

**FAC 8443 Reservoir, Water**

FY25 SUC: \$0.00055 / GA

Source: Inflated from previous FY using ENR labor and material cost indices to measure actual inflation

Original Source: Multiple Government Sources

## Subject

Reevaluation of Sustainment Unit Cost for FAC 8443 Reservoir, Water

## Background

For the FY21 run of Sustainment Unit Cost modeling, the FSM Configuration Support Panel (C/SP) requested that FAC 8443 be reexamined for sustainment modeling. Since the inception of the Facilities Sustainment Model, FAC 8443 had no sustainment costs associated to it, as the majority of sustainment activities near or associated with water reservoirs were resident in the definitions of other FACs (dams). As the body of knowledge of how to upkeep a lake or reservoir has grown, it is evident that there are maintenance tasks specific to the reservoir that merit a “non-zero” modeling effort.

## Findings

The USACE research center for hydrology, ERDC’s Coastal and Hydraulics Laboratory report that there are maintenance activities for reservoirs. The Environmental Protection Agency has Best Management Practices (BMP) for inspection and maintenance of reservoirs. The two primary documents used to aid in the selection of sustainment activities for a reservoir are: Stormwater Best Management Practice, Design Guide Volume 3, Basin Best Management Practices by Clar and Barfield

Managing Lakes and Reservoirs, Prepared by the North American Lake Management Society.

BMP Modeling Concepts and Simulation, EPA/600/R-06/033 by Huber, Cannon and Stouder

## Expected Service Life

The average age of a Reservoir in the 2019 RPAD is 35 years. This will be used as the designated “Estimated Service Life” Activities, such as major dredging, performed after this date will be considered restoration, and not be captured in sustainment modeling.

## Nature of the Inventory

FAC 8443 Reservoir UM – MG

Definition: An impoundment for the storage of water that, in its natural condition, is not safe for drinking. 7 CatCodes; 2 each for Army, WHS, Navy and 1 CatCode for the Air Force.

There are 523 non-zero Asset Allocations in the 2019 RPAD. Mean size = 14.0 MG

## Inputs

Analyzing service and independent sources, the following tasks are assessed as required for the typical facility over the life of a water reservoir, and meet the DoD definition of a sustainment activity:

- Maintenance Inspection, Debris Removal, and Mechanical Component Testing
- Repair Embankment and side slopes
- Removing accumulated sediment

- Repair or replacement of mechanical components; valve, piping, sluice gates, access hatches

The following activities are associated with reservoirs, but are excluded from being incorporated into SUC modeling:

- Wildlife, fish, pest, or mosquito management
- Aquatic vegetation management
- Water quality activities
- Grass mowing in the vicinity of the reservoir ☐ Trash, graffiti, or vandalism remediation.

#### Summary

With labor, material, and equipment costs for these activities, the SUC is \$430.64/MG