

**Environmental Assessment
South Nassau Communities Hospital
Long Beach Medical Arts Pavilion and South Nassau
Southwest Addition
Nassau County, NY**

4085-DR-NY

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FEMA

**U.S. Department of Homeland Security
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LIST OF ACRONYMS

APE – Area of Potential Effect
BMPs – Best Management Practices
CAA – Clean Air Act
CFR – Code of Federal Regulations
CO – Carbon monoxide
COC – Community of Concern
CRIS – Cultural Resource Information System
CUP – Central Utility Plant
CWA – Clean Water Act
CZMA – Coastal Zone Management Act
DB – decibels on the A-weighted scale
EA – Environmental Assessment
EJ – Environmental Justice
EO – Executive Order
EPA – Environmental Protection Agency
ESA – Endangered Species Act
FEMA – Federal Emergency Management Agency
FIRM – Flood Insurance Rate Maps
FONSI – Finding of No Significant Impact
LBMC – Long Beach Medical Center
Ldn – Night noise level
Leq – Equivalent noise level
LBMAP – Medical Arts Pavilion
NEPA – National Environmental Policy Act
NAAQS – National Ambient Air Quality Standards
NEPA – National Environmental Policy Act
NRHP – National Register of Historic Places
NO₂ – Nitrogen dioxide
NPDES – National Pollution Discharge Elimination System
NYSDEC – New York State Department of Environmental Compliance
NYS DHSES – New York State Division of Homeland Security and Emergency Services
NYS DOS – New York State Department of State
NYS HPO – New York State Historic Preservation Office
O₃ – Ozone
OSHA – Occupational Safety and Health Administration
PA – Public Assistance
PM – Particulate Matter
SIP – State Implementation Plan

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SNCH – South Nassau Communities Hospital

SO₂ – Sulfur Dioxide

SPDES – State Pollution Discharge Elimination System

SRIA – Sandy Recovery Improvement Act

USACE – United States Army Corps of Engineers

USFWS – United States Fish and Wildlife Service

USC – United States Code

1.0 INTRODUCTION

On October 29, 2012 Hurricane Sandy caused storm damage to several areas of New York State including the former Long Beach Medical Center (LBMC) in Long Beach, Nassau County, New York. President Barack Obama declared Hurricane Sandy a major disaster on October 30, 2012. The declaration authorized federal public assistance to affected communities and certain non-profit organizations per Federal Emergency Management Agency (FEMA) 4085-DR-NY and in accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.S. 5172) as amended; the Sandy Recovery Improvement Act (SRIA) of 2013 and the accompanying Disaster Relief Appropriations Act, 2013. The SRIA amended Title IV of the Stafford Act, adding Section 428, which authorizes alternative procedures for permanent work funding under the Federal Emergency Management Agency's (FEMA) Public Assistance (PA) Program.

The LBMC, at the time of the disaster, was subjected to severe flooding and was inundated by storm surge. Following the disaster, the LBMC was closed for more than six months and proposals to demolish select buildings on the site were considered along with clean-up and restoration activities. South Nassau Community Hospital (SNCH) (Subrecipient) has since acquired the LBMC site and has applied to FEMA for financial assistance with restoration of appropriate medical services in Long Beach. The New York State Division of Homeland Security and Emergency Services (NYSDHSES) is the Recipient partner for this project.

This Environmental Assessment (EA) is prepared in accordance with Section 102 of the National Environmental Policy Act (NEPA) of 1969, as amended; and the Regulations for Implementation of the National Environmental Policy Act (40 Code of Federal Regulations [CFR] Parts 1500 to 1508). The purpose of the EA is to analyze the potential environmental impacts of the proposed project and alternatives, including a no action alternative, and to determine whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact (FONSI). In accordance with above referenced regulations and FEMA's regulations for NEPA compliance found at 44 CFR Part 10, FEMA is required, during decision making, to evaluate and consider the environmental consequences of major federal actions it funds or undertakes.

2.0 PURPOSE AND NEED

FEMA's PA Program fosters the protection of health, safety and welfare of citizens, assists communities in recovering from damages caused by disasters and reduces future losses resulting from natural disasters. The purpose of this project is to restore appropriate medical services to Long Beach and the Subrecipient's service area. The secondary purpose is to improve the resiliency of those services against future disasters. The need for this project is to remedy the limited access to medical services present in the community following the closure of the LBMC from Hurricane Sandy.

3.0 PROJECT LOCATION AND BACKGROUND

The LBMC is at 455 E Bay Drive between Lincoln and Franklin Boulevard in the City of Long Beach in Nassau County, New York. The LBMC is bordered by Reynolds Channel to the north and mostly residential neighborhoods on the other three sides. LBMC is accessible by municipal bus service with five routes, a branch of the Long Island Railroad, and multiple two lane roads (Appendix A Figure A). LBMC was a 162-bed teaching and community hospital that also included an emergency department, physical rehabilitation, in-patient psychiatric care, wound and hyperbaric services, and both inpatient and outpatient substance abuse services. During Hurricane Sandy, brackish floodwater inundated the basement of the LBMC through wall vents, under doors and through stairwells and imploded grade level masonry window plugs completely submersing the basement. LBMC personnel employed four six-inch motor operated dewatering pumps, on a continuous basis, for approximately three weeks to dewater the West/Main basements.

Damages to the basements of the facilities containing critical mechanical, electrical and plumbing equipment as well as multiple critical health care functions resulted in the closure of the facility for more than six months. SNCH took over the former 162-bed LBMC in October of 2014 after the LBMC bankruptcy was approved on May 22, 2014. SNCH demolished some of the hurricane damaged facilities due to the level of damages, with the Main and West buildings remaining. Partial demolition of the facilities was completed in March 2016 and the site is currently in this state and is being cleared of the debris and damaged structures. The City of Long Beach also suffered damages from flooding and storm winds on other multiple occasions, including Tropical Storm Irene, Tropical Storm Lee, and several smaller storm events.

A free-standing emergency department is currently meeting the emergency needs of Long Beach. SNCH opened the facility, located at 325 E. Bay Drive in Long Beach, on August 10th 2015. The facility has the capability of a regularly operated emergency department that is part of the 9-1-1 system and can handle virtually any emergency presented and is also a disaster preparedness center. Any patients who require advanced treatment or hospitalization are transferred to the main SNCH campus (SNCH 2015), which is a little more than 5 miles away. Since opening, the Long Beach Emergency Department has treated more than 6,700 patients, nearly 88 percent of whom were treated and released without having to leave the barrier island. Only 8.7 percent of the patients seen at the Long Beach facility had to be admitted to the main hospital in Oceanside.

SNCH, located at One Healthy Way in Oceanside, is in the south part of the town of Hempstead, Nassau County, New York. SNCH is a general medical and surgical hospital with 455 beds and was originally opened in 1928, but has undergone rapid expansion since then (Appendix A Figure B). South Nassau operates the only Level II Trauma Center on the South Shore of Nassau County and is also a designated Stroke Center. It is a Magnet hospital, recognized for its nursing care and is also a Baby Friendly hospital as designated by the World Health Organization and UNICEF. During Hurricane Sandy, the hospital's doors and emergency department remained open to treat

patients. SNCH also provided temporary facilities to the community as a respite from the cold temperatures following the storm that cut power and communications to much of the Island for nearly a week, and in some areas, longer.

4.0 ALTERNATIVES

Several alternative courses of action were evaluated for the restoration of appropriate medical services in Long Beach. The alternatives were evaluated based upon the best approach to provide high quality medical care, engineering constraints, environmental impacts and available property. Budgetary constraints were considered but were not the controlling factor.

Guidance provided in 40 CFR 1502.14 regarding the NEPA provision of an alternative analysis states that an agency must rigorously explore and objectively evaluate all reasonable alternatives and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their elimination. Additionally, a No Action Alternative must be included. This section discusses the No Action Alternative or also known as the “Future without Federal Project Condition”, the feasible alternatives that would provide for the purpose and need and an alternative that was eliminated from full analysis.

4.1 Alternative 1: No Action Alternative

Under the No Action Alternative, no measures would be pursued to enhance SNCH’s resiliency against future storm events. Local medical services would continue to be served by the emergency department. The SNCH temporary facility in Long Beach would continue to be vulnerable to damages caused by storm surge. The residents of Long Beach would face potential loss of life and would encounter significant delays in emergency service response time due to flooding within the City of Long Beach. The SNCH main campus would not increase its emergency capacities and not be able to meet the emerging medical needs of the community.

4.2 Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

The proposed action is composed of several new construction projects and renovations at the former LBMC in Long Beach and the SNCH in Oceanside. The first component, located at the former LBMC, would be the construction of a 25,000-square-foot “Long Beach Medical Arts Pavilion” (LBMAP) designed to accommodate 12,000 to 18,000 emergency department patient visits per year. A potential third-floor expansion of the Pavilion, which would incorporate sustainable elements in its design, would be based on a future determination of space needs and funding. The Pavilion will be constructed using the existing foundation and structural elements of the Main Building and West Building. In addition, LBMAP will have a dock for emergency access from the water. (Appendix A Document A).

The second component, SNCH is proposing to expand certain perioperative and critical care functions on the Oceanside campus which were formerly provided at the LBMC campus prior to Hurricane Sandy in order to better serve the volume of patients and to address increased patient volume projections identified in the emergency department studies commissioned by SNCH. SNCH is proposing to construct the Southwest Addition at the Oceanside campus. The Addition will be a four story facility and will house an expansion of the current emergency department, primary care, critical care unit and surgical services. The addition will be constructed adjacent to the main hospital in an area previously used for parking.

The third component, SNCH is proposing to further enhance the resiliency of the hospital by upgrading the electrical infrastructure of the hospital to withstand hurricane force winds and localized flooding. This includes installing additional and more robust power generation systems to support the new Southwest Addition and better support the existing programs and functions. This will provide SNCH better ability to function in the event of the loss of commercial power. The new generator enclosure and expanded electrical distribution system will be constructed in areas adjacent to the hospital complex. Currently those areas are used for parking and facility access.

The fourth component, SNCH will expand and mitigate the Central Utility Plant (CUP). The expansion of the CUP will be to address the demand for the proposed Southwest Addition. SNCH also plans to dry flood proof the CUP to protect existing and proposed equipment against localized flooding. As with the Southwest Addition and the Electrical Infrastructure projects, the expansion of the CUP will be constructed adjacent to the current hospital complex in areas previously utilized for parking.

