

CEMP-ET

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
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ETL 1110-3-469

Technical Letter
No. 1110-3-469

3 February 1995

Engineering and Design
ALTERNATIVES FOR SECONDARY TREATMENT
AT CENTRAL VEHICLE WASH FACILITIES

1. Purpose. This letter provides design and construction criteria for alternative secondary wastewater treatment systems at Army Central Vehicle Wash Facilities (CVWF). This letter will promulgate, as well as supplement, criteria found in HQUSACE Architectural and Engineering Instructions, Design Criteria. The information in this letter is to be used on a temporary basis until it can be incorporated into TM 5-814-9, Central Vehicle Wash Facilities.
2. Applicability. This letter applies to all HQUSACE elements, major subordinate commands (MSC), districts, laboratories and field operating activities (FOA) having Army military construction responsibility.
3. Objective. The Corps has designed and constructed numerous CVWFs at Army installations throughout CONUS. These facilities are used to clean the exterior of tracked and wheeled tactical vehicles to increase their useful life and prepare them for proper inspection and maintenance. CVWF facilities are designed to conserve water while being efficient, economical, and environmentally safe. Vehicle cleaning activities result in a wastewater that contains soil and small quantities of oil. In a conventional CVWF, washwater is collected in a drain, then treated prior to recycling. Treatment processes include sedimentation, oil/water separation, equalization and one of the following secondary treatment systems: intermittent sand filters, wastewater lagoons, or constructed wetlands. Reclaimed washwater is pumped from a detention basin for reuse in the CVWF. The enclosed criteria will assist in the selection and design of secondary treatment alternatives for CVWFs. Most of the technical information pertaining to intermittent sand filters and wastewater lagoons used in CVWFs has been adapted and/or developed by USACERL based on (a) domestic wastewater treatment technology used throughout the U.S., and (b) from evaluation of secondary treatment systems at existing CVWF installations. Most of the information required for planning and design of constructed wetlands has been developed by researchers under contract with the U.S. Environmental Protection Agency (USEPA), by the Corps, and by numerous researchers and experts throughout the world. This letter was developed to establish design and

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construction criteria for alternative secondary wastewater treatment systems at CVWFs.

4. Action. Where secondary wastewater treatment is required for CVWF facilities, the design and construction criteria included in Appendix A to this ETL will be used in the design of the project.

5. Implementation. This technical letter will have immediate application, as defined in paragraph 6c, ER 1110-345-100.

FOR THE DIRECTOR OF MILITARY PROGRAMS:

1 Appendix
APP A - Alternatives
for Secondary Treatment
at Central Vehicle Wash
Facilities


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