Community Housing...
Development Organizations (CHDOs) or local governments, redevelopment organizations or public housing authorities.

MULTIFAMILY MORTGAGE REVENUE BONDS

The Multifamily Mortgage Revenue Bond program (MMRB) uses both taxable and tax-exempt bonds to provide below market-rate loans to non-profit and for-profit developers who set aside a certain percentage of their apartment units for low-income families. These bonds are sold through either a competitive or negotiated method of sale or private placement. The program requires that at least 20% of the units be set aside for households earning at or below 50% of the area median income (AMI). The developer may also opt to set aside 40% of the units for households earning at or below 60% of the AMI.

PRE-DEVELOPMENT LOAN PROGRAM

Through individualized technical assistance and flexible below market interest financing for predevelopment activities, the Predevelopment Loan Program (PLP) helps non-profit and community-based organizations, local governments and public housing authorities plan, finance and develop affordable housing. Eligible organizations may apply for a loan of up to $750,000. The loan carries a non-amortizing 1% interest rate, with principal and interest deferred until maturity. The loan generally matures either upon the closing of construction/permanent financing or three years after the original PLP loan closed, whichever occurs first.

PLP loans may be applied toward costs such as rezoning, soil tests, engineering fees, title searches, appraisals, feasibility analysis, legal fees, audit fees, earnest money deposit, impact fees, insurance fees, commitment fees, administrative costs, marketing expenses and acquisition expenses. These activities must be part of a non-profit or governmental organization’s effort to develop housing for low-income households.

COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

The Community Development Block Grant (CDBG) Program was created by Title I of the Housing and Community Development Act of 1974. The primary statutory objective of the program is to develop viable communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for persons of low and moderate-income. This general objective is achieved by concentrating on activities which benefit low and moderate-income families. The program can also aid in the prevention or elimination of slums or blight, and under unique circumstances, the state may also use its funds to meet urgent community development needs. A need is considered urgent if it poses a serious and immediate threat to the health or welfare of the community and has arisen in the past 18 months.

The Florida Department of Economic Opportunity (FDEO) manages three CDBG Programs:

- Florida Small Cities Community Development Block Grant Program
- Office of Disaster Recovery
- Neighborhood Stabilization Program
ECONOMIC DEVELOPMENT AD VALOREM PROPERTY TAX EXEMPTION

The Bay County Board of Commissioners, the City of Panama City and the City of Lynn Haven offer an abatement of the local property tax at the business location on tangible personal property and improvements to real property for a period of up to 10 years. In order to qualify, a company must first meet the definitions of a new or expanding business as stated in Section 196.012 (15) and (16), Florida Statutes.

CAREERSOURCE GULF COAST AND JOB CENTER SERVICES

An organization call CareerSource Gulf Coast is one of 24 regional workforce boards located in all regions of the state. It is chartered to address the workforce and training needs of Bay, Gulf and Franklin Counties. The vehicle for providing employer and job seeker services is the Job Center, a one-stop shop for Bay County employers’ human resource needs. The Job Center offers free comprehensive services that assist companies in their recruitment efforts and in the management of their workforce. These services include employee recruitment, applicant screening, applicant testing, conference room space and access to business machines.

CAPITAL INVESTMENT TAX CREDIT (CITC)

The Capital Investment Tax Credit is used to attract and grow capital-intensive industries in Florida. It is an annual credit, provided for up to 20 years, against the corporate income tax. Eligible projects are those in designated high-impact portions of the following sectors: clean energy, biomedical technology, financial services, information technology, silicon technology, transportation equipment manufacturing or be a corporate headquarters facility. Projects must also create a minimum of 100 jobs and invest at least $25 million in eligible capital costs. Eligible capital costs include all expenses incurred in the acquisition, construction, installation and equipping of a project from the beginning of construction to the commencement of operations. The level of investment and the project’s Florida corporate income tax liability for the 20 years following commencement of operations determines the amount of the annual credit.

HIGH IMPACT PERFORMANCE INCENTIVE (HIPI)

The High Impact Performance Incentive (HIPI) is a negotiated grant used to attract and grow major high impact facilities in Florida. In order to participate in the program, the project must operate within designated high-impact portions of the key sectors (clean energy, corporate headquarters, financial services, life sciences, semiconductors and transportation equipment manufacturing), create at least 50 new full-time equivalent jobs (if a R&D facility, company must create at least 25 new full-time equivalent jobs) in Florida in a three year period, and make a cumulative investment in the state of at least $50 million (if a R&D facility, make a cumulative investment of at least $25 million) in a three year period. If approved, the high impact business is awarded 50% of the eligible grant upon commencement of operations and the balance of the awarded grant once full employment and capital investment goals are met.

QUALIFIED DEFENSE AND SPACE CONTRACTOR TAX REFUND (QDSC)

Florida is committed to preserving and growing its high technology employment base by giving Florida defense, homeland security and space business contractors a competitive edge in consolidating contracts or subcontracts, acquiring new contracts or converting contracts to commercial production. Pre-approved applicants creating or retaining jobs in Florida may receive tax refunds of $3,000 per net new full-time equivalent job created or retained.

QUALIFIED TARGET INDUSTRY TAX REFUND (QTI)

The Qualified Target Industry (QTI) Tax Refund program provides an incentive for companies in Florida’s qualified targeted industries to locate new facilities in Florida or to expand existing facilities in Florida. The program provides tax refunds on corporate income, sales, ad valorem, intangible personal property, insurance premium and certain other taxes, at $3,000 per new job created. Higher awards are available to companies paying wages 150% or higher than the County’s average annual wage. New or expanding businesses in selected targeted industries, paying at least 115% of the County’s average annual wage, that have a significant positive impact on the community and have local support are also eligible.

INCUMBENT WORKER TRAINING (IWT)

Florida’s Incumbent Worker Training (IWT) program provides training to currently employed workers to keep Florida’s workforce competitive in a global economy and to retain existing businesses. The program is available to all Florida businesses that have been in operation for at least one year prior to application and require skills upgrade training for existing employees. Priority is given to businesses in targeted industries, Enterprise Zones,
HUB Zones, inner city distressed areas, rural counties and areas, and Brownfield areas.

**QUICK RESPONSE TRAINING (QRT)**

Florida’s Quick Response Training (QRT) program is an employer-driven training program designed to assist new or expanding businesses. The program is flexible and structured to respond quickly to meet business training objectives. A local training provider, school district, technical center, community college, state college or university is selected and available to assist in the application process and program development or delivery. If the business has a training program in place, a state training provider will supervise and manage the training program and serve as the fiscal agent for the grant funds. Reimbursable training expenses include instructors’/trainers’ salaries, curriculum development, textbooks/manuals and materials/supplies.

**WORK OPPORTUNITY TAX CREDIT (WOTC)**

The Work Opportunity Tax Credit is a federal tax credit incentive for private, for-profit employers to hire welfare recipients and individuals from other special groups.

**GOVERNOR’S JOB GROWTH GRANT FUND**

The Florida Job Growth Grant Fund was created to promote economic opportunity by improving public infrastructure and enhancing workforce training. This includes workforce training grants to support programs offered at state colleges and state technical centers.

**ECONOMIC DEVELOPMENT TRANSPORTATION FUND**

The Economic Development Transportation Fund, commonly referred to as the "Road Fund," is an incentive tool designed to alleviate transportation problems that adversely impact a specific company's location or expansion decision. The award amount is based on the number of new and retained jobs and the eligible transportation project costs, up to $3 million. The award is made to the local government on behalf of a specific business for public transportation improvements.
**Private Capital**

Immediately after a natural disaster, individuals, businesses and institutions look quickly to insurance, relief grants and public sector funds to begin the recovery process. However, large gaps remain to help these entities fully recover and rebuild. Thus, it is important for a community to fully implement dynamic and strategic economic development funding in its recovery from natural disasters. The success of the economic development strategy in many cases will help not only make a community more resilient to future natural-disasters but transform its economy. The severe economic impact on Bay County by Hurricane Michael requires this transformation.

To promote the strength of its economic recovery strategy, a community must consider an adaptive mix of financing solutions, many times looking beyond public sector funds. The private sector can bring many solutions to communities looking to build greater resiliency to future natural disasters coupled with stimulus for economic growth. It is also important to stratify private sector financial resources to support short-term recovery efforts and long-term rebuilding and resiliency programs. Moreover, private sector funds in disaster recovery can come with greater speed and less bureaucracy than public sector resources. Given the nature of private sector investors and risk-reward orientation, projects with high resiliency and result potential will yield greatest investor participation regardless of public sector contribution.

Through adaptive financing solutions, individuals, businesses and cities look at the open gaps left from the initial wave of relief funding to determine solutions that best meet the needs of each group. Through community analysis, the prioritization of needs will help lay the groundwork for the type of private sector solution that will be sought.

The scale of private capital is typically commensurate to the long-term economic opportunity surrounding a community’s recovery and economic development plans. It must be dynamic and inclusive of the area’s natural resources and human capital. For that reason, having a strong community foundation that attracts workers of all levels to employment opportunities is critical to achieving a successful and resilient local economy.
PRIVATE REAL ESTATE INVESTORS

Bay County is home to a group of local real estate investors who have historically invested across the County with significant success. While the priority should be local support, the scale of need in Bay County likely will require the expanding the search for private investment beyond the local community. Reaching out to external investors to participate alongside, investing alongside of local investors could result in local investors being rewarded in larger projects while providing “local knowledge.” This would also allow local investors to participate in larger projects that may outstrip the capacity of local investors.

The role of real estate investors in a natural disaster recovery is critical to ensure that a community’s disaster recovery plan, inclusive of its community redevelopment goals, are met with capital resources to meet housing needs for its residents and commercial areas for strong economic recovery and growth.

PRIVATE EQUITY

Private equity capital is available to help accelerate the community’s businesses recover beyond the resources of the public sector such as SBA loans. To attract private equity, the community must be strategic in its approach, target central themes and develop a backdrop for sustainable growth.

There will be natural matches made between available private capital and business opportunities. It will be the role of community and business leaders to attract private capital by promoting the opportunity to invest in a strong resilient growing community.

VENTURE CAPITAL

Community leaders can foster emerging industries that will be the catalyst for the area’s long-term economic growth by attracting venture capital. In its economic development plan, community planners can use innovation centers, accelerators and other start-up modalities to bring venture investors to meet new ideas and the area’s rising entrepreneurs.

PUBLIC PRIVATE PARTNERSHIPS

Effective public-private partnerships (“P3”) have been used by many communities to assist in funding everything from infrastructure to student housing and technology upgrades as well as operations of municipal or other government facilities. This can be a very effective tool for creating much needed capital through effective partnerships.

INFRASTRUCTURE FUNDS

Infrastructure investors are typically focused on large scale project opportunities that touch public assets, which may include roads, bridges, pipelines, ports and telecommunications networks.