The fifth and final component, SNCH is proposing to renovate interior spaces in the existing hospital that are adjacent to the proposed Southwest Addition. The F-Wing project involves the renovation of the third and fourth floors (top two floors) of the hospital's existing F-Wing Addition. The third floor will be renovated to upgrade existing mechanical systems for compliance with new standards and conversion of the floor to a 20-bed code compliant Medical Surgical unit. The fourth floor will be renovated to upgrade the existing mechanical systems in connection with the third floor renovation. The fourth floor will be converted to a 16-bed Critical Care unit. The Southwest Addition project includes a connecting bridge to the fourth floor for linking of this unit to the newly constructed Critical Care unit located on the fourth floor of the new Southwest Addition. As of the writing of this Environmental Assessment, project development, design, and permitting at both locations are in progress or are in preliminary stages.

4.3 Alternative 3: Restore Remaining Long Beach Facilities

Under Alternative 3, SNCH would restore the hurricane damaged Main and West buildings of the LBMC that were not demolished with the inclusion of minor mitigation measures. The proposed

mitigation measures would include flood barriers on exterior doors, flood proofing windows and any below grade openings, and moving the mechanical, electrical, and plumbing utilities above the 500-year flood level, which would be a cost-effective action to prevent or reduce the threat of future damage to the facility.

4.4 Alternatives Considered and Dismissed

One additional alternative preliminarily considered by the Subrecipient was to completely restore the medical facilities including rehabilitating the entire facility to pre-existing conditions prior to being damaged by Hurricane Sandy. However, restoration of medical services to levels prior to Hurricane Sandy has been dismissed due to recommendations made in “*Meeting the Health Care needs of Long Beach: Findings and Recommendations*” by Bruce C. Vladeck, Ph.D. The report stated that reconstruction was not viable due to quality of care considerations, financial viability, and the anticipated inability to receive certification by the New York State Health Department for this level of service. Also dismissed from consideration is the possibility of relocating outside of the floodplain as this would not meet the purpose and need of this project or the community.

4.5 Summary of Alternatives

Five alternatives were considered by the Subrecipient for implementation at the former Long Beach hospital site and the SNCH. The alternatives to completely restore medical services to pre Sandy levels and to move facilities outside of the floodplain were dismissed. The remaining alternatives are:

- 1) No Action Alternative
- 2) Proposed Alternative: Long Beach Medical Arts Pavilion and South Nassau Southwest Addition
- 3) Alternative 3: Restore Remaining Long Beach Facilities

The following impact analyses evaluate the potential environmental impacts of the three alternatives. A table summarizing the potential impacts of the three alternatives is provided in Section 10.0, Summary of Impacts.

5.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

This section discusses the potential impacts of the No Action Alternative, the Proposed Alternative, and the Restore Remaining Long Beach Facilities Alternative on environmental resources. The potential cumulative environmental impacts are also discussed (see Section 5.14). When possible quantitative information is provided to establish potential impacts and the potential impacts are evaluated based on the criteria listed in Table 5.0.

Table 5.0.1: Impact Significance and Context Evaluation Criteria for Potential Impacts

Impact Scale	Criteria
No Effect	The resource area would not be affected and there would be no impact.
Negligible	Changes would either be non-detectable or, if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.
Minor	Changes to the resource would be measurable, but the changes would be small and localized. Impacts would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.
Moderate	Changes to the resource would be measurable and have either localized or regional scale impacts. Impacts would be within or below regulatory standards, but historical conditions would be altered on a short-term basis. Mitigation measures would be necessary, and the measures would reduce any potential adverse effects.
Major	Changes to the resource would be readily measurable and would have substantial consequences on regional levels. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

Four environmental resource topics were omitted because they do not apply to the project as covered by this EA.

Table 5.0.2: Eliminated Resource Topics

Topic	Reason
Geology, Topography, and Soils	Due to the previously disturbed nature of the sites there would be negligible short-term impacts on soil resources and no further discussion is required
Land Use and Planning	No change in function of the facility and the capacity for this topic would be addressed through building permits and if needed, a zoning variance.
The Magnuson-Stevens Fisheries Conservation and Management Act	No work will be conducted within Essential Fish Habitat and with the implementation of BMPs this resource would not be affected by storm water runoff. Any future dock would be addressed through existing permitting and approval processes. Therefore, no further discussion is included here.
Bald and Golden Eagle Protection Act	There is no known habitat or siting of Bald Eagles in Oceanside. There have been sightings of Bald Eagles in Long Beach. However, all sightings have been over 660 feet away from project site, the required amount of distance to not disturb Bald Eagles. Therefore this resource will not be discussed further.

5.1 Air Quality

The Clean Air Act (CAA) of 1970 (42 USC 7401–7661 [2009]) is a comprehensive federal law that regulates air emissions from area, stationary, and mobile sources. The act authorized the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The NAAQS include standards for six criteria air pollutants: lead, nitrogen dioxide, ozone, carbon monoxide, sulfur dioxide, and particulate matter (including both particulate matter less than 10 micrometers in diameter [PM10], and fine particulate matter less than 2.5 micrometers in diameter [PM2.5]). Areas where the monitored concentration of a criteria pollutant exceeds the applicable NAAQS are designated as being in non-attainment of the standards; while areas where the monitored concentration of a criteria pollutant is below the standard are classified as in attainment. Non-attainment areas can be re-designated as a maintenance area if monitoring data demonstrate that a non-attainment area meets the NAAQS and a 10-year plan for continuing to meet and maintain such standards is implemented.

Federally funded actions in nonattainment and maintenance areas are subject to EPA conformity regulations (40 CFR Parts 51 and 93), which ensure that emissions of air pollutants from planned federally funded activities would not affect the state’s ability to meet the NAAQS. Section 176(c) of the CAA requires that federally funded projects conform to the purpose of the State Implementation Plan (SIP), meaning that federally funded activities would not cause any violations of the NAAQS, increase the frequency or severity of NAAQS violations, or delay timely attainment of the NAAQS or any interim milestone.

The conformity requirements of the CAA and its regulations limit the ability of federal agencies to assist, fund, permit, and approve projects that do not conform to the applicable SIP. When subject to this regulation, the federal agency is responsible for demonstrating conformity for its proposed action. Conformity determinations for federal actions other than those related to transportation plans, programs, and projects that are developed, funded, or approved under title 23 USC or the Federal Transit Act (49 USC 1601 et seq.) must be made according to the federal general conformity regulations (40 CFR 93 Subpart B). Certain actions and activities are exempted from general conformity review, including the following:

- Stationary source emissions regulated under major or minor New Source Review (air permitting) programs
- Alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation
- Actions where the emissions are not reasonably foreseeable
- Actions that have been defined by the federal agency or by the state as “presumed to conform”
- Activities with total direct or indirect emissions (not including stationary source emissions regulated under New Source Review programs) below *de minimis* levels. Emissions from construction activities are subject to air conformity review, unless they are shown to be below the applicable *de minimis* levels

The emissions from construction activities are subject to air conformity review, unless they are shown to be below the applicable *de minimis* levels.

5.1.1 Existing Conditions

The existing background ambient air quality for the LBMC and SNCH project sites is based on the air quality monitoring data collected on a continuous basis by the New York State Department of Environmental Compliance (NYSDEC) in Region 1 at the Babylon monitoring station (NYSDEC 2014). The concentrations of the air contaminants measured at this location were all below the applicable NAAQS except for ozone. The project site is classified as in attainment for sulfur dioxide (SO₂), particulate matter less than 2.5 micrometers in diameter (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂) and lead (Pb). Maintenance plan requirements apply to CO and PM_{2.5}. The project sites are currently classified as moderate non-attainment for ozone.

5.1.2 Potential Impacts and proposed Mitigation

Alternative 1: No Action

The No Action alternative will not result in any additional emissions from construction activity. Both medical sites, SNCH and the temporary site at Long Beach, would continue to use their

current backup generators in the event of power loss within the limits of existing permits. There would be no change in impact on air quality from current conditions.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

Construction activities for the Proposed Alternative may require the use of backhoes, loaders, cranes, trucks and other large equipment. Temporary electric power may also be supplied by portable diesel generators. Construction vehicles and equipment emissions could temporarily increase the levels of some of the criteria pollutants, including CO, NO₂, O₃, PM₁₀, and non-criteria pollutants such as Volatile Organic Compounds (EPA 2003). To reduce the emission of criteria and non-criteria pollutants, Best Management Practices (BMPs) would be applied which may include, covering spoil piles, covering the haul vehicle loads that contain fill or cut materials, and spraying the site with water. Running times for fuel-burning equipment would be kept to a minimum, and engines would be properly maintained. Ultra-low sulfur diesel fuel would be used, as required by the Clean Air Non-road Diesel Rule (EPA 2012). In addition, adequate maintenance of equipment shall be ensured, including proper engine maintenance, adequate tire inflation, and proper maintenance of pollution control devices. With implementation of BMPs, construction impacts would be temporary and negligible.

During emergency operations due to loss of power the generators, installed as part of the Electrical Infrastructure Upgrade, would generate power to allow continuous operation of the SNCH. However, the temporary use of these generators, if needed, would likely cause a negligible impact on air quality.

Based on the expected emissions for construction and operation, the emissions for the proposed alternative would be below the *de minimis* levels. In the unlikely event that emission levels are above *de minimis* levels, the project may require conformity determination and contact with NYSDEC would be required. FEMA anticipates that any change in existing air quality permitting will be addressed during the Subrecipient's SEQR process and as design and engineering are more detailed.

Alternative 3: Restore Remaining Long Beach Facilities

The potential impacts and proposed mitigation for this alternative would likely be similar to those discussed in Alternative 2. Construction activity levels are likely to be lower since work will only be done at the LBMC site. Operational emissions at the sites would likely be similar to Alternative 1 due to similar level of backup power generation needed. Temporary emissions from construction and backup power generation would likely be below the *de minimis* levels and would have temporary negligible impacts on air quality.

