

North Carolina Department of Military and Veterans Affairs
Agency Utility Management Plan
2019-2021



Prepared by Cecil Holt, DMVA Energy Manager
8-29-2020
With Military Installation Information provided by:
Paul Berry **Robert Johnson**
SgtMaj, USMC (Retired) SgtMaj., USMC (Retired)
Program Development Installation Coordinators
NC Department of Military and Veterans Affairs

Purpose

To provide Secretary Hall of the North Carolina Department of Military and Veterans Affairs & Department of Environmental Quality information on Executive Order No. 80.

“The North Carolina Department of Military and Veteran Affairs is the newest state government agency and we are dedicated to helping our veterans and active duty men and women access the programs, benefits and resources that they earned when they took the oath and answered the call to service. Our staff is committed to providing the highest level of service, responsiveness and integrity in keeping with the principles and values of this state and nation that our military and their families deserve. “

Larry D. Hall, Secretary of Department of Military and Veteran Affairs

Overview

- DMVA is a State agency that assists with the management of 4 military Skill Care Nursing Homes housing 449 veterans and are currently in the construction phase of 1 - 120 Bed Home & plans to build a 6th Home to provide additional housing for veterans in the state.
- North Carolina has one of the largest military footprints of any state in the country, representing three out of the four branches of service and totaling 129, 049 in 2016. Military and defense industries are the second largest employers in our state, and the military has an economic impact of \$66 billion annually. The military bases located in North Carolina are major drivers in our communities, allowing families and business to thrive through the synergy and partnerships that have developed between local and state government, military and defense sectors, and local businesses throughout our history.

Utility Management Plan Goals

Department Veterans Affairs Nursing Homes

Salisbury State Veteran Home

- Replacement of T12 Bulbs to T8 Bulbs to capitalize on potential energy savings. Seek funding to replace existing T12 Fluorescent Fixtures to T8 LED fixtures.
- Investigate feasibility of Solar Powered Water Heater System
- Add Light Diming functions to Resident Rooms.
- Investigate how to monitor utility consumption on site

- Will request Design Proposal to add Isolation Wing in response to COVID Pandemic, with Negative Pressure Equipment Features to Home in effective yet energy efficient manner.
- Educate and engage employees in energy conservation best practices through meeting presentations, emails, Intranet web sites, etc.

Fayetteville State Veteran Home

- Replacement of T12 Bulbs to T8 Bulbs to capitalize on potential energy savings. Seek funding to replace existing T12 Fluorescent Fixtures to T8 LED fixtures.
- Investigate feasibility of Solar Powered Water Heater System
- Investigate Heating Ventilation & Air Conditioning System replacement with an Energy Conservation System.
- Investigate feasibility of Power Company LED/ Solar Light Pole Leasing Program.
- Investigate how to monitor utility consumption on site
- Site walkthrough with State Energy Office to look for additional low/no cost projects
- Educate and engage employees in energy conservation best practices through meeting presentations, emails, Intranet web sites, etc.
- Will request Design Proposal to add Isolation Wing in response to COVID Pandemic, with Negative Pressure Equipment Features to Home in effective yet energy efficient manner.

Black Mountain State Veteran Home

- Replacement of T12 Bulbs to T8 Bulbs to capitalize on potential energy savings. Seek funding to replace existing T12 Fluorescent Fixtures to T8 LED fixtures.
- Investigate feasibility of Solar Powered Water Heater System
- Investigate Heating Ventilation & Air Conditioning System replacement with an Energy Conservation System.
- Investigate feasibility of Power Company LED/ Solar Light Pole Leasing Program.
- Investigate how to monitor utility consumption on site
- Site walkthrough with State Energy Office to look for additional low/no cost projects
- Educate and engage employees in energy conservation best practices through meeting presentations, emails, Intranet web sites, etc.
- Will request proposal to add Isolation Wing in response to COVID Pandemic, Negative Pressure Equipment Features to Home in effective yet energy efficient manner.