STRUCTURED FINANCE

The structured finance industry can bring more flexible capital solutions to a community’s recovery plan. The very nature of structure finance suggests that the financial community provides customized solutions to capital requirements that may be less straightforward and not aligned with a direct public sector allocated funds or a private sector capital resource. Instead, financial engineering is employed to provide the capital resource to a community to meet a planned solution, while delivering an equitable solution to investors. Examples of structured transactions include cash flow securitization, collateralized obligations and future flow receivables.

RESILIENCY BOND

Communities rebounding from natural-disasters are beginning to turn to a new form of financing, what is sometimes referred to as the second generation of catastrophic bonds. In its basic form, resiliency bonds provide the community with capital to cover mitigation focused projects that lead to broader resiliency for future natural-disasters. In the process, the selected projects ultimately lead to reduced insurance premiums given the stronger resiliency to targeted coverage such as wind damage. The resilient bond investor, similar to that of the catastrophic bonds, stand in during a parametric loss event based on specific metrics (e.g. 500-year flood event). The beneficiaries of the resiliency bond include utility companies, municipalities, large industrial businesses, and others that need further insulation from tail risk events from natural-disasters.

The following section (pages 247 - 259) provides a general listing of federal and state programs which provide funding and assistance to communities. These charts outline the name of the program, eligible applicants and how the program/funding may be utilized. This information, as well as specific funding recently provided by the U.S. Congress (via H.R. 2157) is the key source of pursue efforts for the communities of Bay County.

An analysis of the Federal Appropriations Bill (H.R. 2157) is found on page 287.
### FEDERAL PROGRAMS

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<tr>
<th>Program</th>
<th>Eligible Applicants</th>
<th>Eligible Use of Program Funds</th>
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</table>
| CDBG-DR (HUD)                   | Under most CDBG-DR appropriations, funds may be made available to States, units of general local government, Indian tribes, or insular areas. *Grantees must have significant unmet recovery needs and the capacity to carry out a disaster recovery program. | CDBG-DR funds can be used to assist many types of beneficiaries in a variety of ways.  
- Housing. E.g., activities that restore and/or improve the housing stock such as new construction (typically allowed via a waiver) or rehabilitation/reconstruction. This includes activities for single family or multifamily housing, either owner-occupied or rental.  
- Restoration of infrastructure. E.g., activities that rebuild or replace affected public facilities or improvements. Typical activities include the rehabilitation of schools, health care centers, water or wastewater facilities, drainage improvements, etc.  
- Economic Revitalization. E.g., activities that address job losses, and negative effects to tax revenues or businesses. This may include job training and workforce development, loans and grants to businesses, or improvements to commercial/retail districts. |
| Us Dept. of Commerce - EDA Disaster Supplemental Grants | 1. District Organization;  
2. Indian Tribe or a consortium of Indian Tribes;  
3. State, county, city, or other political subdivision of a State, including a special purpose unit of a State or local government engaged in economic or infrastructure development activities, or a consortium of political subdivisions;  
4. Institution of higher education or a consortium of institutions of higher education; or  
5. Public or private non-profit organization or association acting in cooperation with officials of a political subdivision of a State | Applicants must propose a project located in or serving one or more communities or regions impacted by Hurricanes Harvey  
Support the creation of new businesses and jobs in a variety of industry sectors, including, but not limited to advanced manufacturing, agriculture, energy, information technology, health care, telecommunications, tourism and recreation, transportation, and cultural and natural assets.  
• Implement local and regional job creation and growth and economic diversification strategies targeted towards affected workers and businesses.  
• Resiliency projects to increase the ability of a community or region to anticipate, withstand, and bounce back from future economic injuries and disasters. This may |
include: ensuring redundancy in telecommunications and broadband networks; promoting business continuity and preparedness; industrial diversification; employing safe development practices in business districts and surrounding communities; conducting disaster recovery planning with key stakeholders; and other methods that strengthen local and regional capacity to troubleshoot and address vulnerabilities within the regional economy.

- Construction activities, including the restoration of damaged infrastructure, infrastructure enhancement, building new infrastructure including high performance and resilient infrastructure.
- Strengthening or developing existing or emerging industry clusters.

2
- Developing business incubator programs.
- Enhancing access to and use of broadband services to support job growth through business creation and expansion.
- The development of economic development diversification strategies in accordance with EDA CEDS recommendations.

3
- Facilitating access to private capital investment and providing related capacity building and technical assistance, such as effective utilization of capital investment for business development and job creation.
- Facilitating and promoting market access for goods and services created and manufactured by businesses in the impacted community/region.
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<tr>
<td>US Dept. of HHS - Community Economic Development</td>
<td>CED awards funds to private, non-profit organizations that are community development corporations (CDCs), including faith-based organizations, and Tribal and Alaskan Native organizations. CDCs must be governed by a three-party board of directors that includes residents of the community served, and local business and civic leaders. CDCs must have as their principle purpose planning, developing or managing low-income housing or community development projects.</td>
<td>Business incubators; Shopping centers; Manufacturing businesses; and Agricultural initiatives.</td>
</tr>
<tr>
<td>FEMA (PA) 428</td>
<td>PA provides grants to state, tribal, territorial, and local governments, and certain types of PNP organizations so that communities can quickly respond to and recover from major disasters or emergencies.</td>
<td>The capped grants are based on cost estimates to complete scopes of work (SOWs) that would be eligible under the standard PA program.</td>
</tr>
<tr>
<td>SBA Disaster Loans</td>
<td>SBA provides low-interest disaster loans to businesses of all sizes, private non-profit organizations, homeowners, and renters.</td>
<td>SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.</td>
</tr>
<tr>
<td>FEMA CDL Loan</td>
<td>The Community Disaster Loan (CDL) Program provides operational funding for local governments to continue to operate after a substantial revenue loss caused by a disaster.</td>
<td>Local governments can apply if: • Located in a Presidentially Declared Disaster Area • Substantial Revenue Loss ≥ 5% • Affects Your Current or Subsequent Fiscal Year Funds must be used to carry on existing essential municipal services or to expand such essential functions to meet disaster-related needs. 44CFR §206.361(f)</td>
</tr>
<tr>
<td>Program</td>
<td>Eligible Applicants</td>
<td>Eligible Use of Program Funds</td>
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<tr>
<td>USDA - Rural Business Enterprise Grant</td>
<td>Public bodies</td>
<td>• Technical assistance for private business enterprises.</td>
</tr>
<tr>
<td>(RBEG) Program</td>
<td>• Private nonprofit corporations serving rural areas</td>
<td>• Feasibility studies, technical consultation, and analysis.</td>
</tr>
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<td></td>
<td>• Federally recognized Indian/Alaska Tribal Groups</td>
<td>• Financial assistance to third parties through a loan (revolving loan fund) for start-up operating cost and working capital.</td>
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<td>• Training, when necessary, in connection with technical assistance.</td>
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<td>• Equipment to be leased by small and emerging small business.</td>
</tr>
<tr>
<td><strong>Grants will be made only when there is a reasonable prospect that they will result in development of small and emerging private business enterprises. A small and emerging private business enterprise is defined as follows: • Private business which will employ 50 or fewer new employees; and • Has less than $1 million in projected gross revenues.</strong></td>
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</tr>
<tr>
<td>USDA - Economic Impact Initiative Grants</td>
<td>Targeted communities that are experiencing a high rate of residents unable to find employment may apply for Economic Impact Initiative (EII) grant funds made available through the U.S. Department of Agriculture Rural Development.</td>
<td>The funds may be used for a variety of community facility needs including road maintenance equipment, police vehicles, computer and communication equipment, energy efficiency improvements and municipal buildings.</td>
</tr>
<tr>
<td>USDA - Distance Learning, Telemedicine, Broadband</td>
<td>Through the Distance Learning and Telemedicine Program, USDA Rural Development offers rural communities help in developing facilities to make these services accessible.</td>
<td>Distance learning projects provide funding for computers and internet hookups in schools and libraries. Telemedicine provides rural clinics and health care centers with instant access to physicians hundreds or thousands of miles away.</td>
</tr>
<tr>
<td>Program</td>
<td>Eligible Applicants</td>
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<tr>
<td>Federal Qualified Opportunity Zone (“QOZ”)</td>
<td>Private Investors</td>
<td>Investors receive deferral, reduction or exclusion on capital gains taxes on investments. Investments in QOZs must be made via an Opportunity Fund (“O Fund”) which holds at least 90% of its assets in QOZ property, which can be stock, partnership interests and/or other tangible property used in a trade or business, (e.g. real estate), within a QOZ.</td>
</tr>
<tr>
<td>Property Assessed Clean Energy (PACE)</td>
<td>Property Owner</td>
<td>Florida PACE Qualified Improvements:</td>
</tr>
</tbody>
</table>

1. Energy conservation and efficiency improvement, including, but not limited to, air sealing; installation of insulation; installation of energy-efficient heating, cooling, or ventilation systems; building modifications to increase the use of daylight; replacement of windows; installation of energy controls or energy recovery systems; installation of electric vehicle charging equipment; and installation of efficient lighting equipment.

2. Renewable energy improvement, which is the installation of any system in which the electrical, mechanical, or thermal energy is produced from a method that uses one or more of the following fuels or energy sources: hydrogen, solar energy, geothermal energy, bioenergy, and wind energy.

3. Wind resistance improvement, which includes, but is not limited to:
   a. Improving the strength of the roof deck attachment;
   b. Creating a secondary water barrier to prevent water intrusion;
   c. Installing wind-resistant shingles;
   d. Installing gable-end bracing;
   e. Reinforcing roof-to-wall connections;
   f. Installing storm shutters; or
   g. Installing opening protections.
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<th>Program</th>
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<tr>
<td>New Market Tax Credits (NMTC)</td>
<td>Community Development Entity (CDE)</td>
<td>Can be used to finance equipment, operations, or real estate which can include purchase or rehabilitating retail, manufacturing, agriculture, community facilities, rental or for-sale housing, or combinations of these.</td>
</tr>
<tr>
<td>Community Reinvestment Act (CRA)</td>
<td>Private Investors</td>
<td>Funding is used for investment in community in which financial institution is chartered.</td>
</tr>
<tr>
<td>HUBZone (Historically Under-utilized Business Zones)</td>
<td>Small Business</td>
<td>ACT requires the agencies of the U.S. federal government to contract with HUBZone certified small businesses for more than 3% of their budget in the form of prime contracts.</td>
</tr>
<tr>
<td>Florida Housing Finance Corporation - Low-Income Housing Tax Credit (LIHTC)</td>
<td>Private Investors</td>
<td>Development of affordable rental housing for low-income Americans. LIHTC is attractive to private investors because of its dollar-to-dollar tax reduction.</td>
</tr>
<tr>
<td>Capital Magnet Fund</td>
<td>• A certified CDFI, or&lt;br&gt; • A non-profit organization operating with a principal purpose of developing or managing affordable housing solutions.</td>
<td>Created to spur investment in affordable housing and related economic development efforts that serve low-income families and low-income communities across the country.</td>
</tr>
<tr>
<td>USDA - Section 515 Loans</td>
<td>Individuals, Businesses, PNPs, Local Governments, Native American tribes. *For-profit borrowers must agree to limit profit in order to keep costs low.</td>
<td>Borrowers may use the funds to purchase buildings or land, to develop or renovate buildings. Also, funds can be used to build facilities such as water and wastewater systems.</td>
</tr>
<tr>
<td>USDA 538 Multi-family Loans</td>
<td>Business, PNPs, State and local governments and Native American tribes are all eligible</td>
<td>Must be developing or renovating multi-family homes in a rural area.</td>
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# FEDERAL PROGRAMS THAT OFFER HOMEOWNER REPAIR/REBUILD ASSISTANCE AND LOANS