5.2 Water Quality

Congress enacted the Federal Water Pollution Control Act in 1948 which was later reorganized and expanded in 1972 and became known as the Clean Water Act (CWA) in 1977. The CWA regulates discharge of pollutants into water with sections falling under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the EPA. Section 404 of the CWA establishes the USACE permit requirements for discharging dredged or fill materials into Waters of the United States and traditional navigable waterways. USACE regulation of activities within navigable waters is also authorized under the 1899 Rivers and Harbors Act. Under the National Pollution Discharge Elimination System (NPDES), the EPA regulates both point and non-point pollutant sources, including stormwater and stormwater runoff. Activities that disturb one acre of ground or more are required to apply for an NPDES permit, called a State Pollution Discharge Elimination System (SPDES) through the NYSDEC as authorized by the EPA. An SPDES includes an Erosion and Sediment Control Plan and a Stormwater Pollution Prevention Plan

Section 1424(e) of the Safe Drinking Water Act of 1974 [Public Law 93–523] authorizes EPA to designate an aquifer for special protection under the sole source aquifer program if the aquifer is the sole or principal drinking water resource for an area (i.e., it supplies 50 percent or more of the drinking water in a particular area) and if its contamination would create a significant hazard to public health. No commitment for federal financial assistance may be provided for any project that EPA determines may contaminate a sole source aquifer such that a significant hazard to public health is created.

5.2.1 Existing Conditions

The LBMC site sits on the edge of Reynolds Channel on the north side of Long Beach Island. There is a narrow band of pavement between the structure and the water, supported by a bulkhead. The SNCH site is located inland close to State Route 27 and is more than one half mile from the nearest tributary to Hempstead Bay. Both sites are within the same watershed (HUC 020302020205), and both sites are within fully urbanized locations. Reynolds Channel is listed as impaired for pathogens as is most of Hempstead Bay and the tidal tributaries that drain the watershed. Portions of Hempstead Bay are also listed as impaired by nitrogen. The sources of water pollution are primarily urban stormwater runoff and municipal sewage discharges.

Both sites are located over the sole source aquifers that underlie Nassau County, the Upper Glacial, Magothy, and the Lloyd Aquifers. These aquifers are designated sole source aquifers under the Safe Drinking Water Act.

5.2.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the No Action Alternative, there may be a minor increase in impacts compared to the existing condition as BMPs used to manage stormwater runoff from demolition are typically not intended to be long-term measures. Over time, the effectiveness of those temporary measures would degrade if left in place. There would be no change from the existing conditions at the SNCH site. Under the No Action Alternative, there would be minor impacts on water quality at the LBMC site and no impact at the SNCH site. Both sites would remain predominantly impervious, and there would be no change in the condition of the sole source aquifers underlying the sites.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

Under the Proposed Alternative, construction at the LBMC site would involve ground disturbance during construction at the new Medical Arts Pavilion and for related site work. The existing buildings are located 25 to 30 feet from the water and conceptual drawings provided by the Subrecipient (Appendix A, Document A) indicate that some impervious surfaces between the building and the water will be removed, there is the potential for ground disturbing activities to occur very close to surface waters. BMPs including construction site stabilization, dust control, sediment traps, and temporary swales would be employed to minimize potential impacts from stormwater runoff. As design and site plans are further developed and through the permitting process, FEMA anticipates measures such as potential construction sheeting or other BMPs appropriate to the site would be required to minimize incidental impacts to the waterway. Coverage under the NYSDEC SPDES general permit would be required if work activity disturbs an acre or more of soil (NYSDEC 2016a).

Following construction, landscaping would be installed around the new Medical Arts Pavilion. Landscaped areas which can help to mitigate the impacts of stormwater runoff from impervious surfaces. The new building will have a smaller footprint than the existing buildings, potentially allowing for more landscape vegetation and less impervious surface than currently exists. More on-site vegetation may improve the quality of the stormwater runoff leaving the site.

Construction at the SNCH site would also involve ground disturbing activities. However, because the site is not near any surface water bodies and is very flat, there would be little potential for water quality impacts. Further, BMPs appropriate to the site, permit conditions, and activities would further minimize potential impacts. Construction and operation at both sites would have no effect on the underlying sole source aquifers. Both sites are currently predominantly impervious and they would still be predominantly impervious following construction. The increase in vegetated areas at the LBMC site may slightly improve aquifer recharge potential, but the effects would likely not be measureable. There would be no change in potential sources of contamination at either site.

The Proposed Alternative would have a negligible short-term adverse effect on water quality with the implementation of BMPs to control stormwater runoff and windblown debris. There would be a negligible long-term beneficial effect on water quality in the Reynolds Channel from possible landscape vegetation. There would be no impact on water quality in the vicinity of the SNCH site.

Alternative 3: Restore Remaining Long Beach Facilities

Construction at the LBMC site under Alternative 3 would likely involve less ground disturbance than under Alternative 2. Therefore, the potential for stormwater runoff to impact water quality would be less. However, BMPs would still be employed to manage stormwater runoff as required by a construction general SPDES. Under this alternative, it is unlikely that there would be additional landscaping planted in areas that are currently impervious surfaces; therefore, there would be no improvement in water quality over the long term.

Under Alternative 3, there would be no construction at the SNCH site; therefore, there would be no impact on water quality at SNCH.

Alternative 3 would not change the existing conditions with respect to the sole source aquifers. Both sites would still be predominantly impervious surfaces, and there would be no change in recharge potential or sources of contamination.

5.3 Floodplains and Wetlands

Executive Order (EO) 11988, Floodplain Management, requires that a Federal agency avoid direct or indirect support of development within a floodplain whenever there is a practicable alternative. FEMA uses Flood Insurance Rate Maps (FIRM) to identify the floodplain boundaries. Federal actions within the 500-year floodplain, for critical action facilities such as hospitals, require the federal agency to evaluate alternatives to siting the use in the floodplain. Similarly, EO 11990, Wetlands Management, requires federal agencies to avoid funding activities that directly or indirectly support occupancy, modification, or development of wetlands, whenever there are practicable alternatives. FEMA uses the eight-step decision-making process to evaluate potential effects on, and mitigate impacts to, floodplains and wetlands (see Appendix A, Document B). FEMA's regulations on conducting the eight-step process are contained in 44 CFR Part 9.

5.3.1 Existing Conditions

The LBMC site is located within the floodplain AE zone as shown on FEMA FIRM panel 36059C0307G revised September 11th 2009 (see Appendix B Figure C). The base flood elevation in this area is 8 feet for the 100-year flood and approximately 11 feet for the 500-year event. This location is within both the 100-year and the 500-year floodplain. The LBMC site is subject to coastal and fluvial flooding and storm surges that may come either from Reynolds Channel to the north or from floodwaters that have washed completely across Long Beach Island from the south. Such flooding conditions are likely to increase in frequency and depth as a result of climate change,

which leads to rising sea levels and increasing frequency or severity of storm events. SNCH is in a zone X as shown on FEMA FIRM panel 36059C0219G revised September 11th 2009 (see Appendix B Figure D).

FEMA uses the National Wetlands Inventory, state-specific mapping tools and on-site surveys to identify wetlands. The U.S. Fish & Wildlife Service's (USFWS) National Wetland Inventory map for the project area is located in Appendix B Figure E. Reynolds Channel, adjacent to the LBMC site, is mapped by USFWS as subtidal marine waters. The SNCH site is more than one half mile from the nearest wetland (See Appendix B Figure F).

5.3.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the No Action Alternative, there would be no construction related impacts on floodplains and wetlands. However, the partially demolished LBMC buildings would remain in place and continue to impede flood flows and reduce flood capacity in the immediate vicinity and would cause a minor impact on floodplain. The LBMC would likely cause negligible impact on the wetlands in Reynolds Channel from uncontrolled runoff. There would be no impact on floodplains and wetlands from the SNCH site.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

Under the Proposed Alternative, construction activities at the LBMC site could have minor effects on floodplain function due to water quality effects as described in section 5.2. Because the new Medical Arts Pavilion would be considered a critical action, it would be constructed above the 500-year floodplain elevation (including rising sea level predictions). The structure would be elevated on remnant structural elements of the existing buildings to allow floodwaters to flow under with complete pass-through with the exception of two lobbies, a receiving area, a storage room, and associated stairs and elevators. Because the mass of the building below the 500-year flood elevation would be reduced, there would be a beneficial impact on floodplain capacity. The exterior façade and glass panels would be designed to withstand hurricane-force winds that would minimize additional debris from entering the floodplain resulting from damage to the building. The Proposed Alternative would have a minor beneficial impact on floodplains. There would be no impact on floodplains at the SNCH site and no impact on wetlands at either site.

Alternative 3: Restore Remaining Long Beach Facilities

Under Alternative 3, construction activities at the LBMC would have a negligible impact on floodplains as the footprint of the existing buildings would be maintained and construction activities would be largely contained within the existing structures. Following construction, there would be little change from the existing condition as the mass of the building below the 500-year

flood elevation would remain the same and there would be no flow-through passages provided. Functions such as mechanical, electrical, and plumbing utilities would be elevated within the structure to level above the 500-year flood elevation and lower levels would be flood proofed. Although the structure would be better able to resist damage from flooding and critical action functions would be protected, there would still be ongoing impacts on flood flows and floodplain capacity. Operation of Alternative 3 would continue to have a minor adverse impact on floodplain functions and no impact on wetlands.

5.4 Coastal Resources

The Coastal Zone Management Act (CZMA), administered by states with shorelines in coastal zones, requires those states to have a Coastal Zone Management Plan to manage coastal development. Projects falling within designated coastal zones must be evaluated to ensure they are consistent with the adopted Coastal Zone Management Plan. Projects receiving federal assistance must follow the procedures outlined in 15 CFR 930.90 – 930.101 for federal coastal zone consistency determinations. In order to guide development and resource management within the State’s coastal areas, substantive policies have been identified and promulgated by the New York State Department of State (NYSDOS) and NYSDEC.

5.4.1 Existing Conditions

The LBMC site is within the coastal zone and the SNCH site is outside of the coastal zone boundary. The project areas are not within a waterfront revitalization area nor are they within a Coastal Barrier Resources Area or an Otherwise Protected Area. The LBMC site is almost 2 miles and the SNCH site is over 1.5 miles from the nearest Coastal Barrier Resources Areas.

5.4.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the No Action Alternative, there would be no change in the existing conditions. There may be a minor negative impact on coastal resources as a result of the remaining Main and West Buildings in their current, unmitigated state.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

The Proposed Alternative would not change the existing land uses in the coastal zone. FEMA determined that the Proposed Alternative is consistent with NYSDOS coastal policies and consultation with NYSDOS was initiated on April 28, 2016 (Appendix C Correspondence A) to seek concurrence. The Proposed Alternative would have a short-term, adverse impact on coastal resources during construction, but the impact would be negligible because previously described BMPs (section 5.2) would be implemented. It would have potential minor, long-term, beneficial

impacts on coastal resources because of additional open space that would be created along the waterfront.

