2019 Secretary of Defense Environmental Awards
Sustainability, Individual/Team Award

Each year since 1962, the Secretary of Defense (SecDef) has honored installations, teams, and individuals for outstanding conservation achievements, innovative environmental practices, and partnerships that improve quality of life and promote efficiencies without compromising the Department of Defense's (DoD's) mission success. The 2019 SecDef Environmental Awards cycle encompasses an achievement period from October 1, 2016 through September 30, 2018 (Fiscal Years (FY) 2017-2018). A diverse panel of 58 judges with relevant expertise representing Federal and state agencies, academia, and the private sector evaluated all nominees to select one winner for each of the nine categories that cover six subject areas: natural resources conservation, environmental quality, sustainability, environmental restoration, cultural resources management, and environmental excellence in weapon system acquisition.

About the Sustainability, Individual/Team Award

The Sustainability, Individual/Team award recognizes efforts to prevent or eliminate pollution at the source, including practices that increase efficiency and sustainability in the use of raw materials, energy, water, or other resources. The sustainability award also recognizes energy efficiency and renewable energy practices, greenhouse gas reduction efforts, procurement of sustainable goods and services, waste diversion, and efforts to plan for adaptation and resilience. Sustainable practices ensure that DoD protects valuable resources that are critical to mission success. The 2019 winner of the Sustainability, Individual/Team award is the *East Campus Reclaimed Water Team, National Security Agency, Fort Meade, Maryland*.

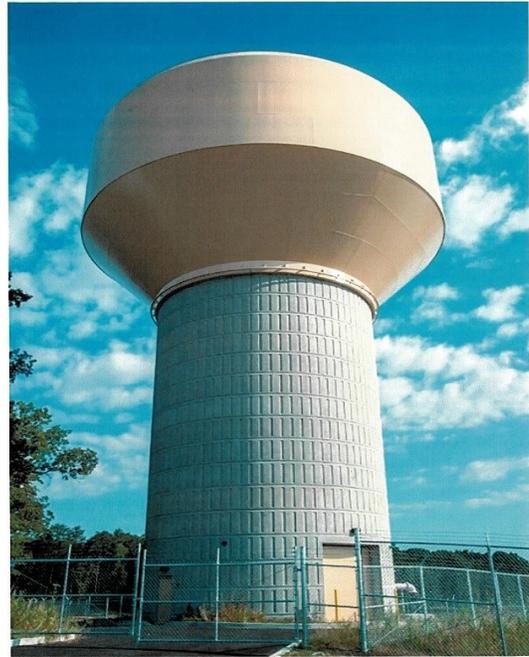### About East Campus Reclaimed Water Team, National Security Agency, Fort Meade, Maryland

The National Security Agency (NSA) is a Defense Agency located on the Army's Fort George G. Meade installation in central Maryland. Fort Meade is an Army installation with multiple Defense tenants that borders the Baltimore-Washington Parkway between Washington, DC, and Baltimore, MD. Initially called Camp Annapolis Junction, the post opened in 1917 when it was one of 16 cantonments built for troops drafted for World War I. Fort Meade became a training center during World War II, and more than 200 units and approximately 3.5 million Servicemen used its ranges and other facilities between 1942 and 1946. In 1957, the post became the NSA's headquarters. The NSA and Central Security Service campus is determined by an exclusive use agreement within Fort Meade which

The Howard County pumping station, located in Howard County, MD, has the capacity to pump 5 million gallons of reclaimed water per day to the National Security Agency's (NSA's) East Campus.

encompasses approximately 5,400 acres. The NSA Washington campus occupies approximately 775 of those acres. The East Campus Reclaimed Water Team is part of NSA's Installations and Logistics organization, which is responsible for planning, designing, engineering and maintaining all of the NSA Washington campus facilities and infrastructure.

- The East Campus Reclaimed Water Team led an unprecedented military construction program that developed one of the largest applications of reclaimed water for industrial use within the state of Maryland and the Intelligence Community (IC). This water-cooling supply system for high performing computers supports critical IC missions across the globe and uses reclaimed water, reducing costs by 80% when compared to a conventional potable water-cooling method.

- The reclaimed water-cooling supply system included the construction of a 5-million-gallon per day capacity pumping station, 1.5 miles of transmission main water line, and a 1-million-gallon storage tank. This is the primary infrastructure to deliver cooling water to NSA's East Campus Program, which has a greater water-cooling demand than other similar IC campuses. The infrastructure also provides capacity, if required, for existing building systems on NSA's campus.

Pictured here, a 1-million-gallon storage tank located on NSA's main campus stores reclaimed water for cooling facilities and infrastructure on NSA's East Campus.

- The East Campus Reclaimed Water Team's project has successfully reduced the demand for fresh water from sensitive and taxed ecosystems and is a sustainable long-term source of quality cooling tower water. Using reclaimed water reduces NSA's need to consume additional potable water and instead re-uses a waste stream that would otherwise be discharged into the Little Patuxent River at a rate of approximately 2 million gallons per day, which is equivalent to filling two Olympic sized swimming pools daily.

- The NSA plans to eventually put all its facilities at Fort Meade on reclaimed water, effectively eliminating the need to draw over 4 million gallons per day of water from critical ground aquifer systems. The reclaimed water-cooling supply system also has no requirement to drill new wells to support the center's cooling needs, making it the most sustainable option.

The NSA's chilled water distribution system keeps high performing computer systems cool and functional, allowing critical intelligence community missions across the globe to proceed without impediments. These chilled water pipes are located in the high-performance computing center.

- The East Campus Reclaimed Water Team also achieved 20% forest restoration on the construction site. The restoration effort incorporated plantings into the design of stormwater management features and restored some of the riparian buffer of the adjacent Midway Branch, which has resulted in a substantial improvement of the natural habitat along the stream bed.

- The East Campus Reclaimed Water Team has shared lessons learned from this project with other DoD Components as they prepare to execute projects of similar scale and complexity. This transferability will reduce potable water consumption across the Department, minimizing costs and reducing resource consumption.