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<td>FEMA Individual Assistance</td>
<td>Grants to homeowners</td>
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<td>Small Business Administration</td>
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<td>USDA Home Preservation Grant (Section 533)</td>
<td>Public &amp; Non-profit organizations</td>
<td>Home repair</td>
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<td>USDA Home Repair and Grant (Section 504)</td>
<td>Homebuyer</td>
<td>Home repair</td>
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<td>USDA Direct Loan (Section 502)</td>
<td>Homebuyer</td>
<td>Low-interest loan for repair</td>
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<td>USDA Application Packaging Grant</td>
<td>Non-Profits</td>
<td>Qualifying applicants</td>
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<td>USDA Mutual Self-Help</td>
<td>Non-Profits</td>
<td>Sweat Equity Construction</td>
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<td>HUD Rural Housing and Economic Development Program</td>
<td>Non-Profits</td>
<td>Land Acquisition, infrastructure, building homes, and Homeowner counseling programs</td>
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<td>FHA 203 (h)</td>
<td>Mortgage for Hurricane Victims</td>
<td>100% Financing Mortgage</td>
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<td>FHA 203 (k)</td>
<td>Home Buyer/ Homeowner &amp; Non-profits</td>
<td>Mortgage which include rehabilitation expense</td>
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<td>Brownfield Economic Development Initiative</td>
<td>Local Communities</td>
<td>Redevelopment of Environmentally impacted sites</td>
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# FEDERAL PROGRAMS THAT OFFER CAPITAL GRANTS AND OPERATING SUBSIDIES

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<td>HUD Elderly Housing (Section 202)</td>
<td>Non-Profits</td>
<td>Capital grant &amp; operating subsidy</td>
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<tr>
<td>HUD Housing for Disabled (Section 811)</td>
<td>Non-Profits</td>
<td>Capital grant &amp; operating subsidy</td>
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<tr>
<td>USDA Multi-family Direct Loan (Section 515)</td>
<td>Non-Profits</td>
<td>Capital grant &amp; operating subsidy</td>
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<tr>
<td>USDA Home Preservation Grant (Section 533)</td>
<td>Non-Profits &amp; Homeowners</td>
<td>Low-interest grants for home repair</td>
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<tr>
<td>HUD Section 202 and 811 Emergency repair funds</td>
<td>Non-profit owners of hurricane damaged USDA Sections 202 &amp; 811 projects</td>
<td>Repair existing USDA Sections 202 and 811 projects</td>
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<tr>
<td>TIF Funding</td>
<td>Municipalities</td>
<td>• Establishment and Operations - they can first be used for the implementation and administrative expenses of the Community Redevelopment Agency,</td>
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<td>• Planning and Analysis - they can then be used to develop the necessary engineering, architectural, and financial plans,</td>
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<td>• Financing - the revenues may be used to issue and repay debt for proposed capital improvements contained in the Community Redevelopment Plan,</td>
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<td>• Acquisition - the revenues may be used to acquire real property,</td>
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<td>• Preparation - finally, the revenues may be used for site preparation, including the relocation of existing residents.</td>
</tr>
<tr>
<td>State Apartment Incentive Loan</td>
<td>Private Investors</td>
<td>SAIL dollars are available to individuals, public entities, not-for-profit or for-profit organizations that propose the construction or substantial rehabilitation of multifamily units affordable to very low-income individuals and families. A minimum of 20 percent of the development’s units must be set aside for families earning 50 percent or less of the area median income</td>
</tr>
<tr>
<td>404 Mitigation</td>
<td>state, tribal, territorial, and local governments</td>
<td>The 404 funding is used to provide protection to undamaged parts of a facility or to prevent or reduce damages caused by future disasters. The entire state - not just presidentially declared counties - may qualify for 404 mitigation projects. The 404 grant is managed by the State under funding provided for in the Stafford Act. Section 404 mitigation measures are funded under the</td>
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<td>Program</td>
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<tr>
<td>Elderly Housing Community Loan Program</td>
<td>Private Investors</td>
<td>Program provides loans of up to $750,000 to developers that are making substantial improvements to elderly housing.</td>
</tr>
<tr>
<td>Grants For Housing To Serve Persons With Developmental Disabilities</td>
<td>Private nonprofit organizations with a primary mission includes serving persons with developmental disabilities</td>
<td>Developments eligible for these grants include community residential homes (CRHs) as defined in section 419.001, Florida Statutes, and licensed by the Florida Agency for Persons with Disabilities; individual supported living units; and apartment properties that provide permanent supportive housing units. Funds may be used to renovate existing CRHs or build new properties.</td>
</tr>
<tr>
<td>HOME Investment Partnerships Program</td>
<td>Private Investors</td>
<td>Loans are offered for the financing of first or subordinate mortgages with a simple interest rate of zero percent to nonprofit applicants and 1.5% per annum interest rate to for-profit applicants. Loan terms are generally for 15 years for rehabilitation and 20 years for new construction.</td>
</tr>
<tr>
<td>Multifamily Mortgage Revenue Bonds (MMRB)</td>
<td>For Profit or Non-Profit Developers</td>
<td>The program requires that at least 20 percent of the units be set aside for households earning at or below 50 percent of the area median income (AMI). The developer may also opt to set aside 40 percent of the units for households earning at or below 60 percent of the AMI.</td>
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<td>Program</td>
<td>Eligible Applicants</td>
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<tr>
<td>Predevelopment Loan Program</td>
<td>nonprofit and community-based organizations, local governments, and public housing authorities</td>
<td>Eligible organizations may apply for a loan of up to $750,000. The loan carries a non-amortizing one percent interest rate, with principal and interest deferred until maturity. The loan generally matures either upon the closing of construction/permanent financing or three years after the original PLP loan closed, whichever occurs first.</td>
</tr>
<tr>
<td>Community Development Block Grant Program (SMALL Cities Program &amp; Neighborhood Stabilization)</td>
<td>Small Cities, Municipalities, PNPs</td>
<td>This general objective is achieved by concentrating on activities which benefit low- and moderate-income families. The program can also aid in the prevention or elimination of slums or blight, and under unique circumstances, the State may also use its funds to meet urgent community development needs.</td>
</tr>
<tr>
<td>Economic Development Ad Valorem Property Tax Exemption</td>
<td>New or Expanding Business</td>
<td>Tax Abatement</td>
</tr>
<tr>
<td>CareerSource Gulf Coast and Job Center Services</td>
<td>Local Business</td>
<td>Center offers free comprehensive services that assist companies in their recruitment efforts and in the management of their workforce. These services include employee recruitment, applicant screening, applicant testing, conference room space and access to business machines.</td>
</tr>
<tr>
<td>Capital Investment Tax Credit (CITC)</td>
<td>Businesses/Corporations</td>
<td>Eligible projects are those in designated high-impact portions of the following sectors: clean energy, biomedical technology, financial services, information technology, silicon technology, transportation equipment manufacturing, or be a corporate headquarters facility. Projects must also create a minimum of 100 jobs and invest at least $25 million in eligible capital costs. Eligible capital costs</td>
</tr>
<tr>
<td>Program</td>
<td>Eligible Applicants</td>
<td>Eligible Use of Program Funds</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>High Impact Performance Incentive (HIPI)</td>
<td>Businesses/Corporations</td>
<td>In order to participate in the program, the project must: operate within designated high-impact portions of the following sectors— clean energy, corporate headquarters, financial services, life sciences, semiconductors and transportation equipment manufacturing; create at least 50 new, full-time equivalent jobs (if a R&amp;D facility, company must create at least 25 new, full-time equivalent jobs) in Florida in a three-year period; and make a cumulative investment in the state of at least $50 million (if a R&amp;D facility, make a cumulative investment of at least $25 million) in a three-year period.</td>
</tr>
<tr>
<td>Qualified Defense and Space Contractor Tax Refund (QDSC)</td>
<td>Businesses/Corporations</td>
<td>Homeland security and space business contractors a competitive edge in consolidating contracts or subcontracts, acquiring new contracts or converting contracts to commercial production. Pre-approved applicants creating or retaining jobs in Florida may receive tax refunds of $3,000 per net new, full-time equivalent job created or retained.</td>
</tr>
<tr>
<td>Qualified Target Industry Tax Refund (QTI)</td>
<td>Businesses/Corporations</td>
<td>The program provides tax refunds on corporate income, sales, ad valorem, intangible personal property, insurance premium and certain other taxes, at $3,000 per new job created. Higher awards are available to companies paying wages 150% or higher than the county’s average annual wage. New or expanding businesses in selected targeted industries, paying at least 115% of the county’s average annual wage, that have a significant positive impact on the community and have local support are eligible.</td>
</tr>
</tbody>
</table>
## STATE & LOCAL PROGRAMS

<table>
<thead>
<tr>
<th>Program</th>
<th>Eligible Applicants</th>
<th>Eligible Use of Program Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incumbent Worker Training (IWT)</td>
<td>Employed Workers</td>
<td>The program is available to all Florida businesses that have been in operation for at least one year prior to application and require skills upgrade training for existing employees. Priority is given to businesses in targeted industries, Enterprise Zones, HUB Zones, Inner City Distressed areas, Rural Counties and areas, and Brownfield areas.</td>
</tr>
<tr>
<td>Quick Response Training (QRT)</td>
<td>New or Expanding Business</td>
<td>A local training provider – school district, technical center, community college, state college or university – is selected and available to assist in the application process and program development or delivery. If the business has a training program in place, a state training provider will supervise and manage the training program and serve as the fiscal agent for the grant funds. Reimbursable training expenses include instructors’/trainers’ salaries, curriculum development, textbooks/manuals and materials/supplies.</td>
</tr>
<tr>
<td>Governor’s Job Growth Grant Fund</td>
<td>State Colleges &amp; Technical Centers</td>
<td>Created to promote economic opportunity by improving public infrastructure and enhancing workforce training. This includes workforce training grants to support programs offered at state colleges and state technical centers.</td>
</tr>
<tr>
<td>Economic Development Transportation Fund</td>
<td>Local Government</td>
<td>The award amount is based on the number of new and retained jobs and the eligible transportation project costs, up to $3 million. The award is made to the local government on behalf of a specific business for public transportation improvements.</td>
</tr>
<tr>
<td>STATE PROGRAMS - HOMEOWNER ASSISTANCE LOANS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>Eligible Applicants</td>
<td>Use of Program Funds</td>
</tr>
<tr>
<td>Special Hurricane CDBG allocation</td>
<td>Local Governments</td>
<td>Homeowner repair</td>
</tr>
<tr>
<td>HOME Again</td>
<td>Local Governments</td>
<td>Homeowner repair</td>
</tr>
<tr>
<td>Homeownership Loan Program</td>
<td>Private Builders &amp; Non-profits</td>
<td>Construction subsidy and deferred mortgages for homebuyers</td>
</tr>
<tr>
<td>First-Time Homeowner Mortgage Bonds</td>
<td>Home buyers</td>
<td>Eligible Homebuyers (2-year waiver requested from first-time homebuyer requirement requested) Tax deduction to businesses donating materials</td>
</tr>
<tr>
<td>Community Contribution Tax Credits</td>
<td>Non-profits</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE PROGRAMS THAT OFFER DEVELOPMENT CAPITAL FOR LOW INCOME HOUSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
</tr>
<tr>
<td>Multi-family Revenue Bonds</td>
</tr>
<tr>
<td>Rental Recovery Loan</td>
</tr>
<tr>
<td>State Apartment Incentive Loan</td>
</tr>
<tr>
<td>State HOME Rental Program</td>
</tr>
<tr>
<td>Tax Credits</td>
</tr>
<tr>
<td>Elderly Housing Community Loan</td>
</tr>
<tr>
<td>Special Housing Assistance &amp; Development</td>
</tr>
<tr>
<td>Community Development Block Grant</td>
</tr>
<tr>
<td>HOME Partnership</td>
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</table>