Alternative 3: Restore Remaining Long Beach Facilities

Alternative 3 would result in slightly less construction-related impacts than the Proposed Alternative because there would be less reconfiguration of the LBMC site. With the implementation of previously described BMPs, these potential impacts would be negligible.

5.5 Biological Resources

Biological resources include vegetation, fish and wildlife, migratory birds, threatened and endangered species, and designated critical habitats. Because both project areas are already intensively developed and there is little potential for effects on these resources, they have been combined into one section in this EA. Biological resources are protected under several regulations.

The Endangered Species Act (ESA) of 1973 provides guidance for the protection of federally listed species and the ecosystems on which they depend. Section 7 of the ESA (16 U.S.C. 1536) requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service, as appropriate, to ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of designated critical habitat.

EO 13112, Invasive Species, requires federal agencies, to the extent practicable, to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause. Invasive species tend to prefer disturbed habitats and generally possess high dispersal abilities, enabling them to out-compete native species.

5.5.1 Existing Conditions

The LBMC site is entirely covered by impervious surfaces and buildings. Based on aerial photographs, there does not appear to be any vegetation on the site. Reynolds Channel is immediately adjacent to the project area, which is a deepwater marine channel and is not known to support seagrasses. The edge of the project area is supported by a vertical bulkhead, which does not provide any shallow water or beach habitat on the water side. The nearest natural habitats, including tidal marsh wetlands and beach habitats, are more than one half mile away.

The SNCH site is also entirely covered by impervious surfaces and buildings. However, this project area does have some landscape vegetation in planting strips within the parking areas surrounding the hospital and numerous street trees around the perimeter of the property. The nearest natural vegetation is at Lofts Pond Park, approximately one half mile to the northeast.

The USFWS IPaC reports (Appendix A, Documents D & E) indicates that six threatened or endangered species may occur near both of the project areas. Because the report results are generalized to the County level, the habitat requirements for each species and the existing habitat conditions within the project areas must also be considered. Based on each species habitat requirements, there is no suitable habitat within the project areas. The species and their habitat requirements include:

- Red knot, threatened: mudflats with abundant food such as horseshoe crab eggs.
- Piping plover, threatened: wide, flat, open, sandy beaches with limited vegetation and limited human disturbance.
- Roseate tern, endangered: open water for fishing and barrier island nesting colony areas free of predators and human disturbance.
- Northern long-eared bat, threatened: abundant stands of trees with sufficient bark crevices and snags for roosting.
- Sandplain gerardia, endangered: dry, sandy, short grass plains, roadsides, and openings in oak scrub. This species is dependent on periodic disturbance that maintains an open habitat and while it does occur in very disturbed areas, there is no exposed soil at either site.
- Seabeach amaranth, threatened: sandy beaches and fore dunes of barrier islands.

There is no designated critical habitat for any of these species near either project area.

Currently, there are no known infestations of the invasive insect, emerald ash borer (*Agrilus planipennis*) on Long Island. Both project sites are also outside Asian Longhorned Beetle (*Anoplophora glabripennis*) quarantine zones. Due to the lack of vegetation at both project sites the presence of other invasive species is unlikely.

5.5.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the No Action Alternative, there would be no construction and no change in the existing condition. Therefore, there would be no impact on biological resources. Because both sites are largely composed of impervious surfaces, it is unlikely that there would be any change in the presence of the identified invasive species.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

Following construction, new landscaping would be installed around the new medical arts building at the LBMC site consistent with local regulations. Conceptual drawings provided by the Subrecipient indicate that the area between the building and the water might include some landscape trees. Following construction, landscape vegetation would be replaced with native plants

where feasible and in accordance with local regulations. There would be an increase in landscaped area at LBMC, which would provide a negligible beneficial effect on biological resources. There would be no impact to threatened or endangered species since there is no critical habitat in project sites and construction would not limit migratory bird migration patterns due to height of construction (2106 USFW). If any threatened or endangered species are identified on project site, construction would stop and consultation with USFW would occur.

Because both sites would still be predominantly impervious following construction, there would be no impact related to the spread or establishment of invasive species. Though it is unlikely to encounter invasive species, BMPs required by USDA and NYS Department of Agriculture and Markets would be used if invasive species are identified.

The Proposed Alternative would have no impact on threatened or endangered species, designated critical habitat, or other biological resources following construction.

Alternative 3: Restore Remaining Long Beach Facilities

Construction at the LBMC site under Alternative 3 would likely involve less ground disturbance than under Alternative 2. Following construction, there would be no change from the existing condition for biological resources.

Under Alternative 3, there would be no construction at the SNCH site; therefore, there would be no impacts on biological resources at SNCH and there would be no change from the existing condition.

5.6 Cultural Resources

As a federal agency, FEMA must consider the potential impacts of its undertakings (i.e., funding actions) on cultural resources prior to engaging in any undertaking. Cultural resources are defined as prehistoric or historic archaeology sites, historic standing structures, historic districts, objects, artifacts, cultural properties of historic or traditional significance, referred to as Traditional Cultural Properties that may have religious or cultural significance to Federally-Recognized Indian Tribes (Tribes), or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. The geographic area(s) within which the undertaking may directly or indirectly affect cultural resources is defined as the Area of Potential Effects (APE).

Based on the proposed scope of work, FEMA has determined that the APE built environment resources for this undertaking is limited to the footprints of 455 East Bay Drive in Long Beach and One Healthy Way in Oceanside. The APE for archaeological resources is limited to the area of proposed ground disturbance within the limits of the subject property for the new LBMC Long Beach Medical Arts Pavilion and the “Southwest Addition,” the SNCH Oceanside Emergency Department and Critical Care Unit. The Long Beach Medical Arts Pavilion will be located in the

northwest end of the LBMC hospital parcel and the “Southwest Addition” will be located in the southwest end of the SNCH hospital parcel. FEMA consulted with the New York State Historic Preservation Office (NYSHPO) on May 2, 2016 to assess the potential effects of the Undertaking within the APE. FEMA determined that the Undertaking’s determination of effect is No Historic Properties Affected that are either in, or eligible for inclusion in, the State or National Register of Historic Places and received concurrence on May 16, 2016 (Appendix C Correspondence B).

5.6.1 Archaeology and Historic Resources Existing Conditions

Both APEs were mostly vacant until the early-20th century. Review of the E. Belcher-Hyde Map in 1914 of both Long Beach Island and Oceanside shows each APE as being almost entirely absent of development. Prior to the construction of the present-day LBMC and SNCH properties, the potential to encounter historic archaeological features including privies, cisterns, wells, and domestic refuse pits associated with early-to-mid-20th century development within the area was low. The construction of the hospital buildings and extensive underground utility and infrastructure of the hospital complex would have obliterated any remaining deposits, if any were present. Previous development within and adjacent to the sites are currently covered by residences, commercial space, parking lots, and additional fill deposits. Therefore, the potential preservation of historic archaeological features greatly reduces with the LBMC and SNCH development by the 21st century. Soils for both APEs consist of urban land profiles and are indicative of the great amount of disturbance the properties have been subjected to. In the case of both properties, construction resulted in subterranean impacts across the parcels leaving virtually no portions of the property undeveloped.

Archaeology

LBMC: Research conducted using the NYSHPO Cultural Resource Information System (CRIS) database revealed the project site is located within an area of archaeological sensitivity however no known archaeological sites have been recorded within 5,280 feet (1.0 mile) of the LBMC APE. In addition, no archaeological studies have been conducted within 10,560 feet (2.0 miles) of the APE.

Review of the historic and modern aerials and maps reveals the majority of the LBMC APE consists of mid-to-late-20th century development including 20th century suburban development and the hospital complex itself. The vast development has significantly modified the area resulting in extensive subterranean disturbances throughout the APE. This has greatly impacted native soils whereby reducing the potential for encountering in-situ archaeological resources to exist. As a result, archaeological sensitivity within the LBMC portion of the APE is determined to be low.

SNCH: Research conducted using the CRIS database reveals that the project site is not located within an area of archaeological sensitivity and there are no known archaeological sites located within one-mile of the SNCH APE and only one archaeological study has been conducted in the

vicinity of the project site. Results of the study recommended the APE had a low potential to encounter in-situ archaeological resources due to site disturbance and environmental setting. The potential to encounter other such sites located within the APE was considered to be low given the lack of prehistoric and historic sites recorded in the vicinity of the project area. The expansion area of the SNCH is located within an area of previously disturbed soils associated with the underground utilities of the complex. Previous modifications to the landscape have significantly disturbed the native soils whereby greatly reducing the likelihood of existing intact prehistoric or historic archaeological resources. Because of this, the project area is considered to have low sensitivity for archaeological resources.

The historical development within the area has also greatly reduced the potential for prehistoric archaeological resources to exist. Therefore, it is unlikely any archaeological resources with the potential to reveal information about history or prehistory will be affected. The absence of sites at or below the project APE elevations is likely due to inhospitable or submerged conditions in such areas prior to the early-20th century and the area's history of filling and development.

Historic Properties

LBMC: Research conducted using the NYSHPO CRIS reveals that the LBMC and associated buildings do not meet the minimum age requirement for listing on the National Register of Historic Places (NRHP). The hospital is not individually listed in the NRHP nor do any of the buildings in the LBMC appear in the CRIS database as an NRHP-eligible resource. The LBMC is not situated within a designated NRHP-listed or NRHP-eligible historic district, nor is it located within a state or locally recognized historic district. Therefore, the project has no potential to affect National Register-eligible and/or listed architectural resources.

SNCH: Research conducted using the CRIS database reveals that the SNCH and associated buildings do not meet the minimum age requirement for listing on the NRHP. The hospital is not individually listed in the NRHP nor do any of the buildings in the SNCH appear in the CRIS database as an NRHP-eligible resource. The SNCH is not situated within a designated NRHP-listed or NRHP-eligible historic district, nor is it located within a state or locally recognized historic district. Therefore, the project has no potential to affect National Register-eligible and/or listed architectural resources. Since there will be no affect to historic properties, this resource will no longer be discussed.