Kinston State Veteran Home

- Replacement of T12 Bulbs to T8 Bulbs to capitalize on potential energy savings. Seek funding to replace existing T12 Fluorescent Fixtures to T8 LED fixtures.
- Investigate feasibility of Solar Powered Water Heater System

- Investigate Heating Ventilation & Air Conditioning System replacement with an Energy Conservation System.
- Existing Shingle Roof Replacement will be with Metal
- Investigate how to monitor utility consumption on site
- Site walkthrough with State Energy Office to look for additional low/no cost projects
- Educate and engage employees in energy conservation best practices through meeting presentations, emails, Intranet web sites, etc.
- Will request proposal to add Isolation Wing in response to COVID Pandemic, Negative Pressure Equipment Features to Home in effective yet energy efficient manner.

Kernersville State Veteran Home (Construction Phase)

- In response to COVID Pandemic, a Change Order will was approved to add Isolation Wing with Negative Pressure Equipment features to Home in effective yet energy efficient Specification and Design.
- Being built to current Energy Codes.
- DMVA did participate in the Duke Energy New Construction Energy Efficiency Design Assistance Program provided by the Weidt Group.
- Investigate how to monitor utility consumption on site

Raleigh State Veteran Home (Proposed)

- If funding is approved the intent is to have a Solar System as a Base Bid program item.
- Investigate Green Roof System as a alternate program item.
- Will be designed & built to current Energy Codes.
- Will participate in the Duke Energy New Construction Energy Efficiency Design Assistance Program provided by the Weidt Group.
- Investigate how to monitor utility consumption on site

Department of Military & Veterans Affairs Cemeteries

Western Carolina State Veterans Cemetery

- Seek funding to install an energy efficient irrigation system in place of staff manual watering system.
- Research funding and options to retrofit lighting to LED fixtures.

Coastal Carolina State Veterans Cemetery

- Seek funding to replace existing irrigation System with an energy efficient system.
- Research funding and options to retrofit lighting to LED fixtures.

Sandhills State Veterans Cemetery

- Seek funding to install an energy efficient Irrigation system in place of staff manual watering system.

- Research funding and options to retrofit lighting to LED fixtures.

Military Installations in NC

“The chief priority of the Department of Defense (DoD) energy policy is to ensure the mission readiness of the armed forces by pursuing energy security and energy resilience. In today’s technology-dependent environment, energy is inextricably combined with the Department’s missions, from the directly employed weapons systems to the installations and systems that support missions around the globe. In this environment, energy resilience, which enables the capabilities of weapons platforms, facilities, and equipment, is a critical investment that must be part of the Department’s research, acquisition, operations, and sustainment conversations.”

Camp Lejeune

- Site visits or teleconferences to connect with the energy manager on site
- Determine installations strategy energy security and sustainability goals
- Collaborate to share best practices and knowledge gained from energy and water initiatives

Coast Guard's Base Support

- Site visits or teleconferences to connect with the energy manager on site
- Determine installations strategy energy security and sustainability goals
- Collaborate to share best practices and knowledge gained from energy and water initiatives

Fort Bragg

- Site visits or teleconferences to connect with the energy manager on site
- Determine installations strategy energy security and sustainability goals
- Collaborate to share best practices and knowledge gained from energy and water initiatives

Seymour Johnson Air Force

- Site visits or teleconferences to connect with the energy manager on site to determine installations strategy energy security and sustainability goals.
- Collaborate to share best practices and knowledge gained from energy and water initiatives

The attached following documents display the efforts the installations are taking in regards to Energy and Energy Resilience Plans. Provided by

- a. Department of Defense Operational Energy Strategy Implementation Plan. This document provides the overarching guidance to the uniformed service components. Each uniformed service component then builds their own Energy Plan/Strategy.
- b. Depart of the Navy (DoN) Installation Energy Resilience Strategy. This document provides guidance and direction to the Navy and Marine Corps on how to develop each installation energy plan. This strategy provides further guidance

and direction on the proper use of energy when the uniformed are training and during combat operations. The Army, Air Force, and Coast Guard have very similar plans.