<table>
<thead>
<tr>
<th>LOCAL PROGRAMS THAT OFFER HOMEOWNER REPAIR/REBUILDING ASSISTANCE AND LOANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
</tr>
<tr>
<td>Special Hurricane CDBG allocation</td>
</tr>
<tr>
<td>Hurricane Housing Recovery</td>
</tr>
<tr>
<td>HOME</td>
</tr>
<tr>
<td>Community Development Block Grant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RENTERS MAY QUALIFY FOR DIRECT RENTAL ASSISTANCE FROM THE FOLLOWING SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
</tr>
<tr>
<td>Housing &amp; Vouchers</td>
</tr>
<tr>
<td>Family Relocation Hurricane Vouchers</td>
</tr>
<tr>
<td>State HOME TBRA</td>
</tr>
<tr>
<td>Shelter Plus Care</td>
</tr>
</tbody>
</table>
The Bay County Long-term Recovery Plan is intended to set into action collaborative and continued efforts to achieve the vision of full recovery and significant improvement in all of the communities in Bay County. This plan is not a document that will simply be read a few times, get some media attention and then be set aside. The Plan is a dynamic and living tool that will be used to thoughtfully consider and implement the action items addressed in this document, as well as others that will be identified in the coming months and years.

The Bay County Long-term Recovery Task Force will continue to oversee the implementation of this broad and aggressive strategy. The Task Force will foster the critical inter-governmental cooperation and continued dialogue with the business, industry, military, educational and private sectors as well as the citizenry of Bay County. This collaboration promises maximum return on the collective investment of dollars, hard work, creative thinking and leadership for our hometowns.
Key Recovery Plan Implementation Steps:

1. Long-term Recovery Task Force will review and approve initial components of the Plan. It is also suggested that each governing body of the cities, school board and the County formally adopt and endorse this strategy. After review and approval of all, provide to the public and all stakeholders. As this is communicated, the notion that the Plan is a dynamic tool which will be modified and enhanced through ongoing input will be critical.

2. Establish procedures for the continuation of the Bay County Long-term Recovery Task Force and establish specific roles and responsibilities for oversight of the recovery plan and its actions and tasks.

3. Enable a web-based tool which will be comprised of the Long-term Recovery Plan, actions and tasks. This tool, which will be available to all local jurisdictions, will facilitate project tracking, reporting and measurable updates to local leadership, stakeholders and the general public. This will include the development of appropriate performance measures and review/audit techniques that meet federal and state standards. This will be critical for use by FEMA, HUD and other federal and state grantors as well.

4. Determine and immediately implement a comprehensive approach for the pursuit of federal, state and other funding sources. This effort will include leveraging of different funding sources to achieve maximum enhancement. In addition to ongoing funding programs through FEMA, this approach will begin with a full and exhaustive examination of funding soon to be available as a result of H.R. 2157.

5. Realizing the impact and importance of U.S. Housing and Urban Development (HUD) funding through the Community Development Block Grant—Disaster Recovery program, immediately convert aspects of the Plan into an action plan adhering to HUD guidelines and the standards set by the Florida Department of Economic Opportunity (FDEO).

6. Based upon the critical need for private investment (which can be enhanced through governmental incentives), conduct a conference in which local, national and international investors are invited to attend and examine the many excellent opportunities which can and will occur in the region.

7. Identify and implement all necessary inter-local government agreements related to projects that cross jurisdictional lines. This will facilitate grant pursuit, division of duties and overall project management tactics.

8. Implement grant and project management resources to effectively monitor, report and correct any operational concerns or issues that arise.

9. Establish an ongoing methodology for the identification and continued pursuit of federal, state and private investment funding. The recovery process will be multi-year, so additional funding should be aggressively pursued to continue progress toward full success.

10. Arrange technical assistance for Bay County’s local governmental entities in the areas of financial management, grant acquisition and management, legislative appropriations requests and justification, accounting, investing, budgeting, and debt issuance through the most economical means available. This assistance will be essential for those entities that lack the specific technical expertise or resources to implement workable solutions to challenges resulting from diminished revenue, increased operating expenditures and deferred aid.
FEMA Public Assistance Damage Inventory Estimates

The information below is associated with estimated FEMA Public Assistance costs provided by each jurisdiction, as of May 2019.

### Debris Removal - Category A

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay County</td>
<td>$386,050,000.00</td>
</tr>
<tr>
<td>Panama City, City of</td>
<td>$153,005,000.00</td>
</tr>
<tr>
<td>Mexico Beach, City of</td>
<td>$35,993,903.19</td>
</tr>
<tr>
<td>Callaway, City of</td>
<td>$25,150,000.00</td>
</tr>
<tr>
<td>Lynn Haven, City of</td>
<td>$14,418,481.77</td>
</tr>
<tr>
<td>Springfield, City of</td>
<td>$13,410,726.56</td>
</tr>
<tr>
<td>Parker, City of</td>
<td>$7,400,000.00</td>
</tr>
<tr>
<td>Bay District Schools</td>
<td>$3,070,381.85</td>
</tr>
<tr>
<td>Panama City Beach, City of</td>
<td>$650,000.00</td>
</tr>
<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$639,148,493.37</strong></td>
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</table>

### Emergency Protective Measures - Category B

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay County</td>
<td>$81,450,000.00</td>
</tr>
<tr>
<td>Bay District Schools</td>
<td>$62,569,590.97</td>
</tr>
<tr>
<td>Mexico Beach, City of</td>
<td>$36,600,000.00</td>
</tr>
<tr>
<td>Panama City, City of</td>
<td>$23,215,000.00</td>
</tr>
<tr>
<td>Lynn Haven, City of</td>
<td>$4,020,000.00</td>
</tr>
<tr>
<td>Callaway, City of</td>
<td>$1,650,000.00</td>
</tr>
<tr>
<td>Springfield, City of</td>
<td>$721,465.00</td>
</tr>
<tr>
<td>Panama City Beach, City of</td>
<td>$436,584.00</td>
</tr>
<tr>
<td>Parker, City of</td>
<td>$371,000.00</td>
</tr>
<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$211,033,639.97</strong></td>
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</table>
### Roads and Bridges - Category C

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay County</td>
<td>$65,553,000.00</td>
</tr>
<tr>
<td>Callaway, City of</td>
<td>$38,300,000.00</td>
</tr>
<tr>
<td>Mexico Beach, City of</td>
<td>$16,331,000.00</td>
</tr>
<tr>
<td>Panama City, City of</td>
<td>$10,105,000.00</td>
</tr>
<tr>
<td>Lynn Haven, City of</td>
<td>$5,150,000.00</td>
</tr>
<tr>
<td>Springfield, City of</td>
<td>$1,938,354.15</td>
</tr>
<tr>
<td>Parker, City of</td>
<td>$300,000.00</td>
</tr>
<tr>
<td>Panama City Beach, City of</td>
<td>$200,000.00</td>
</tr>
<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$137,877,354.15</strong></td>
</tr>
</tbody>
</table>

### Water Control Facilities - Category D

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callaway, City of</td>
<td>$30,480,618.00</td>
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<tr>
<td>Mexico Beach, City of</td>
<td>$10,800,000.00</td>
</tr>
<tr>
<td>Lynn Haven, City of</td>
<td>$6,850,000.00</td>
</tr>
<tr>
<td>Bay County</td>
<td>$4,210,000.00</td>
</tr>
<tr>
<td>Parker, City of</td>
<td>$550,000.00</td>
</tr>
<tr>
<td>Bay District Schools</td>
<td>$380,921.14</td>
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<tr>
<td>Panama City Beach, City of</td>
<td>$204,000.00</td>
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<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$53,475,539.14</strong></td>
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</table>

### Public Facilities - Category E

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay District Schools</td>
<td>$301,293,306.55</td>
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<tr>
<td>Panama City, City of</td>
<td>$41,207,681.32</td>
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<tr>
<td>Bay County</td>
<td>$30,919,441.95</td>
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<tr>
<td>Mexico Beach, City of</td>
<td>$17,462,200.00</td>
</tr>
<tr>
<td>Lynn Haven, City of</td>
<td>$12,518,528.70</td>
</tr>
<tr>
<td>Springfield, City of</td>
<td>$11,151,934.00</td>
</tr>
<tr>
<td>Callaway, City of</td>
<td>$8,257,000.00</td>
</tr>
<tr>
<td>Parker, City of</td>
<td>$1,200,000.00</td>
</tr>
<tr>
<td>Panama City Beach, City of</td>
<td>$299,160.00</td>
</tr>
<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$424,309,252.52</strong></td>
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</table>
## Utilities - Category F

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
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</thead>
<tbody>
<tr>
<td>Bay County</td>
<td>$54,947,619.46</td>
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<tr>
<td>Lynn Haven, City of</td>
<td>$15,650,000.00</td>
</tr>
<tr>
<td>Panama City, City of</td>
<td>$14,525,000.00</td>
</tr>
<tr>
<td>Mexico Beach, City of</td>
<td>$10,884,000.00</td>
</tr>
<tr>
<td>Callaway, City of</td>
<td>$400,000.00</td>
</tr>
<tr>
<td>Panama City Beach, City of</td>
<td>$319,515.00</td>
</tr>
<tr>
<td>Springfield, City of</td>
<td>$158,155.50</td>
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<tr>
<td>Parker, City of</td>
<td>$100,000.00</td>
</tr>
<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$96,984,289.96</strong></td>
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</table>