5.6.2 Potential Impacts and Proposed Mitigation to Archaeology and Historic Properties

Alternative 1: No Action

The No Action alternative would have no impact on archeological resources from construction due to no ground disturbing activity occurring. There would be potential for soil disturbance from wind

and water disturbance at demolished sites at LBMC, however, due to the low archaeological sensitivity of the area there would be no impact on archeological resources.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

Under Alternative 2, the ground-disturbing impacts for this alternative would be limited to the LBMC and SNCH footprints and will take place in previously disturbed and/or sterile soils. Although the LBMC project area is located in an archaeological sensitive area, the probability of encountering intact soils and in-situ archaeological resources was assessed as low. As noted above, the SNCH project area is not located in an archaeologically sensitive area and therefore had no potential to affect intact and in-situ archaeological resources. There is limited potential to encounter in-situ prehistoric or historic archaeological resources at both facilities due to the amount of soil disturbance within the APE and neither the LBMC nor SNCH project sites are likely to contain intact historic or prehistoric archaeological deposits and therefore are not considered archaeologically sensitive and would have no impact.

Alternative 3: Restore Remaining Long Beach Facilities

Under Alternative 3, SNCH would restore the hurricane damaged main and west buildings of the LBMC that were not demolished with the inclusion of minor mitigation measures. As noted above in Alternative 2, any ground-disturbing impacts for the LBMC and SNCH facilities will be taking place in previously disturbed and/or sterile soils with limited potential to encounter intact and in-situ prehistoric and historic archaeological resources and would result in no impact.

5.7 Environmental Justice

5.7.1 Existing Conditions

EO 12898, Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-Income Populations, requires agencies to identify and address disproportionately high and adverse human health or environmental effects its activities may have on minority or low income populations.

In order to provide context for this report a demographic analysis was undertaken. The first step was to define a relevant Community of Concern (COC) in the context of the Proposed Alternative. The COC will be the Cities of Long Beach and Oceanside as the medical campuses services multiple communities. Pockets of EJ communities will be called out within the coverage area during analysis.

Per EPA Region 2's Guidelines for Conducting EJ Analyses, for New York, a community would be considered an EJ community if the minority population was 51.51% or higher or if 23.59% or more of the population was below the poverty line. Examination of Long Beach and Oceanside's

2014 Census data indicates the LBMC and SNCH facility's overall service populations do not meet the criteria for "Minority Populations" and does not cross the Poverty Threshold. Approximately 8.9% of the population of the City of Long Beach lives below the poverty line and approximately 3.8% of the population of the City of Oceanside live below the poverty line (U.S. Census Bureau, 2014).

The City of Long Beach has a population breakdown of 80.8% white, 5.4% black, 3.8% Asian, and 8.2% some other race. The percentage of households below poverty is less than 9 percent. The City of Oceanside has a population breakdown of 93.6% white, 2.3 % Asian, .6% black, and 2.2% some other race (U.S. Census Bureau, 2014). Long Beach residents earn a median income of \$83,396 and Oceanside's earn \$97,922, which is higher compared to New York State median (\$56,951) and the United States (\$52,762) (U.S. Census Bureau, 2014).

There is one community that is serviced by the LBMC that has a concentration of low income population. In close proximity to the free standing emergency department in the City of Long Beach are the Channel Park Homes which have 108 units of low-income family rental housing and is located at 500 Center Street. EPA's EJ Screen showed this area as the single area in both of the hospitals zones that is low income (EPA 2016). One of the requirements to qualify for housing is to an applicant's household income needs to be below the poverty line as defined by EPA (Long Beach 2016) therefore making it an EJ community.

5.7.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the No Action Alternative there would be no construction activity in the COC and therefore environmental justice communities would not be impacted by the work. The existing temporary LBMC facility will remain susceptible to flooding and storm damage that could potentially cause another extended loss of facility functions. This loss could prevent the EJ population in Long Beach from receiving proper care because they may not have the means to go elsewhere. The SNCH would not expand its facilities that could cause crowding issues during peak times and disasters. Though there is no EJ COC in the SNCH coverage there is still a percentage of the population that are minority or low income that could be prevented from receiving care due to potentially not having the means to go elsewhere. The No Action Alternative could have a minor negative impact on EJ communities in the COC during times of facility loss and hospital crowding.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

Potential effects on the COC could be a temporary increase of noise and traffic levels during construction (see sections 5.8 and 5.9 respectively) that could cause disruption to the EJ community within close proximity to the LBMC site, but work would not disproportionately affect

them. The new Medical Pavilion's mitigation measures at LBMC could prevent extended loss and would thus provide care to EJ populations during and after disasters. SNCH would have extended capacities to handle a higher number of patients giving EJ populations better access to health care. Therefore, there would be temporary negative negligible effect and a long term minor positive effect to EJ populations.

Alternative 3: Restore Remaining Long Beach Facilities

The potential construction impacts for this alternative would be similar to those discussed in Alternative 2 for LBMC but no impact at SNCH. The LBMC facilities would be mitigated against possible extended loss but would not be as effective as the Proposed Alternative's mitigation measures. SNCH's capacity would be the same as the No Action Alternative. Therefore, there would be potential minor negative impact at SNCH during peak times and minor positive impact at LBMC to EJ populations.

5.8 Noise

The Noise Control Act of 1972 required the EPA to create a set of noise criteria. In response, the EPA published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* in 1974 which explains the impact of noise on humans. The EPA report found that keeping the maximum 24-hour Ldn value below 70 dBA would protect the majority of people from hearing loss. The EPA recommends an outdoor Ldn of 55 dBA. According to published lists of noise sources, sound levels, and their effects, sound causes pain starting at approximately 120 to 125 dBA (depending on the individual) and can cause immediate irreparable damage at 140 dBA. Occupational Safety and Health Administration (OSHA) has adopted a standard of 140 dBA for maximum impulse noise exposure.

Sound pressure level (SPL) is used to measure the magnitude of sound and is expressed in decibels (dB or dBA), with the threshold of human hearing defined as 0 dBA. The SPL increases logarithmically, so that when the intensity of a sound is increased by a factor of 10, its SPL rises by 10 dB, while a 100-fold increase in the intensity of a sound increases the SPL by 20 dB. Equivalent noise level (Leq) is the average of sound energy over time, so that one sound occurring for 2 minutes would have the same Leq of a sound twice as loud occurring for 1 minute. The day night noise level (Ldn) is based on the Leq, and is used to measure the average sound impacts for the purpose of guidance for compatible land use. It weights the impact of sound as it is perceived at night against the impact of the same sound heard during the day. This is done by adding 10 dBA to all noise levels measured between 10:00 pm and 7:00 am. For instance, the sound of a car on a rural highway may have an SPL of 50 dBA when *measured* from the front porch of a house. If the measurement were taken at night, a value of 60 dBA would be recorded and incorporated into the 24-hour Ldn.

Leq and Ldn are useful measures when used to determine levels of constant or regular sounds (such as road traffic or noise from a ventilation system). However, neither represents the sound level as it is perceived during discrete events, such as fire sirens and other impulse noises. They are averages that express the equivalent SPL over a given period of time. Because the decibel scale is logarithmic, louder sounds (higher SPL) are weighted more heavily; however, loud infrequent noises (such as fire sirens) with short durations would not significantly increase Leq or Ldn over the course of a day.

5.8.1 Existing Conditions

The existing LBMC facility and the temporary facility are located in a residential area where most noise is generated from vehicle traffic along Long Beach Boulevard. There is currently an added level of noise from emergency vehicle and activates at the free standing facility. The existing SNCH facility is also located in a residential area where most noise generated is from vehicle traffic along Oceanside Road and from emergency vehicles and activity. Other sources of noise near the proposed project sites include helicopters and airplanes, industrial equipment and machinery, water channels, humans, and animals. Existing noise levels would vary by proposed project site and depend on the sound level and the observer's distance from the source.

5.8.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

The No Action Alternative does not include any construction or site preparation. Therefore, there would be no noise impacts under normal conditions. During a flood event, however, residents in the vicinity of the facility would likely be able to hear the emergency and/or temporary generators, pumps, and equipment necessary to run the medical center's while repairs are performed. The temporary medical facility at Long Beach would continue to have elevated noise levels from emergency activity. SNCH emergency activity would remain the same. Therefore, there would be no change on impact to noise during normal operations and a minor impact during and after disasters.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

This alternative would result in relatively small temporary increases in noise due to construction activities at both locations. BMPs would minimize noise levels by ensuring that construction equipment uses the manufacturer's standard noise control devices and would follow local noise ordinance requirements. Noise impacts on nearby residences and other sensitive receptors would also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours defined by local ordinance. Once the hospital facilities are constructed, vehicular traffic on access roads is expected to be infrequent for maintenance and emergency

vehicle activities. The emergency activity created noise would move from the temporary medical facility to the new pavilion in Long Beach. SNCH would have a potential increase in noise levels from the increase in emergency services activity. Therefore, short-term construction impacts will be minor and long-term impacts are expected to be minor at both sites. If noise levels exceed typical levels on a permanent or prolonged basis, outreach to EPA and OSHA be required to assess noise.

Alternative 3: Restore Remaining Long Beach Facilities

Under the No Action Alternative the LBMC would similar to Alternative 2 as the construction period would be similar. There would be no change at the SNCH site due to no construction work there. The potential impacts and proposed BMPs for this alternative would be similar to those discussed in Alternative 2 with the exception of the potentially increase in noise levels at SNCH. The temporary impact from construction would be minor and the long-term impacts would be negligible at LBMC. There would be no change on impact to noise levels at SNCH.

5.9 Transportation

5.9.1 Existing Conditions

The LBMC site is surrounded by East Bay Road to the south, Lincoln Boulevard to the west, and Franklin Boulevard to the east. The roads are city owned and maintained and primarily carry lesser volumes of residential traffic (traffic counts are not available). Further south of the LBMC facility is East Pine Street which has 3,262 annual average daily traffic trips (NYSDOT 2016). There are three bridges that are available for egress and ingress to Long Beach, the Atlantic Beach Bridge, Long Beach Bridge, and the Loop Parkway. Public transportation in the area consists of the Long Island Rail Road operated by the Metropolitan Transportation Authority and city buses operated by the Long Beach Department of Transportation.

The SNCH site is surrounded by Nassau Parkway to the south, Oceanside Road to the west, Oswald Court to the north, and Washington Avenue to the east. Oceanside Road is a County-owned road with 11,327 annual average daily traffic trips (NYSDOT 2016). Public transportation in the area consists of the Long Island Rail Road operated by the Metropolitan Transportation Authority and bus service is operated by the Nassau Inter-County Express.