- c. Marine Corps Installations East (MCIE) Energy Plan. This is a great example of a local plan here in NC. Camp Lejeune and Marine Corps Air Station Cherry Point both recently converted from coal fired hot water plants to natural gas. Every Battalion and Squadron level command has an Energy Manager. Their duties direct them to monitor the energy consumption both in garrison and during field training environments. Social media is used heavily to educate all personnel on how to properly use and conserve energy. An example if when there is a major holiday assigned personnel ensure all lights and office equipment are tuned off. These efforts have proven to be big cost savers over time. Military Ocean Terminal Sunny Point (MOTSU), NC is energy independent. They have a state of the art solar farm that provides most of their energy. I have requested details from them about this project and I will share it with you.
- d. MCIE Energy and Water Strategy. I was at this command when this strategy was written. This is an example of a well written plan that is easy to implement and monitor.
- e. Joint Land Uses Study Seymour Johnson Air Force Base and Dare County Range. These studies have also taken place around Camp Lejeune, Cherry Point, Ft. Bragg, and MOTSU. One of the outcomes of protecting land around military installations is Energy Development.

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis is currently taking place with the NC Military Installations.

Attached are the following documents that best display the efforts the installations are taking in regards to their Energy and Energy Resilience Plans.

- a. Department of Defense Operational Energy Strategy Implementation Plan. This document provides the overarching guidance to the uniformed service components. Each uniformed service component then builds their own Energy Plan/Strategy.
- b. Depart of the Navy (DoN) Installation Energy Resilience Strategy. This document provides guidance and direction to the Navy and Marine Corps on how to develop each installation energy plan. This strategy provides further guidance and direction on the proper use of energy when the uniformed are training and during combat operations. The Army, Air Force, and Coast Guard have very similar plans.
- c. Marine Corps Installations East (MCIE) Energy Plan. This is a great example of a local plan here in NC. Camp Lejeune and Marine Corps Air Station Cherry Point both recently converted from coal fired hot water plants to natural gas. Every Battalion and Squadron level command has an Energy Manager. Their duties direct them to monitor the energy consumption both in garrison and during field training environments. Social media is used heavily to

educate all personnel on how to properly use and conserve energy. An example if when there is a major holiday assigned personnel ensure all lights and office equipment are tuned off. These efforts have proven to be big cost savers over time. Military Ocean Terminal Sunny Point (MOTSU), NC is energy independent. They have a state of the are solar farm that provides most of their energy. I have requested details from them about this project and I will share it with you.

- d. MCIE Energy and Water Strategy. I was at this command when this strategy was written. This is an example of a well written plan that is easy to implement and monitor.
- e. Joint Land Uses Study Seymour Johnson Air Force Base and Dare County Range. These studies have also taken place around Camp Lejeune, Cherry Point, Ft. Bragg, and MOTSU. One of the outcomes of protecting land around military installations is Energy Development.

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis is currently taking place with the NC Military Installations. This will be after your 1 September deadline but will be shared for situational awareness.

**NC Department of Military & Veterans Affairs
Agency Utility Management Plan**

- The NC Department of Military & Veterans Affairs recognizes that energy and water consumption can be managed for the benefit of our agency. Energy and Water management is the responsibility of the staff at each facility, which will be guided and supported by the Energy Manager Designee for NC DMVA.
- The Department of Military & Veterans Affairs has implemented an Agency Utility Management Plan.
- The attached plan outlines the activities and expenditures required to reduce energy and water consumption to achieve the goals of the program.
- The Department Secretary's staff will review progress and results and will support staff attendance at training in energy and water management.

Agency Utility Management Plan Goals

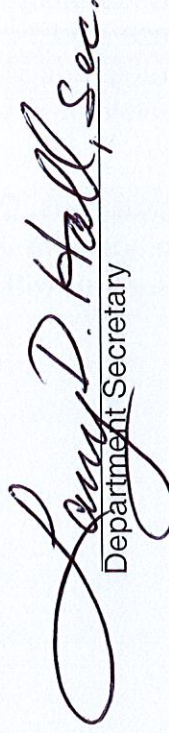
- As required in Executive Order 80, NC DMVA will support efforts to reduce by 2025 total energy consumption per square foot in state owned buildings by at least 40% below fiscal year 2002-2003 levels and reduce state-wide greenhouse gas emissions to 40% below 2005 levels.