## Parks and Recreation - Category G

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Approximate Cost</th>
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</thead>
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<td>Panama City, City of</td>
<td>$72,248,845.24</td>
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<tr>
<td>Mexico Beach, City of</td>
<td>$52,591,000.00</td>
</tr>
<tr>
<td>Bay County</td>
<td>$12,965,350.00</td>
</tr>
<tr>
<td>Lynn Haven, City of</td>
<td>$8,715,000.00</td>
</tr>
<tr>
<td>Bay District Schools</td>
<td>$4,280,744.77</td>
</tr>
<tr>
<td>Callaway, City of</td>
<td>$2,900,000.00</td>
</tr>
<tr>
<td>Parker, City of</td>
<td>$1,500,000.00</td>
</tr>
<tr>
<td>Springfield, City of</td>
<td>$662,578.00</td>
</tr>
<tr>
<td>Panama City Beach, City of</td>
<td>$283,000.00</td>
</tr>
<tr>
<td><strong>Total Approximate Cost</strong></td>
<td><strong>$156,146,518.01</strong></td>
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### Action Items by Initiative

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Total Estimated Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Energy Programs</td>
<td>$26,750,000.00</td>
</tr>
<tr>
<td>Beach Restoration and Marine Protection</td>
<td>$47,500,000.00</td>
</tr>
<tr>
<td>Building and Code Enforcement</td>
<td>$425,000.00</td>
</tr>
<tr>
<td>Community Capacity Planning</td>
<td>$2,125,000.00</td>
</tr>
<tr>
<td>Community Quality of Life</td>
<td>$8,425,000.00</td>
</tr>
<tr>
<td>Community Resiliency</td>
<td>$196,450,000.00</td>
</tr>
<tr>
<td>Economic Redevelopment</td>
<td>$598,110,000.00</td>
</tr>
<tr>
<td>Electrical Hardening</td>
<td>$50,000,000.00</td>
</tr>
<tr>
<td>Emergency Housing Programs</td>
<td>$1,025,000.00</td>
</tr>
<tr>
<td>Environmental Initiatives</td>
<td>$188,000,000.00</td>
</tr>
<tr>
<td>Health Care Facilities and Service Improvements</td>
<td>$385,496,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, Unincorporated Bay County</td>
<td>$995,500,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Panama City</td>
<td>$752,200,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Mexico Beach</td>
<td>$354,000,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Callaway</td>
<td>$188,000,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Lynn Haven</td>
<td>$215,000,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Springfield</td>
<td>$128,755,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Parker</td>
<td>$68,250,000.00</td>
</tr>
<tr>
<td>Affordable Housing Redevelopment, City of Panama City Beach</td>
<td>$36,500,000.00</td>
</tr>
<tr>
<td>Mental Health and Community Support</td>
<td>$39,755,000.00</td>
</tr>
<tr>
<td>Military Economics</td>
<td>$118,000,000.00</td>
</tr>
<tr>
<td>Natural Resource Preservation and Education</td>
<td>$3,310,000.00</td>
</tr>
<tr>
<td>New Transportation Initiatives</td>
<td>$756,800,000.00</td>
</tr>
<tr>
<td>Parks, Trails, and Greenspace</td>
<td>$101,250,000.00</td>
</tr>
<tr>
<td>Port of Panama City Expansion</td>
<td>$110,000,000.00</td>
</tr>
<tr>
<td>Private Sector and Small Business Expansion</td>
<td>$85,150,000.00</td>
</tr>
<tr>
<td>Public Facility Construction and Hardening</td>
<td>$150,250,000.00</td>
</tr>
<tr>
<td>Public Safety and Mission Support</td>
<td>$148,630,000.00</td>
</tr>
<tr>
<td>Public Sheltering and Services</td>
<td>$94,200,000.00</td>
</tr>
<tr>
<td>Smart City Sensing and Telemetry</td>
<td>$14,500,000.00</td>
</tr>
<tr>
<td>Special Purpose Community Housing Projects</td>
<td>$36,112,000.00</td>
</tr>
<tr>
<td>Sports and Recreation Facilities</td>
<td>$61,275,000.00</td>
</tr>
<tr>
<td>Initiative</td>
<td>Total Estimated Needs</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Stormwater Initiatives</td>
<td>$244,997,000.00</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>$93,580,000.00</td>
</tr>
<tr>
<td>Transportation Improvements</td>
<td>$321,150,000.00</td>
</tr>
<tr>
<td>Water and Wastewater Initiatives</td>
<td>$320,560,000.00</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>$6,942,030,000.00</strong></td>
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### Affordable Housing Redevelopment

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Branch</th>
<th>Sponsor</th>
<th>Cost Estimate</th>
<th>Potential Funding Sources</th>
<th>Project Number</th>
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</thead>
<tbody>
<tr>
<td>Unincorporated Bay County Affordable Housing Redevelopment</td>
<td>Housing</td>
<td>Unincorporated Bay County</td>
<td>$995,500,000.00</td>
<td>HUD</td>
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<tr>
<td>City of Panama City Affordable Housing Redevelopment</td>
<td>Housing</td>
<td>City of Panama City</td>
<td>$752,200,000.00</td>
<td>HUD</td>
<td>151</td>
</tr>
<tr>
<td>City of Mexico Beach Affordable Housing Redevelopment</td>
<td>Housing</td>
<td>City of Mexico Beach</td>
<td>$354,000,000.00</td>
<td>HUD</td>
<td>151</td>
</tr>
<tr>
<td>City of Callaway Affordable Housing Redevelopment</td>
<td>Housing</td>
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<td>City of Lynn Haven Affordable Housing Redevelopment</td>
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<td>City of Springfield Affordable Housing Redevelopment</td>
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### Alternative Energy Programs

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Branch</th>
<th>Sponsor</th>
<th>Cost Estimate</th>
<th>Potential Funding Sources</th>
<th>Project #</th>
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<tr>
<td>Electric Car Charging Stations</td>
<td>Infrastructure</td>
<td>Citizen submission</td>
<td>$6,500,000.00</td>
<td>USDOT, DOE, Smart Cities Council</td>
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<td>Identify and Develop New Alternative Energy Programs</td>
<td>Planning &amp; Capacity</td>
<td>Bay County</td>
<td>$20,000,000.00</td>
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<td>Pursue Alternative Energy Programs</td>
<td>Planning &amp; Capacity</td>
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## Beach Restoration and Marine Protection

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<tr>
<td>Mexico Beach Restoration Project</td>
<td>Natural &amp; Cultural Resources</td>
<td>Mexico Beach, City of</td>
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<td>Panama City Beach Shore Protection Project</td>
<td>Natural &amp; Cultural Resources</td>
<td>Panama City Beach, City of</td>
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<td>St. Andrews State Park Beach Restoration Project</td>
<td>Natural &amp; Cultural Resources</td>
<td>St. Andrews Park_DEP</td>
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## Building and Code Enforcement

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<th>Cost Estimate</th>
<th>Potential Funding Sources</th>
<th>Project #</th>
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<tr>
<td>Central Center for out of town contractors to report, register, learn laws, educate on number of municipalities and permitting, etc.</td>
<td>Economic Recovery</td>
<td>Bay County</td>
<td>$75,000.00</td>
<td>Chambers, DOC USEDA, HUD CDBG</td>
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<tr>
<td>Implement Flood and Flood Zone Mitigation Efforts</td>
<td>Planning &amp; Capacity</td>
<td>Bay County</td>
<td>$100,000.00</td>
<td>USACE, DOACS, DOC, DEO, EPA, FDEP, FWCC, WMDs</td>
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<td>Pursue Sustainability Programs</td>
<td>Planning &amp; Capacity</td>
<td>Bay County</td>
<td>$250,000.00</td>
<td>EPA, DOL, DEO, HUD, DOE, FDEP</td>
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## Community Capacity Planning

<table>
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<tr>
<th>Action Item</th>
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<th>Cost Estimate</th>
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<th>Project #</th>
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<tr>
<td>Continue Enhanced Facilities Planning</td>
<td>Planning &amp; Capacity</td>
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<td>HUD, DEO, DOC, DOI, DOACS, FDEP, FWCC</td>
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<td>Continue Utility and Infrastructure Planning</td>
<td>Planning &amp; Capacity</td>
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<tr>
<td>Establish Temporary Housing and Debris Sites</td>
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<tr>
<td>Examine Land Use and Watershed Planning</td>
<td>Planning &amp; Capacity</td>
<td>Bay County</td>
<td>$750,000.00</td>
<td>DOACS, USACE, EPA, FDOT, FDEP, WMDs</td>
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<tr>
<td>Strengthen Pre-Disaster Preparations</td>
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<td>Bay County</td>
<td>$750,000.00</td>
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<td>Action Item</td>
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<tr>
<td>Artist Live Workspace</td>
<td>Natural &amp; Cultural Resources</td>
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<td>$2,000,000.00</td>
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<td>Bay Families with Dogs, Inc.</td>
<td>Natural &amp; Cultural Resources</td>
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<td>Community centers</td>
<td>Infrastructure</td>
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<td>$1,200,000.00</td>
<td>HUD CDBG and CDBG-DR</td>
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<td>Community Heart and Soul Project</td>
<td>Natural &amp; Cultural Resources</td>
<td>Bay County</td>
<td>$1,500,000.00</td>
<td>HHS, DOH DCF, DOL, DEO</td>
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<tr>
<td>Conduct Assessment of Senior Programs &amp; Facilities</td>
<td>Health &amp; Social Services</td>
<td>Countywide</td>
<td>$25,000.00</td>
<td>Income Security &amp; Soc Sv HHS-2019-ACL-AOA-DASG-0313 Disaster Assistance for State Units on Aging (SUAs)</td>
<td>158</td>
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<tr>
<td>Create a Special Teen Center for Counseling and other Services</td>
<td>Health &amp; Social Services</td>
<td>Bay County</td>
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<td>Dedicated Arts venues</td>
<td>Natural &amp; Cultural Resources</td>
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<td>GPS story scaping</td>
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<tr>
<td>Maker Spaces and Growing Spaces at Community Centers</td>
<td>Natural &amp; Cultural Resources</td>
<td>Countywide</td>
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<td>Neighborhood based job training, maker space, and garden</td>
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<td>Public “map and think” forums with GIS Decision Support</td>
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<td>Public Art and Green Space</td>
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<td>Sunshine Art Center Project Jumpstart Art</td>
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<td>Action Item</td>
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<td>Bay County Indoor Recreation Center 1 of 4 (Resiliency Centers)</td>
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<td>Panama City, City of</td>
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<td>Build a Community Resiliency Center</td>
<td>Health &amp; Social Services</td>
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<td>TBD</td>
<td>HUD, DOE, HHS, DOH, DCF</td>
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<td>Business Recovery Center</td>
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<td>Bay County</td>
<td>$1,500,000.00</td>
<td>HUD CDBG, DOC USEDA, Private investment</td>
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<td>Downtown Conference Center 2 of 4 (Resiliency Centers)</td>
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<td>Panama City, City of</td>
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<td>Establish a Private Endowment for Residents Awaiting Disaster Financial Assistance</td>
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<td>$5,000,000.00</td>
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<td>Expand the Head Start Program</td>
<td>Health &amp; Social Services</td>
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<td>Panama City Beach Event Center 3 of 4 (Resiliency Centers)</td>
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<td>Panama City Beach, City of</td>
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<td>Panama City Beach Indoor Sports Center 4 of 4 (Resiliency Centers)</td>
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<td>Provide Enhanced Transportation for Hospitals</td>
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<td>Provide Program and Transportation Support for the Elderly Population</td>
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<td>Provide Subsidized Childcare</td>
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<td>Provide Training on Emergency or Strategic Operations Planning</td>
<td>Health &amp; Social Services</td>
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<td>Build “City Walk” style development at downtown marina</td>
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<td>HUD CDBG, Private investment</td>
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<td>Build a Farmers Market &amp; Community Gardens</td>
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<td>Panama City, City of</td>
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<td>Build an Aquarium at the Downtown Marina</td>
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<td>Panama City, City of</td>
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<td>Build and Operate a Downtown Outdoor Amphitheater</td>
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<td>Build Conference Center on Panama City Beach</td>
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<td>HUD CDBG, HSS CED, County, State, Private Funding</td>
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<td>Build New Community Convention Center</td>
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<td>Bay County</td>
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<td>City Marina Convention Center</td>
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<td>City of Panama City Visitor Center</td>
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<td>Create and Provide Incentives to Attract and Retain Medical Professionals</td>
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<td>Create Downtown Science &amp; Technology Center</td>
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<td>Panama City, City of</td>
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<td>DOC USEDA, HSS CED, FEMA, HUD CDBG, Private investment</td>
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<td>Database of ALL Bay County businesses (partner w/ power companies)</td>
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<td>$75,000.00</td>
<td>Chambers, DOC USEDA, HUD CDBG</td>
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<td>Development of Fuel Depot Property (Lynn Haven)</td>
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<td>Lynn Haven, City of</td>
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<td>Enhance CRA Funding &amp; Coverage</td>
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<td>Countywide</td>
<td>TBD</td>
<td>HUD, CDBG</td>
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<td>Establish and Operate Concert Venues</td>
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<td>Bay County</td>
<td>$4,500,000.00</td>
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<td>Family Friendly Music/Food Venue</td>
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<td>Panama City, City of</td>
<td>$10,000,000.00</td>
<td>DOC USEDA, HUD CDBG, Private investment, City of Panama City</td>
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<td>Implement a Business and Employment Incubator</td>
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<td>Lynn Haven, City of</td>
<td>$1,500,000.00</td>
<td>HUD CDBG, County, City, Private investment</td>
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<td>Implement an Engineering, Science, Technology and Advanced Workforce Center at FSU-PC</td>
<td>Health &amp; Social Services</td>
<td>County Higher Education System</td>
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## Economic Redevelopment