5.9.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

The No Action Alternative would have no impact on traffic volume or public transportation routes as no construction activity would take place at the site and existing traffic conditions would remain the same.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

The Proposed Alternative would have a minor short-term impact on traffic during construction at both locations due to daily construction activity. Construction workers' personal vehicles and construction trucks and equipment could result in 10-20 vehicle trips to and from the site daily. In addition, mobilization and demobilization of construction equipment and the delivery of construction materials would generate off-site truck traffic. Under the Proposed Alternative there would be no impact on the roadway network, traffic patterns, or cause any road closures because no new roadways would need to be constructed. Potential trip generation would include short-term construction activities and intermittent maintenance. There may be increased emergency and patient vehicle volumes from both the new facility at LBMC and the expansion at SNCH on the three bridges, but is only expected for patients that require prolonged care. Therefore, there would be a negligible impact on vehicle traffic patterns during and post construction and no impact on rail.

Alternative 3: Restore Remaining Long Beach Facilities

Similar to the proposed alternative, this alternative would not impact the roadway network, alter traffic patterns, or cause any road closures because no new roadways would need to be constructed. Potential trip generation would include short-term construction activities and intermittent maintenance. The upgraded LBMC may cause a slight increase in emergency and patient vehicle volume. Therefore, there would be a negligible impact on vehicle traffic patterns at LBMC and no impact on SNCH and no impact on rail.

5.10 Public Services and Utilities

5.10.1 Existing Conditions

Long Beach, including the project site, receives its water from the City of Long Beach public works department. Water is pumped from eight wells from the Lloyd aquifer and is treated at the Park Place treatment plant (LB 2013). The city also provides sewer utilities that are currently treated by the water pollution control plant on W Pine Street. Natural gas is also provided by the city and electric is provided by Public Service Enterprise Group Long Island. At the project site, there are buried water and natural gas lines and electric is provided by above ground lines. All utilities to the LBMC are currently shut off.

Oceanside, including SNCH, receives its water from the Rockville Center Water Department which is drawn from ten wells from the Magothy aquifer (RVC 2016). The Rockville Center Water Department also provides sewer utilities that are currently treated at the Bay Park waste water treatment plant. Natural gas is provided by National Grid and electric is provided by Public Service Enterprise Group Long Island. SNCH also has backup generators and a boiler system on site.

5.10.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the No Action Alternative, the LBMC site would continue to have no utilities. No construction would occur at the site and would not have the possibility to disrupt utility services to the community. SNCH would not be upgraded and would continue to use utilities at its current rate. Therefore, there would be no impact on public services and utilities at both sites.

Alternative 2: Proposed Alternative Medical Arts Pavilion and South Nassau Southwest Addition

The Proposed Alternative would require ground disturbance during construction that could potentially disrupt utility services. The medical pavilion will be reconnected to all public utilities and are expected to use less resources than the previous hospital due to size and energy efficiency measures. The building's storm mitigation measures would reduce chances of utilities being disrupted at the site. Backup generators, boilers and other utility systems would be placed on the third floor of the building above the 500-year flood level (including rising sea level predictions).

As with LBMC, construction at SNCH would require ground disturbance that could potentially disrupt utility services. The Southwest Addition will require extra utility resources to operate. The proposed Electrical Infrastructure Upgrade and CUP expansion will provide the hospital with energy efficient generators, backup generators, and heating and air conditioning systems.

The Proposed Alternative would have negligible impact on public utilities post construction and will have negligible impact during construction by following all local regulations in regards to work around utilities.

Alternative 3: Restore Remaining Long Beach Facilities

Alternative 3 may require ground disturbance during upgrades to current buildings at the LBMC site that could potentially disrupt utility services. The medical center will be reconnected to utilities and risk of utility disruption would be reduced from mitigation measures, though not to the extents as the Proposed Alternative. Utilities would not change at SNCH, therefore there would be negligible impact on utilities at LBMC as long as all local regulations in regards to work around utilities are followed and no impact on utilities and SNCH.

5.11 Public Health and Safety

5.11.1 Existing Conditions

The City of Long Beach census numbers are around 33,000 year round residents. Long Beach is served by the Long Beach Police Department, Long Beach Auxiliary Police Department, City of

Long Beach Fire Department, and the SNCH free standing emergency department which provides emergency services to the community. The City of Oceanside census numbers are around 32,000 year round residents. The project site is served by the City of Oceanside Police Department, the 4th Precinct of the Nassau County Police Department, City of Oceanside Beach Fire Department, and the SNCH which provides emergency services to the community. Access to the SNCH site from Long Beach requires crossing one of three draw bridges which open frequently to permit the passage of marine traffic (especially in summer). Travel is often delayed by heavy summertime vehicular traffic, mechanical failures, and storm induced flooding which can block transit for an indefinite time.

5.11.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

The No Action Alternative could impact the ability of first responders and emergency medical services to respond to needs elsewhere in the community due to the limited capabilities of the temporary LBMC site. The LBMC facility would remain susceptible to loss of facility functions as a result of a flood event and would not be able to service the community. In addition, access to the SNCH from Long Beach could be severely impaired if passage on any or all of the draw bridges was not possible. Therefore, the No Action Alternative would have a continuing minor impact on public health and safety at Long Beach.

Alternative 2: Proposed Alternative Medical Arts Pavilion and South Nassau Southwest Addition

Both communities would benefit from more modern facilities that would be better equipped to provide critical services and more resilient to future flood events due to flood mitigation measures implemented in the new buildings. The new LBMC would not provide the level of service the original hospital provided pre Hurricane Sandy and would require the additions at SNCH to fulfill the medical needs of Long Beach. As with the No Action Alternative, there is potential for roads to and from Long Beach to shut down preventing emergency vehicles to move patients.

Therefore, the Proposed Alternative would have a minor beneficial impact on Public Health and Safety for the City of Long Beach and Oceanside during normal operations. There would be a minor, negative impact in the event of road closures.

Alternative 3: Restore Remaining Long Beach Facilities

Long Beach would benefit from a full service facility that would be better equipped to provide critical services and more resilient to future flood events due to flood mitigation measures implemented in the new buildings. Alternative three would have a minor beneficial impact on

Public Health and Safety for the City of Long Beach. The SNCH facility would remain the same and would therefore have no impact on Public Health and Safety.

5.12 Hazardous Materials

NYSDEC defines hazardous substances as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that pose a substantial present or potential hazard to human health and the environment (NYSDEC 2014c). Hazardous materials and wastes are regulated under a variety of federal and state laws, including 40 CFR Part 260, the Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.), Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC 9601 et seq.), Solid Waste Act, the Toxic Substances Control Act, and the CAA of 1970 (42 USC 7401 et seq.). OSHA standards under the Occupational Safety and Health Act seek to minimize adverse impacts on worker health and safety (U.S. Department of Labor no date). Evaluations of hazardous substances and wastes must consider whether any hazardous material would be generated by the proposed activity and/or already exists at or in the general vicinity of the site (40 CFR 312.10). If hazardous materials are discovered, they must be handled by properly permitted entities. The New York Department of Labor permits entities for asbestos waste abatement, and NYSDEC issues permits for transportation and disposal of hazardous waste.

5.12.1 Existing Conditions

The NYSDEC website provides access to databases with records of chemical and petroleum spills; State Superfund, Brownfield Cleanup, Environmental Restoration, Voluntary Cleanup and Inactive Hazardous Waste Disposal Sites; and bulk storage facilities across the state (NYSDEC 2014). At least six spills have been documented at the LBMC site in the NYSDEC Spill Incidents Database from 2000-2016, including a recent diesel spill in 2014, and Fuel Oil #2 spills in 2015 and 2016 (see Appendix A Document C). These spills are known to have contaminated the soils on the property, but the quantities and extent is not known at this time (NYSDEC 2016b). No evidence of prior spills was documented at the SNCH site utilizing the NYSDEC database.

5.12.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

No work would be conducted at either site and would not create or disturb potential hazardous waste. The soils at the demolished LBMC site would remain in their current condition and could potentially leach hazardous materials offsite. Under the No Action Alternative, there would be a potential minor negative impact on hazardous wastes contamination at LBMC and no impact at SNCH.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

For each site, the presence of hazardous materials would be determined through appropriate background research and inspection in accordance with NYSDEC and local standards. If contamination exceeding reporting levels is present, further hazardous waste mitigation must occur and the Subrecipient would be required to follow all NYSDEC and EPA regulations in handling the waste.

SNCH and LBMC would direct its contractors to use approved landfills that accept construction waste and have sufficient permitted capacity to accommodate the project's solid waste disposal needs. SNCH and LBMC shall handle and dispose of any hazardous materials exposed, generated, or used during construction in accordance with all applicable local, state, and federal regulations. There would be a negligible impact from hazardous waste as long as all NYSDEC and EPA regulations are followed.

Alternative 3: Restore Remaining Long Beach Facilities

The potential impacts for this alternative would likely be similar to those discussed in Alternative 2 at LBMC and no impact at SNCH.

5.13 Climate Change

EO 13693, Planning for Federal Sustainability in the Next Decade, sets sustainability targets for the environmental, energy, and economic performance of federal agencies and calls for specific management strategies for agencies to improve sustainability with greenhouse gas reduction as a key priority. EO 13653, preparing the United States for the Impacts of Climate Change, sets standards to prepare the United States for the impacts of climate change and supporting climate-resilient investment. According to draft Council of Environmental Quality (CEQ) guidance for considering climate change in environmental reviews, agencies should consider the following when addressing climate change: (1) the potential effects of a proposed action on climate change as indicated by its greenhouse gas emissions; and (2) the implications of climate change for the environmental effects of a proposed action.

5.13.1 Existing Conditions

Recent storm events have negatively affected Nassau County over the past few years. These include a blizzard in December 2010, Hurricane Irene in August 2011, the Nor'easter in October 2011, Hurricane Sandy in October 2012, the Nor'easter in November 2012, and several winter storms and high wind events during 2012, 2013, and 2014.

The effects of storm surge from Hurricane Sandy were exacerbated by sea level rise. According to NOAA, sea levels in the New York harbor area have risen approximately 12 inches over the past

100 years, with 3 to 4 inches of this sea level rise attributed to land subsidence and the remainder to climate change. NOAA predicts an additional 12 to 23 inches of sea level rise by the 2080s, using a similar approach used in the last Intergovernmental Panel on Climate Change report (IPCC 2014).