Strategic Energy and Water Plan Mandate – Commitment

I have read the Agency Utility Management Plan for the NC Department of Military and Veterans Affairs. The plan, as presented, supports the reduction goals in Executive Order 80. Implemented this 1st day of September 2020



Energy Manager



Department Secretary

Appendix A
Sample Utility Management Plan

2019-20

Comprehensive Plan				
Strategy 1.	Designate Energy Manager as the point of contact for SEO			
Strategy 2.	Edit or create a plan to reflect EE strategy toward 40% reduction in Btu/gsf.			
Strategy 3.	Contact the SEO to assist with review of strategy, budget, training, and timeline.			
Strategy 4.	Develop internal stakeholders to develop behavioral programming and internal team building toward goals			
Strategy 5.	Implement Plan			
2019-2020 Planned Activities				
	Expected Measurement	Assigned To	Occurrence	
Meet with SEO to develop ideas for plan	Discuss training schedule available, current Utility Management Plan and future Management Plan	Energy Manager and SEO staff	Quarterly	
Research facilities for potential energy savings projects	Create a list to use for potential projects to be implemented in the Utility Management Plan	Energy Manager and Agency Staff	Monthly	
Create a Utility Management Plan	Complete timeline and approvals from agency and submit plan to SEO	Energy Manager and staff	Due March 1, 2019, thereafter October 1 st each year	
Attend SEO or other energy conservation training sessions	Discuss lessons learned with staff and how that can enhance your strategy	Agency staff	(add dates of training)	
Develop internal stakeholders and internal teams to implement plan	Designate a person or team to implement portions on the plan	Energy Manager and staff	May, 2019	
Develop internal marketing and awards/rewards program	Designate person to develop programming and implement program	Energy Manager and staff	May, 2019	
Review Utility Management Plan progress	Tweak plan if it is not realizing expected savings	Energy Manager	Quarterly	

2019-2020 Planned Activities	Expected Measurement	Assigned To	Occurrence
Track utility data	Record monthly utility data for annual utility report to submit to SEO and trend to catch anomalies early on	Energy Manager	Monthly, September 1 st each year

2019-20

Projects to Implement				
Planned Activities	Expected Measurement	Assigned To	Occurrence	
Strategy 1.	Review projects with staff to determine high priority projects to implement			
Strategy 2.	Work with staff to determine the best timeframe to implement projects			
Strategy 3.	Create a schedule for projects to be implemented during the fiscal year			
Strategy 4.	Communicate projects to staff			
Strategy 5.	Implement projects			
Research lighting retrofit or replacement opportunities in Retirement Homes	Replacement of T12 Bulbs to T8 Bulbs to capitalize on potential energy savings. Seek funding to replace existing T12 Fluorescent Fixtures to T8 LED fixtures.	Energy Manager	Ongoing	
Investigate feasibility of Solar Powered Water Heater System	Determine if installation of solar powered water heating system feasible.	Energy Manager and Agency Staff	Ongoing	
Investigate feasibility of Power Company LED/ Solar Light Pole Leasing Program.	Determine if lighting can be upgraded on pole lighting by utility company	Energy Manager and Agency Staff	Ongoing	
Investigate Heating Ventilation & Air Conditioning System replacement with an Energy Conservation System	Determine which units can be retrofitted or upgraded to more energy efficient units	Energy Manager	Ongoing	
Investigate how to monitor utility consumption on site	Determine the best method to track utility data	Energy Manager	Ongoing	
Site walkthrough with State Energy Office	Look for additional low/no cost projects	Energy Manager and staff	Ongoing	

Educate and engage employees in best practices	Educate and engage employees in energy conservation best practices through meeting presentations, emails, Intranet web sites, etc.	Energy Manager and staff	Ongoing
Building New Retirement Homes to current Energy Codes.	Design and build new facilities to be energy efficient.	Energy Manager and staff	Ongoing
Participate in Duke Energy New Construction Energy Efficiency Design Assistance Program	Participate in the program provided by the Weidt Group.	Energy Manager and staff	Ongoing
Lighting retrofits at cemetery.	Research funding and options to retrofit lighting to LED fixtures.	Energy Manager and staff	Ongoing