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<th>Project #</th>
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<tbody>
<tr>
<td>Man in the Sea</td>
<td>Natural &amp; Cultural Resources</td>
<td>Panama City Beach, City of Panama City Beach</td>
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<td>Offer Incentives to Attract and Retain Behavioral Health Providers</td>
<td>Health &amp; Social Services</td>
<td>Bay County</td>
<td>$2,000,000.00</td>
<td>HHS, DOH, DCF, HUD, DEO</td>
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<td>Philanthropic Pursuit</td>
<td>Natural &amp; Cultural Resources</td>
<td>Bay County</td>
<td>TBD</td>
<td>Private Investment</td>
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<td>Prepare a Bay County Economic Development Strategy</td>
<td>Economic Recovery</td>
<td>Bay County</td>
<td>$120,000.00</td>
<td>DOC USEDA, HUD CDBG, County</td>
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<td>Provide a Cruise Ship Port</td>
<td>Economic Recovery</td>
<td>Port of Panama City</td>
<td>$25,000,000.00</td>
<td>HUD CDBG, HSS CED, Private investment</td>
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<td>Relocate Fuel Dock at Beach Drive &amp; 6th Street</td>
<td>Infrastructure</td>
<td>Citizen submission</td>
<td>TBD</td>
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## Electrical Hardening

<table>
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<th>Project #</th>
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<tbody>
<tr>
<td>Underground power and communications on Front Beach Road and Thomas Drive</td>
<td>Infrastructure</td>
<td>Bay County &amp; Panama City Beach, City of</td>
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<td>FEMA HMGP, HUD CDBG-DR, USDOT</td>
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<td>Underground Utilities</td>
<td>Infrastructure</td>
<td>Lynn Haven, City of</td>
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## Emergency Housing Programs

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<th>Project #</th>
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<tr>
<td>Designate Portable Housing Units for Disaster Relief Organizations</td>
<td>Health &amp; Social Services</td>
<td>Countywide</td>
<td>$1,000,000.00</td>
<td>HHS, DOH, DCF, HUD, DOE, DOI, FDEP, FWCC, DOACS</td>
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<tr>
<td>Provide or Waive Permits for Portable Housing Units for post storm volunteers and RV locations</td>
<td>Health &amp; Social Services</td>
<td>Bay County</td>
<td>$25,000.00</td>
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## Environmental Initiatives

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<tr>
<td>“Make the Greenprint the Blueprint”</td>
<td>Natural &amp; Cultural Resources</td>
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<tr>
<td>Bay County Reef Restoration</td>
<td>Natural &amp; Cultural Resources</td>
<td>Bay County</td>
<td>$7,500,000.00</td>
<td>NWFWMMD</td>
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<td>Bring Back the Stars! —via Reduction of Light Pollution</td>
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<td>Hentz Lake, Pretty Bayou</td>
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<td>Protecting our Bay, improving our Economy, and Beautifying Bay County</td>
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<td>St. Andrew Bay Real-Time Water Quality Monitoring</td>
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<td>Create Business Recovery Center with Medical Grade office space</td>
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<td>Enhance Security for Domestic Violence Program</td>
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<td>Enhance Security for Pharmaceuticals and Hospital Staff during Emergencies</td>
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<td>Establish a New 150 bed Micro-Hospital in Panama City Beach</td>
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<td>Expand Awareness of RxOpen Application</td>
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<td>Expand Life Management Center and Step Down Care</td>
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<td>Harden Arc of The Bay Facilities and Integrate Electronic Records System</td>
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<td>Panhandle Aging Research Center FSU-PARC, FSU-PC</td>
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<td>Standardize Water Connections for Hospitals</td>
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<td>Acquire Telemedicine System for Mental Health Services</td>
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<td>Create a 5000 sf Facility for the Lifeline Drug Treatment Program</td>
<td>Health &amp; Social Services</td>
<td>Bay County Sheriff’s Office</td>
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<td>Deploy Mental Health Experts in Bay District Schools</td>
<td>Health &amp; Social Services</td>
<td>Bay District Schools</td>
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<td>Establish an Effective Data Tracking System for County Mental Health Issues</td>
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<td>Establish Med-Psych Crisis Unit</td>
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<td>Expand Mental Health Mobile Service to Mental Health Crisis Response Team</td>
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<td>Expand the Living Free Community Training Program</td>
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<td>Implement Counseling and Immediate Needs Distribution Program</td>
<td>Health &amp; Social Services</td>
<td>Bay County</td>
<td>$2,500,000.00</td>
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<td>Implement Innovative Mental Health Services at FSU, FSU-PC</td>
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<td>Implement Mental Health Training and Disaster Research through MDC at FSU, FSU-PC</td>
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<td>County Higher Education System</td>
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## Military Economics

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<td>Enhance NSA Panama City Turning Basin</td>
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<td>Establish Defense Industry Hub</td>
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<td>Bay County</td>
<td>$35,000,000.00</td>
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<td>Separate transmission line into the base for electrical needs</td>
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<td>Tyndall AFB</td>
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<td>Sewer Line expansion/Improvement through Tyndall that leads to</td>
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<td>Tyndall AFB</td>
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<td>Mexico Beach</td>
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<td>Tyndall Parkway Masterplan</td>
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## Natural Resource Preservation and Education

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<tr>
<td>Designate Photo Landmarks/venues to Promote Tourism</td>
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<td>Grow the Ecotourism Aspect of the Community</td>
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<td>Heritage Preservation Plan</td>
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<td>Historic Preservation and Education of the Governor’s Stone</td>
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<td>Implement program to ensure historical preservation</td>
<td>Planning &amp; Capacity</td>
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<td>St. Andrews State Park Gun Mount/Overlook</td>
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<td>Bay Parkway Phase 2</td>
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<td>Continuation of East Bay Parkway to Wildwood Road</td>
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<td>Crosswind Runway at Northwest Florida Beaches International Airport (ECP)</td>
<td>Infrastructure</td>
<td>Northwest Florida Beaches International Airport</td>
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<td>Full build-out of Bay Parkway Phase 1 &amp; 2 (addition of 2 more travel lanes)</td>
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<td>Gulf Coast Parkway (Advancement)</td>
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<td>ROW Acquisition &amp; Construction of East Avenue Improvements</td>
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<td>Study for Construction of a North Bay Bridge</td>
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<td>Thomas Drive Flyover Phase 2</td>
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<td>West Bay Parkway (Advancement)</td>
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## Parks, Trails, and Greenspace

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<td>Bike Path/boardwalk between downtown &amp; St Andrews</td>
<td>Infrastructure</td>
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<td>TBD</td>
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<td>Build Boardwalk Systems (PCB and Mexico Beach)</td>
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<td>Build Top Quality Water-Front Parks</td>
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<td>City of Mexico Beach Parker Park Improvements</td>
<td>Natural &amp; Cultural Resources</td>
<td>Mexico Beach, City of</td>
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<td>Countywide off-road bicycle network</td>
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<td>$18,000,000.00</td>
<td>FDEP, PeopleForBikes Community Grant Program, American Hiking Society’s National Trails Fund, Kodak American Greenways Grant</td>
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<td>Develop Kayak Launch, Conservation Area, Eco-learning</td>
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<td>Enhance Parks and Playground Equipment</td>
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<td>Rebuild and expand local parks and recreation facilities</td>
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<td>St. Andrews State Park Button Bush Trail</td>
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<td>Build Reinforced Deeper Bulkheads at Port Panama City</td>
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<td>Port West Terminal - Bulk Terminal Expansion - Biomass Dome Storage Facility, Conveyance System and Access Roads</td>
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<td>Build an Artist Village to Capitalize on Industry</td>
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<td>Build New Lynn Haven Commerce Park</td>
<td>Economic Recovery</td>
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<td>Business Accelerator</td>
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<td>Establish a Disaster Recovery Fund for Charter Captains</td>
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<td>Establish Advanced Manufacturing Innovation Institute</td>
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<td>Gulf Coast State College</td>
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<td>Establish Childcare Business Training</td>
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<td>Implement Research Park at Airport</td>
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<td>Install additional generators on county facilities</td>
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### Public Facility Construction and Hardening

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<th>Action Item</th>
<th>Branch</th>
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### Public Safety and Mission Support