Greenhouse gases contributing to climate change include carbon dioxide, methane, nitrous oxide, and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Construction activities, such as the combustion of diesel and gasoline to power heavy equipment, emit carbon dioxide and smaller quantities of methane and nitrous oxide (EPA 2009). Greenhouse gas emissions also result from the production of the materials used in the construction process (referred to as embedded carbon).

Climate change could potentially exacerbate medical conditions and illness as stated in the last Intergovernmental Panel on Climate Change report (IPCC 2014). These conditions include the introduction of more diseases from warmer climates and effecting populations that are already medically sensitive to climate such as dangerous heat and cold.

5.13.2 Potential Impacts and Proposed Mitigation

Alternative 1: No Action

The No Action Alternative does not provide for flood damage risk reduction and other hazard mitigation measures; therefore, the temporary facility at LBMC would be subject to greater risk of damage and operational disruption in the future from sea level rise. Both facilities would continue to produce current levels of greenhouse gases and both facilities would be burdened by a potential increase in climate change related illnesses. Therefore the No Action alternative would have a moderate impact on facility's abilities to hand climate change and a negligible impact on climate change.

Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition

FEMA 543, Design Guide for Improving Critical Facility Safety from Flooding and High Winds: Providing Protection to People and Buildings, recommends designing to the 500-year return period for critical facilities, including hospitals. The Proposed Alternative is designed to incorporate flood damage risk reduction and other hazard mitigation measures to at or above the 500-year floodplain elevation (Including rising sea level predictions); therefore, increasing the ability of the facility to withstand future tidal surge damage. The exterior façade and glass panels will be upgraded and designed to withstand hurricane-force winds and the design also incorporates new energy features (see Appendix A Document A). These features enhance resiliency for the facility as the frequency of severe weather is expected to increase due to climate change.

There would be an increase in greenhouse gases from construction and facility power use but would be mitigated through efficiency measures. Both facilities would be able to handle the potential increase from climate change related illnesses. Therefore, Alternative 2 would have a minor positive impact in mitigating against climate change and a negligible negative impact on climate change from the increased greenhouse gas emissions.

Alternative 3: Restore Remaining Long Beach Facilities

Restoring the remaining Long Beach facility would protect the site from future flood damage in a manner similar to the Proposed Alternative but not to the same extent. Similar to Alternative 2, this alternative would not be expected to significantly exacerbate impacts of climate change from greenhouse emissions, however, it would not have the increased capacity to handle a potential increase in climate change related illnesses. Therefore there would be a minor negative impact on the LBMC facility from climate change and a negligible impact on climate change from greenhouse gases. The impacts to and from climate change to the SNCH would be the same as in the No Action Alternative.

5.14 Cumulative Impacts

In accordance with NEPA, this EA considers the overall cumulative impact of the Proposed Alternative and other actions that are related in terms of time or proximity. According to the CEQ regulations, cumulative impacts represent the “impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what federal agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). In the context of evaluating the scope of a proposed action, direct, indirect and cumulative impacts must be considered.

In addition to NEPA, other statutes require federal agencies to consider cumulative impacts. These include the CWA Section 404 (b)(1) guidelines and regulations implementing the conformity provisions of the CAA, Section 106 of the NHPA, and Section 7 of the ESA.

Recovery efforts are in progress throughout the area impacted by Hurricane Sandy including demolition, reconstruction, and new construction from the private sector as well as state and federal sectors. Numerous projects including roads, buildings, recreational facilities, and public utilities to restore pre-disaster conditions are either under way or completed throughout both Long Beach and Oceanside. One project of note is currently in the planning stages in Long Beach by the LBMC site:

- New York Rising – Provide coordination with the \$12.9 million north shore bulk heading project, announced by Governor Cuomo in November 2013, which will develop bulk

heading from National Boulevard to the Long Beach Bridge. Includes flood barriers (i.e., deployable barriers or Dutch dams) around major utilities.

These other projects would not result in cumulative impacts when combined with the proposed project, given their scale and the fact that, like LBMC, they largely restore pre-disaster condition or include minor changes to enhance utility and/or resiliency. The bulkheading project was evaluated separately due to its scale and because it is located adjacent to the LBMC. The bulkheading and LBMC projects would not be constructed concurrently, so there are no cumulative construction impacts; similarly, because of their type and the lack of negative moderate or major impacts associated with the LBMC project, there would be no post-construction or long-term cumulative impacts to the human-built or natural environment.

6.0 PERMITS AND PROJECT CONDITIONS

The Subrecipient is responsible for obtaining all applicable federal, state, and local permits and other authorizations for project implementation prior to construction and for adherence to all permit conditions. Any substantive change to the approved scope of work would require re-evaluations by FEMA for compliance with NEPA and other laws and EOs. The Subrecipient must also adhere to the following conditions during project implementation. Failure to comply with grant conditions may jeopardize federal funding:

- 1) Mitigation measures would be employed that may include, at a minimum, covering spoil piles, covering the haul vehicle loads that contain fill or cut materials, and spraying the site with water during construction.
- 2) Adequate maintenance of equipment must be ensured, including proper engine maintenance, adequate tire inflation, and proper maintenance of pollution control devices.
- 3) Running times for fuel-burning equipment would be kept to a minimum, and engines would be properly maintained. Ultra-low sulfur diesel fuel would also be utilized.
- 4) Measures to reduce runoff would be employed that may include construction site stabilization, dust control, sediment traps, and temporary swales. Coverage under NYSDEC SPDES general permit would be required if one or more acre of soil is disturbed at each site.
- 5) If threatened or endangered species are found on site, construction will cease and consultation with FEMA and USFWS will be done.
- 6) Native planting of landscape vegetation following construction would occur where feasible.
- 7) Though sites are not within invasive species quarantine zones, BMPs required by USDA and NYS Department of Agriculture and Markets would be used if invasive species are discovered.

- 8) Noise abatement in residential areas shall limit construction activities, including operation of heavy machinery, by ensuring that construction activities are not conducted during early morning or late evening hours according to local ordinances.
- 9) Local ordinances for work around utilities must be followed.
- 10) Excavated soil and waste materials, including hazardous waste, shall be managed and disposed of in accordance with applicable federal, state, and local regulations. Solid waste haulers shall be required to have an NYSDEC waste hauler permit and all must shall be disposed of or processed at an NYSDEC permitted facility.
- 11) Construction activities cannot be initiated until 15 days after the date that the FONSI has been signed as “APPROVED” at the LBMC site.

7.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

This EA will be made available for agency and public review and comment for a period of 15 days. The public information process will include a public notice with information about the proposed action in Long Beach Herald and Newsday, with targeted outreach to environmental justice populations through notices to community organizations. The EA will also be made available for download at <http://www.southnassau.org/fema/>.

A hard copy of the EA will be available for review at the following locations:

Long Beach Public Library
111 W Park Ave.
Long Beach, NY 11561

Long Beach Public Library
903 W Beech St.
Long Beach, NY 11561

Long Beach Public Library
26 Lido Blvd #B
Point Lookout, NY 11569

City of Long Beach
City Hall
1 West Chester St.
Long Beach, NY 11561

Interested parties may request an electronic copy of the EA by emailing FEMA at FEMA-4085-Comment@fema.dhs.gov. This EA reflects the evaluation and assessment of the federal government, the decision maker for the federal action; however, FEMA will take into

consideration any substantive comments received during the public review period to inform the final decision regarding grant approval and project implementation. The public is invited to submit written comments by emailing FEMA-4085-Comment@fema.dhs.gov or via mail to:

FEMA Region II – DR-4085-NY
26 Federal Plaza
New York, NY 10278

Attn: South Nassau Community Hospitals Long Beach Medical Arts Pavilion and South Nassau Southwest Addition EA Comments.

If no substantive comments are received from the public and/or agency reviewers, the EA will be adopted as final, and FEMA will issue a FONSI. If FEMA receives substantive comments, it will evaluate and address comments as part of the FONSI documentation or in a final EA.

8.0 CONCLUSION

FEMA evaluated, through NEPA, environmental and cultural resource impacts of the alternatives. The proposed alternative analysis resulted in identification of no negative moderate or major impacts associated with the resources of air quality, water quality, floodplain and wetlands, coastal resources, biological resources, cultural resources, environmental justice, noise, transportation, public services and utilities, public health and safety, hazardous materials, and climate change. Coordination and permit submissions will be completed between several agencies during project review and mitigation measures will be incorporated into the design in order to meet regulatory requirements. During the construction period, short-term minor to negligible impacts on air quality, water quality, biological resources, noise, transportation, public services, hazardous waste and climate change are anticipated. Short-term impacts would be mitigated through BMPs and applicable permitting processes that would avoid or minimize effects associated with the Proposed Alternative. The long-term environmental impacts on public health and safety, floodplain capacity, and water quality as a result of the renovations at the former LBMC and SNCH would be beneficial post construction. The entire community would benefit from the renovations and mitigation to the LBMC and the SNCH.

9.0 LIST OF PREPARERS

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10.0 SUMMARY OF IMPACTS

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
5.1	Air Quality	<p>The No Action alternative will not result in any additional emissions from construction activity. Both medical sites, SNCH and the temporary site at Long Beach, would continue to use their current backup generators in the event of power loss within the limits of existing permits. There would be no change in impact on air quality from current conditions.</p>	<p>There would be a negligible impact on Air Quality. Construction equipment and temporary diesel generators would be the source of emissions. BMPs would be applied which may include, covering spoil piles, covering the haul vehicle loads that contain fill or cut materials, and spraying the site with water. During emergency operations due to loss of power the generators, installed as part of the Electrical Infrastructure Upgrade, would generate power to allow continuous operation of the SNCH. However, the temporary use of these generators, if needed, would likely cause a negligible impact on air quality.</p>	<p>Construction activity levels are likely to be lower than the Proposed Alternative since work will only be done at the LBMC site. Operational emissions at the sites would likely be similar to Alternative 1 due to similar level of backup power generation needed. Temporary emissions from construction and backup power generation would likely be below the <i>de minimis</i> levels and would have temporary negligible impacts on air quality.</p>
5.2	Water Quality	<p>Under the No Action Alternative, there would be minor impacts on water quality at the LBMC site and no impact at the SNCH site. Both sites would remain predominantly impervious, and there would be no change in the condition of the sole source aquifers underlying the sites.</p>	<p>Under the Proposed Alternative, there would be no change in potential sources of contamination at either site. The Proposed Alternative would have a negligible short-term adverse effect on water quality with the implementation of BMPs to control stormwater runoff and windblown debris. There would be a negligible long-term</p>	<p>There would be no impact to water quality and sole source aquifers at SNCH. There would be negligible impact from construction at LBMC.</p>