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<td>Public Safety and Mission Support</td>
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<td>10 Acre Debris Management Site</td>
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<td>BCSO Training Facility/Law Enforcement Command Post and high-value vehicle storage</td>
<td>Infrastructure</td>
<td>Bay County Sheriff's Office</td>
<td>$875,000.00</td>
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<td>Consolidated Communications/911 Center</td>
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<td>Designate EOC Media Spokesperson in future events</td>
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<td>Bay County</td>
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<td>Emergency Staging Areas</td>
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<td>Examine Emergency Response Capacity</td>
<td>Planning &amp; Capacity</td>
<td>Bay County</td>
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<td>Expand Emergency Operations Centers</td>
<td>Health &amp; Social Services</td>
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<td>TBD</td>
<td>HUD, DEO</td>
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<td>Hurricane shelter/Hardened Operations Center</td>
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<td>Interdisciplinary Community Training Program for Healthcare Staff and First Responders</td>
<td>Health &amp; Social Services</td>
<td>County Higher Education System</td>
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<td>Multipurpose Community Building, Hardened Operations Center, and Public Shelter</td>
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<td>New Fire Stations (Unincorporated Bay County)</td>
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<td>Panama City Hardened Operations Center and Emergency Services Headquarters</td>
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### Public Safety and Mission Support

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<td>Property Protection</td>
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<td>Natural &amp; Cultural Resources</td>
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<td>Bay County</td>
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<td>Retrofit County Fire Station/EMS Station Truck Bay Doors</td>
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<td>Tethered Aerostats for Emergency Response</td>
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### Public Sheltering and Services

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<td>Animal Control hardened facility to act as &quot;animal shelter&quot;</td>
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<td>Bay District Schools Shelter Hardening</td>
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<td>Build a Regional Hurricane Center</td>
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<td>Create a Pet Shelter for Evacuations</td>
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<td>HUD, DOE, HHS, DOH, DCF</td>
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<td>Establish Centralized Feeding Capabilities</td>
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<td>Expand and Improve Emergency Shelters Operations</td>
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<td>Pet and People Shelter</td>
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### Smart City Sensing and Telemetry

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<td>Utility Remote Sites Communication and Telemetry</td>
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### Special Purpose Community Housing Projects

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<td>Health &amp; Social Services</td>
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<td>Establish Block Housing for the Behavioral Health Community</td>
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### Sports and Recreation Facilities

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<td>Construct Community Skate Parks</td>
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<td>Hurricane Hardened Gym Facility</td>
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<td>PCB Sports Complex Recreation Center</td>
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<td>Pickleball at Senior Center</td>
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<td>Sports Complex/Kinsaul Park and Cain Griffin Park Improvements Expansion</td>
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### Stormwater Initiatives

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<td>City-wide Ditch &amp; Creek Clearing &amp; Maintenance</td>
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### Telecommunications

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### Transportation Improvements

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## Transportation Improvements

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## Water and Wastewater Initiatives

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<td>Extension of Sanitary Sewer to Underserved Areas</td>
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<td>DOH</td>
<td>Florida Department of Health</td>
</tr>
<tr>
<td>DCF</td>
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</tr>
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<td>Florida Department of Education</td>
</tr>
<tr>
<td>WMD</td>
<td>Water Management District</td>
</tr>
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</table>
IMPACT ANALYSIS: H.R. 2157

**Summary:**

House Resolution (H.R.) 2157 was a supplemental appropriations bill sponsored by Nita Lowey, Representative for New York’s 17th Congressional District. The bill passed in the Senate with a vote of 85-8 and passed in the House with a vote of 354-58. The bill was signed into law by President Trump on June 6, 2019, and codified as Public Law 116-20.

Florida’s congressional delegation generally supported this bill, with Congressman Neal Dunn (FL 2nd District) authoring an amendment to the bill to increase military construction funding in FY 2019 for the rebuilding of the U.S. Marine Corps’ Camp Lejeune and the U.S. Air Force’s Tyndall AFB with respective additions of $500 million and $1 billion. The Neal amendment passed unanimously in the House and was included in the final passage of the supplemental disaster relief bill that passed the House. Two congressmen, Gregory Steube (FL 17th District) and Francis Rooney (FL 19th District), voted against the bill.

In its final form, the bill provides $19.1 billion in FY2019 supplemental appropriations to several federal departments and agencies for expenses related to the consequences of wildfires, hurricanes, volcanos, earthquakes, typhoons, and other natural disasters occurring in 2017 and 2018.

The funding provided by this bill was designated as emergency spending, which is exempt from discretionary spending limits and other budget enforcement rules.

The bill includes appropriations for the Department of Agriculture, the Department of Commerce, the Department of Justice, the Department of Defense, the U.S. Army Corps of Engineers, the Department of the Interior, the Department of Energy, the U.S. Coast Guard, the Environmental Protection Agency, the Forest Service, the Department of Health and Human Services, the Department of Labor, the Department of Education, the Government Accountability Office, the Department of Veterans Affairs, the Department of Transportation, and the Department of Housing and Urban Development.

**Expenditure Timelines:**

H.R. 2157 requires that “not later than 60 days after enactment of this Act, the Secretary of the Air Force, or his designee, shall submit to the Committees on Appropriations of the House of Representatives and the Senate a detailed expenditure plan for funds provided [in H.R. 2157]” related to the rebuilding of Tyndall AFB.

H.R. 2157 requires that the Secretary of H.U.D. allocate to Community Development Block Grant (CDBG) grantees an aggregate amount not less than 33 percent of the sum of the amount of appropriated funds within 120 days after the enactment of H.R. 2157, and allocate no less than 100 percent of the appropriated funds no later than 180 days after the enactment of the bill (June 6, 2019 + 180 days). This places the 120 and 180-day marks at October 4 and December 3, 2019.
Conditions on Funding:

H.R. 2157 requires that “prior to the obligation of [CDBG] funds a grantee shall submit a plan to the Secretary for approval detailing the proposed use of all funds, including criteria for eligibility and how the use of these funds will address long-term recovery and restoration of infrastructure and housing, economic revitalization, and mitigation in the most impacted and distressed areas.” Additionally, H.R. 2157 caps “administrative costs” for CDBG funds at 5%.

Attachments:

Excel spreadsheet detailing agency appropriations.
Congressional Budget Office cost estimate.
## Title I—Agriculture

<table>
<thead>
<tr>
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## Title II—Commerce, Justice, and Science

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## Title III—Defense

### Military Programs

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## Title IV—Energy and Water

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## Title V—Financial Services and General Government

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## Title VI—Homeland Security

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## Title VII—Interior and Related Agencies

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## Title VIII—Labor, Health, and Education

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## Title IX—Legislative Branch

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## Title X—Military Construction and Veterans Affairs

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## Title XI—Transportation and Housing

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</thead>
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<tr>
<td>Estimated Outlays</td>
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<td>878</td>
<td>936</td>
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## Total Emergency

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</tr>
</thead>
<tbody>
<tr>
<td>Estimated Outlays</td>
<td>5,364</td>
<td>4,951</td>
<td>2,802</td>
<td>2,049</td>
<td>1,406</td>
<td>819</td>
<td>332</td>
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<td>59</td>
<td>28</td>
<td>28</td>
<td>17,391</td>
<td>17,955</td>
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</table>

Source: Congressional Budget Office.

Notes: Estimates are relative to CBO's May 2019 Baseline. Assumes enactment in May 2019.

S.A. 250 would provide supplemental appropriations for fiscal year 2019 to respond to various natural disasters and designate those amounts as emergency requirements pursuant to section 251 of the Balanced Budget and Emergency Deficit Control Act of 1985. The limits on discretionary budget authority established by the Budget Control Act of 2011 (P.L. 112-25), as amended, would be adjusted to accommodate this funding.

Section 1207 of S.A. 250 would extend, from May 31, 2019, through September 30, 2019, the Federal Emergency Management Agency's authority to operate the National Flood Insurance Program (NFIP). Pursuant to provisions of law that govern CBO's baseline projections, the budgetary effects of certain expiring programs—including the NFIP—are assumed to continue beyond the scheduled expiration date for purposes of budget projections. Consistent with that practice, CBO's baseline incorporates the assumption that the NFIP will continue to operate under the same conditions and parameters as under current law. As a result, relative to CBO's baseline projections, CBO estimates that enacting section 1207 would not affect the federal deficit.
<table>
<thead>
<tr>
<th>AGENCY</th>
<th>COMPONENTS</th>
<th>RELATED STATE AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Agriculture</td>
<td>$3,005,442,000 for losses of crops due to Hurricane Michael and other disasters, $480 million for forest restoration program related to consequences of Hurricane Michael and other events, $150 million for rural communities facilities programs for expenses related to Hurricanes Michael/Florence and wildfires, $125 million for watershed and flood prevention related to Hurricanes Michael and Florence, $600 million to PR for disaster nutrition assistance, $25.2 million to Northern Mariana Islands for disaster nutrition assistance, $720 million to repay funds borrowed from non-fire accounts to cover the cost of FY2018 wildfire suppression activities. $134 million to repair national forest visitor and administrative facilities along with roads and trails that were severely damaged by natural disasters, $5 million to conduct study in PR, $5 million to American Samoa for disaster nutrition assistance, and $500 million for the &quot;Emergency Conservation Program&quot; related to Hurricanes Michael/Florence and wildfires. $12 million for state and private forestry expenses related to the consequences of Hurricanes Florence and Michael. $121 million for National Forest System expenses, maintenance, and capital improvements related to the consequences of Hurricanes Michael and Florence. $720.3 million for &quot;urgent wildland fire suppression.&quot;</td>
<td>DOACS, DEP</td>
</tr>
<tr>
<td>Department of Commerce</td>
<td>$3 million for repair of NOAA monitors, $11 million for assessment and removal of marine debris, $31.57 million for mapping affected coastlines and channels, $50 million for disaster forecasting, $50 million to restore coastal marshes and dunes, and $150 million for economic harm to fisheries in coastal communities, $600 million for Economic Development Assistance related to flood mitigation... long term recovery, and restoration of infrastructure as a result of Hurricanes Michael/Florence.</td>
<td>FDEP, FWCC, DEO</td>
</tr>
<tr>
<td>Department of Justice</td>
<td>$28 million to repair or replace damaged BOP facilities, $1.33 million for prisoner transfer costs, $15 million for legal aid, and $15 million to educate detainees about immigration court processes</td>
<td>FDLE, FDOC</td>
</tr>
<tr>
<td>AGENCY</td>
<td>COMPONENTS</td>
<td>RELATED STATE AGENCY</td>
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</tr>
<tr>
<td>Department of Defense</td>
<td>$500 million to repair damage caused by Hurricane Florence to Marine Corps Base Camp Lejeune and Marine Corps Air Station Cherry Point, $1 billion to the Air Force for damages caused by Hurricane Michael to repair facilities and begin rebuilding Tyndall Air Force Base. The bill prohibits the transfer of these funds to border wall construction. $600 million to Navy and USMC for planning and design of projects to replace facilities damaged by Hurricanes Florence and Michael. $42.4 million to Army National Guard to replace facilities damaged by Hurricanes Florence and Michael.</td>
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</tr>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>$1.993 billion to repairs of Corps projects, including $908 million for operations &amp; maintenance, $575 million for the Mississippi River and Tributaries account, and $510 million for flood control &amp; coastal emergencies, $740 million the construction of flood and storm damage reduction projects to reduce risk from future floods and hurricanes. (Within that total, up to $45 million would start authorized ecosystem restoration projects and up to $25 million could continue projects to reduce risks of flooding and storm damage), $35 million to study potential projects to reduce risk from future floods and hurricanes</td>
<td>DEP, WMDs</td>
</tr>
<tr>
<td>Department of the Interior</td>
<td>The Bureau of Reclamation would receive $15.5 million to carry out fire remediation activities and as compensation for firefighting costs, $50 million in historic preservation grants to NPS, $78 million to repair or replace NPS assets damaged in recent storms, $98.5 million for equipment and facility repair &amp; replacement, debris and hazardous waste removal, and data collection in areas affected by disasters (of which $72.3 million is for 2018 disasters). $82.4 million routed to the USFW for the repair and restoration of facilities, roads, bridges, and assets damaged by natural disasters (of which $50 million would be targeted to coastal resiliency).</td>
<td>DEP, FWCC, DOACS</td>
</tr>
<tr>
<td>Department of Energy</td>
<td>$15.5 million to provide technical assistance related to electric grids in areas impacted by Hurricanes Harvey, Irma, and Maria, and Super Typhoon Yutu</td>
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</tr>
<tr>
<td>U.S. Coast Guard</td>
<td>$526 million for the US Coast Guard to repair and upgrade facilities damaged by recent disasters. $48,977,000 for necessary expenses related to the consequences of Hurricanes Michael, Florence, and Lane, Tropical Storm Gordon, and Typhoon Mangkhut. $476,755,000 for necessary expenses related to the consequences of Hurricanes Michael, Florence, and Lane, Tropical Storm Gordon, and Typhoon Mangkhut.</td>
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<td>RELATED STATE AGENCY</td>
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<tr>
<td>Environmental Protection Agency</td>
<td>$414 million in state revolving funds to bring drinking and waste water systems to a state of resiliency against future storms in areas affected by natural disasters in EPA Regions 4, 9, and 10 impacted by Hurricanes Florence and Michael, Typhoon Yutu, and calendar year 2018 wildfires. $600,000 for necessary expenses related to improving preparedness of the water sector. $1,500,000 for leaking underground storage tanks related to Hurricanes Florence and Michael, calendar year 2018 earthquakes. $1,500,000, to remain available until expended; for necessary expenses related to the consequences of Typhoon Yutu. $56 million for water pollution control grants. $5 million to address impacts of Hurricane Florence, Hurricane Michael, Typhoon Yutu, and calendar year 2018 wildfires.</td>
<td>DEP</td>
</tr>
<tr>
<td>Department of Health and Human Services</td>
<td>$250 million for social services block grants that support activities like counseling services, case management, health services, and renovating, repairing, or constructing healthcare facilities related to the consequences of Hurricanes Florence and Michael, Typhoon Mangkhut, Super Typhoon Yutu, and wildfires occurring in 2018. $100 million for substance abuse and mental health services to support behavioral health treatment, crisis counseling, helpline, and related activities. Separate $30 million to remain available until September 30, 2019, for grants, contracts and cooperative agreements for behavioral health treatment, crisis counseling, and other related helplines to provide support to individuals impacted by Hurricanes Florence and Michael, Typhoon Mangkhut, Super Typhoon Yutu, and wildfires occurring in 2018. $60 million for Head Start programs for expenses related to the consequences of Hurricanes Michael and Florence and other events.</td>
<td>DOH, DCF</td>
</tr>
<tr>
<td>Department of Labor</td>
<td>$49.5 million to disaster response economic recovery through the Dislocated National Reserve fund, $500,000 to DOL OIG.</td>
<td>DEO</td>
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<tr>
<td>Department of Education</td>
<td>$162 million to help restart operations at schools and colleges in areas damaged by Hurricanes Florence and Michael, Typhoon Mangkhut, Super Typhoon Yutu, and wildfires and to support schools and colleges receiving displaced students.</td>
<td>DOE</td>
</tr>
<tr>
<td>Government Accountability Office</td>
<td>$10 million to conduct audits and investigations related to federal spending on disasters in 2018 and other disasters</td>
<td>N/A</td>
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<td>COMPONENTS</td>
<td>RELATED STATE AGENCY</td>
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<tr>
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</tr>
<tr>
<td>Department of Veterans Affairs</td>
<td>$3 million to repair Veterans Health Administration facilities damaged by Hurricanes Florence and Michael and Typhoons Mangkhut and Yutu.</td>
<td>N/A</td>
</tr>
<tr>
<td>Department of Transportation</td>
<td>$1.6 billion for federal-aid highways emergency relief program, $10.5 million for the Federal Transit Administration’s emergency relief program.</td>
<td>FDOT</td>
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<tr>
<td>Department of Housing and Urban Development</td>
<td>$2.21 billion to communities for disaster relief involving long-term recovery, restoration of infrastructure and housing, economic revitalization, grant programs to assist small businesses with working capital purposes to aid in recovery, and mitigation in the &quot;most impacted and distressed areas resulting from a major disaster that occurred in 2018 or 2019.&quot;</td>
<td>DEO</td>
</tr>
</tbody>
</table>

https://www.countable.us/bills/hr2157-116-additional-supplemental-appropriations-for-disaster-relief-act-2019

CBO estimates that enacting this bill would cost $19.1 billion in fiscal year 2019 and $19.188 billion over the 2019-2029 period.

Bill passed by Congress on June 3, 2019. Signed by President on June 6, 2019.

HUD money must be apportioned by Secretary within 120 days (33% of funds) and 180 days (100% of funds).
## Long-Term Recovery Plan

<table>
<thead>
<tr>
<th>Lines of Business</th>
<th>Number of Claims</th>
<th>Closed Claims (paid)</th>
<th>Closed Claims (not paid)</th>
<th>Number Claims Open</th>
<th>Percent Claims Closed</th>
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<tbody>
<tr>
<td>Residential Property</td>
<td>97,912</td>
<td>69,102</td>
<td>13,222</td>
<td>15,588</td>
<td>84.1%</td>
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<tr>
<td>Homeowners</td>
<td>71,916</td>
<td>49,342</td>
<td>10,072</td>
<td>12,502</td>
<td>82.6%</td>
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<td>Dwelling</td>
<td>15,763</td>
<td>11,159</td>
<td>2,355</td>
<td>2,249</td>
<td>85.7%</td>
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<tr>
<td>Mobile Homeowners</td>
<td>9,342</td>
<td>8,112</td>
<td>646</td>
<td>584</td>
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<td>Commercial Residential</td>
<td>891</td>
<td>489</td>
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<td>Commercial Property</td>
<td>11,179</td>
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<tr>
<td>Private Flood</td>
<td>233</td>
<td>154</td>
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<td>Business Interruption</td>
<td>862</td>
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<td>192</td>
<td>376</td>
<td>56.4%</td>
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<tr>
<td>Other Lines of Business *</td>
<td>37,691</td>
<td>32,285</td>
<td>4,216</td>
<td>1,190</td>
<td>96.8%</td>
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<tr>
<td><strong>TOTALS</strong></td>
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<td><strong>106,127</strong></td>
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<td><strong>21,669</strong></td>
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Total Estimated Insured Losses: $6,654,241,887

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<tr>
<th>County</th>
<th>Number of Claims</th>
<th>Closed Claims (paid)</th>
<th>Closed Claims (not paid)</th>
<th>Number Claims Open</th>
<th>Percent Claims Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAY</td>
<td>88,692</td>
<td>63,798</td>
<td>8,924</td>
<td>15,970</td>
<td>82.0%</td>
</tr>
<tr>
<td>CALHOUN</td>
<td>4,069</td>
<td>3,366</td>
<td>289</td>
<td>414</td>
<td>89.8%</td>
</tr>
<tr>
<td>FRANKLIN</td>
<td>2,329</td>
<td>1,255</td>
<td>868</td>
<td>206</td>
<td>91.2%</td>
</tr>
<tr>
<td>GADSDEN</td>
<td>6,206</td>
<td>4,544</td>
<td>1,116</td>
<td>546</td>
<td>91.2%</td>
</tr>
<tr>
<td>GULF</td>
<td>8,256</td>
<td>5,777</td>
<td>1,247</td>
<td>1,232</td>
<td>85.1%</td>
</tr>
<tr>
<td>HOLMES</td>
<td>1,019</td>
<td>731</td>
<td>220</td>
<td>68</td>
<td>93.3%</td>
</tr>
<tr>
<td>JACKSON</td>
<td>13,958</td>
<td>11,345</td>
<td>1,164</td>
<td>1,449</td>
<td>80.6%</td>
</tr>
<tr>
<td>JEFFERSON</td>
<td>193</td>
<td>135</td>
<td>50</td>
<td>8</td>
<td>95.9%</td>
</tr>
<tr>
<td>LEON</td>
<td>10,125</td>
<td>5,712</td>
<td>2,925</td>
<td>488</td>
<td>95.2%</td>
</tr>
<tr>
<td>LIBERTY</td>
<td>1,174</td>
<td>988</td>
<td>114</td>
<td>72</td>
<td>93.9%</td>
</tr>
<tr>
<td>MADISON</td>
<td>53</td>
<td>39</td>
<td>12</td>
<td>2</td>
<td>96.2%</td>
</tr>
<tr>
<td>SUWANNE</td>
<td>24</td>
<td>15</td>
<td>9</td>
<td>0</td>
<td>100.0%</td>
</tr>
<tr>
<td>TAYLOR</td>
<td>62</td>
<td>40</td>
<td>19</td>
<td>3</td>
<td>95.2%</td>
</tr>
<tr>
<td>WAKULLA</td>
<td>1,427</td>
<td>958</td>
<td>415</td>
<td>54</td>
<td>96.2%</td>
</tr>
<tr>
<td>WASHINGTON</td>
<td>3,551</td>
<td>2,792</td>
<td>467</td>
<td>292</td>
<td>91.8%</td>
</tr>
<tr>
<td>REST OF THE STATE</td>
<td>6,739</td>
<td>3,632</td>
<td>2,242</td>
<td>865</td>
<td>87.2%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>147,877</strong></td>
<td><strong>106,127</strong></td>
<td><strong>20,081</strong></td>
<td><strong>21,669</strong></td>
<td><strong>85.3%</strong></td>
</tr>
</tbody>
</table>

CITATIONS

1 Data USA; data set from ACS 5 year estimated; Census Bureau Data original source

2 Zillow ZHVI – Zillow Home Value Index

3 www.restoreyoureconomy.org

4 ACS – American Community Survey 5-year estimate 2011-2015

5 Federal Reserve Economic Data St. Louis Branch; source: New York Federal Reserve

6 BLS: Bureau of Labor and Statistics

7 Source: www.nationalgeographic.com/environment/natural-disasters/reference/hurricane-katrina/ pg. 135

8 Source: https://www.pcbeach.org/non-profit-organizations/ pg. 159