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
			beneficial effect on water quality in the Reynolds Channel from possible landscape vegetation. There would be no impact on water quality in the vicinity of the SNCH site.	
5.3	Floodplains and Wetlands	Under the No Action Alternative, there would be no construction related impacts on floodplains and wetlands. The partially demolished LBMC buildings would remain in place and continue to impede flood flows and reduce flood capacity in the immediate vicinity and would cause a minor impact on floodplain. The LBMC would likely cause negligible impact on the wetlands in Reynolds Channel from uncontrolled runoff. There would be no impact on floodplains and wetlands from the SNCH site.	Under the Proposed Alternative, construction activities at the LBMC site could have minor effects on floodplain function due to water quality effects as described in section 5.2. The new Medical Arts Pavilion would be constructed above the 500-year floodplain elevation. The structure would be elevated on remnant structural elements of the existing buildings to allow floodwaters to flow under with complete pass-through with the exception of two lobbies, a receiving area, a storage room, and associated stairs and elevators. The Proposed Alternative would have a minor beneficial impact on floodplains. There would be no impact on floodplains at the SNCH site and no impact on wetlands at either site.	Impact to wetlands and floodplain would be the same as the No Action at SNCH. There would be no change to footprint at LBMC and would have no change to floodplain and would be protected from flooding from the mitigation measures. There would be no impact on wetlands and minor impact on floodplains at LBMC.
5.4	Coastal Resources	Under the No Action Alternative, there would be no change in the existing conditions. The No Action Alternative could potentially not be consistent with the	The Proposed Alternative would have a short-term, adverse impact on coastal resources during construction, but the impact would be negligible because previously described	Alternative 3 would result in slightly less construction-related impacts than the Proposed Alternative because there would be less reconfiguration of

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
		CZMA because it would retain a partially demolished structure on the waterfront. Therefore there may be a minor negative impact on coastal resources.	BMPs (section 5.2). It would have potential minor, long-term, beneficial impacts on coastal resources because of additional open space that would be created along the waterfront.	the LBMC site. With the implementation of previously described BMPs, these potential impacts would be negligible.
5.5	Biological Resources	Under the No Action Alternative, there would be no construction and no change in the existing condition. Therefore, there would be no impact on biological resources.	Native plants would be installed around the new medical arts building at the LBMC providing a negligible beneficial effect on biological resources. There would be no impact to threatened or endangered species and migratory bird migration. BMPs required by USDA and NYS Department of Agriculture and Markets would be used if invasive species are identified. The Proposed Alternative would have no impact on designated critical habitat, or other biological resources following construction.	There would be no change from the existing condition for biological resources at LBMC. Under There would be no construction at the SNCH site and would therefore, have no impacts on biological resources at SNCH.
5.6	Cultural Resources	The No Action alternative would have no impact on archeological resources from construction due to no ground disturbing activity occurring.	Under Alternative 2, the probability of encountering intact soils and in-situ archaeological resources was assessed as low at LBMC and SNCH. LBMC nor SNCH project sites are likely to contain intact historic or prehistoric archaeological deposits and therefore are not considered archaeologically sensitive and would have no impact.	Any ground-disturbing impacts for the LBMC and SNCH facilities will be taking place in previously disturbed and/or sterile soils with limited potential to encounter intact and in-situ prehistoric and historic archaeological resources and would result in no impact.

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
5.7	Environmental Justice	<p>This loss of function at the temporary LBMC could prevent the EJ population in Long Beach from receiving proper care because they may not have the means to go elsewhere. The SNCH would not expand its facilities that could cause crowding issues during peak times and disasters. Though there is no EJ COC in the SNCH coverage there is still a percentage of the population that are minority or low income that could be prevented from receiving care. There would be a minor negative impact on EJ populations.</p>	<p>Potential effects on the COC could be a temporary increase of noise and traffic levels during construction that could cause disruption to the EJ community within close proximity to the LBMC site. The new Medical Pavilion would be able to provide care to EJ populations during and after disasters. SNCH would have extended capacities to handle a higher number of patients giving EJ populations better access to health care. Therefore there would be temporary negative negligible effect and a long term minor positive effect to EJ populations.</p>	<p>The potential construction impacts for this alternative would be similar to those discussed in Alternative 2 for LBMC. The LBMC facilities would be mitigated against possible extended loss but would not be as effective as the Proposed Alternative's mitigation measures. SNCH's capacity would be the same as the No Action Alternative. Therefore, there would be potential minor negative impact at SNCH during peak times and minor positive impact at LBMC to EJ populations.</p>
5.8	Noise	<p>The No Action Alternative does not include any construction or site preparation. Therefore, there would be no noise impacts under normal conditions.</p>	<p>This alternative would result in relatively small temporary increases in noise due to construction activities at both locations. BMPs would minimize noise levels by ensuring that construction equipment uses the manufacturer's standard noise control devices and would follow local noise ordinance requirements including construction times during the day. Once the hospital facilities are</p>	<p>Under the No Action Alternative then noise impact at LBMC would be similar to Alternative 2 as the construction period would be similar. There would be no change at the SNCH site due to no construction work there. The temporary impact from construction would be minor and</p>

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
			<p>constructed, vehicular traffic on access roads could increase for maintenance and emergency vehicle activities, causing an increase in noise levels that are still below OSHA standards. Therefore, short-term construction impacts will be minor and long-term impacts are expected to be negligible at both sites. If noise levels exceed typical levels on a permanent or prolonged basis, outreach to EPA and OSHA be required to assess noise.</p>	<p>the long-term impacts would be negligible at LBMC. There would be no change on impact to noise levels at SNCH.</p>
5.9	Transportation	<p>The No Action Alternative would have no impact on traffic volume or public transportation routes as no construction activity would take place at the site and existing traffic conditions would remain the same.</p>	<p>The Proposed Alternative would have a minor short-term impact on traffic during construction at both locations due to daily construction activity. There would be no impact on the roadway network, traffic patterns, or any road closures because no new roadways would be constructed. There may be increased emergency and patient vehicle volumes from both the new facility at LBMC and the expansion at SNCH on the three bridges, but is only expected for patients that require prolonged care. Therefore, there would be a negligible impact on vehicle traffic patterns during and post construction and no impact on rail.</p>	<p>Similar to the proposed alternative, this alternative would not impact the roadway network, alter traffic patterns, or cause any road closures because no new roadways would need to be constructed. The upgraded LBMC may cause a slight increase in emergency and patient vehicle volume. Therefore there would be a negligible impact on vehicle traffic patterns at LBMC and no impact on SNCH and no impact on rail.</p>

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
5.10	Public Services and Utilities	Under the No Action Alternative the LBMC site would continue to have no utilities. SNCH would not be upgraded and would continue to use utilities at its current rate. Therefore there would be no impact on public services and utilities at both sites.	The Proposed Alternatives construction at LBMC and SNCH would require ground disturbance that could potentially disrupt utility services. The Proposed Alternative would have negligible impact on public utilities post construction and will have negligible impact during construction by following all local regulations in regards to work around utilities.	Alternative 3 may require ground disturbance at the LBMC site that could potentially disrupt utility services. Utilities would not change at SNCH, therefore there would be negligible impact on utilities at LBMC as long as all local regulations are followed and no impact on utilities and SNCH.
5.11	Public Health and Safety	There would be a minor negative impact to public safety due to the susceptibility of flooding at the temporary medical facilities at LBMC. SNCH would not expand its medical services that could cause a minor impact on medical care during peak times.	Both communities would benefit from the facilities because they would be able to provide critical services during and after future flood events. The new LBMAP would not provide the level of service the original hospital provided pre-Hurricane Sandy and would require the additions at SNCH to fulfill the medical needs of Long Beach. The Proposed Alternative would have a minor beneficial impact on Public Health and Safety for the City of Long Beach and Oceanside during normal operations.	Long Beach would benefit from a full service facility that would be better equipped to provide critical services and more resilient to future flood events. Alternative three would have a minor beneficial impact on Public Health and Safety for the City of Long Beach. The SNCH facility would remain the same and would therefore have no impact on Public Health and Safety.
5.21	Hazardous Materials	No work would be conducted at either site and would not create or disturb potential hazardous waste. Under	For each site, the presence of hazardous materials would be determined through appropriate background research and	The potential impacts for this alternative would likely be similar to those discussed in

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
		the No Action Alternative, there could be a potential minor negative impact on hazardous waste contamination at LBMC and no impact at SNCH.	inspection in accordance with NYSDEC and local standards. SNCH shall handle and dispose of any hazardous materials exposed, generated at the Oceanside campus and the Long Beach campus, or used during construction in accordance with all applicable local, state, and federal regulations. There would be a negligible impact from hazardous waste as long as all NYSDEC and EPA regulations are followed.	Alternative 2 at LBMC and no impact at SNCH.
5.13	Climate Change	The No Action Alternative does not provide for flood damage risk reduction. Both facilities would continue to produce current levels of greenhouse gases and both facilities would be burdened by a potential increase in climate change related illnesses. Therefore, the No Action alternative would have a moderate impact on facility's abilities to hand climate change and a negligible impact on climate change.	The Proposed Alternative features enhance resiliency for the facility as the frequency of severe weather is expected to increase due to climate change. There would be an increase in greenhouse gases from construction and facility power use but would be mitigated through efficiency measures. Both facilities would be able to handle the potential increase from climate change related illnesses. Therefore, Alternative 2 would have a minor positive impact in mitigating against climate change and a negligible negative impact on climate change from the increased greenhouse gas emissions.	Restoring the remaining Long Beach facility would protect the site from future flood damage in a manner similar to the Proposed Alternative but not to the same extent. Similar to Alternative 2, this alternative would not be expected to significantly exacerbate impacts of climate change from greenhouse emissions. However, it would not have the increased capacity to handle a potential increase in climate change-related illnesses. Therefore, there would be a minor negative impact on the LBMC facility

Section	Area of Evaluation	Alternative 1: No Action Alternative	Alternative 2: Proposed Alternative: Medical Arts Pavilion and South Nassau Southwest Addition	Alternative 3: Restore Remaining Long Beach Facilities
				<p>from climate change and a negligible impact on climate change from greenhouse gases. The impacts to and from climate change to the SNCH would be the same as in the No Action Alternative.</p>

11.0 REFERENCES

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