Federal Aviation Agency

ADVISORY CIRCULAR

AC NO:	AC 150/5220-4
	AIRPORTS
EFFECTIVE:	12/7/67

SUBJECT: WATER SUPPLY SYSTEMS FOR AIRCRAFT FIRE AND RESCUE PROTECTION

1. PURPOSE. This circular provides guidance for establishing the water system requirements considered essential to support the aircraft firefighting and rescue service on airports.

2. REFERENCE. Copies of AC 150/5210-6, Aircraft Fire and Rescue Facilities and Extinguishing Agents, and additional copies of this circular may be obtained from the Department of Transportation, Distribution Unit, TAD-434.3, Washington, D.C. 20590.

3. SCOPE. This circular makes a distinction between the water system requirements to support the aircraft firefighting and rescue operation and the structural fire protection operation.

4. GENERAL. This circular deals with the water supply system necessary to support the aircraft firefighting and rescue operation during landing, takeoff, taxiing, fueling, and passenger loading/unloading. Install fire hydrants on the periphery of aprons to facilitate resupply of aircraft fire and rescue trucks in extending their foam-making capabilities. Suggestions on water systems for fire protection of airport buildings, aircraft maintenance facilities, automotive parking lots, fuel storage areas, etc., have been excluded. Standards for these requirements are established by the American Insurance Association, 85 John Street, New York, New York 10038.

5. WATER QUANTITY RECOMMENDATIONS. Maintain waterflow and storage quantities to supply:

   a. A waterflow rate of 500 gallons per minute (gpm) at 10 pounds per square inch (psi) residual pressure for two hours at airports in Indexes IV and V of AC 150/5210-6.

b. A waterflow rate of 1,000 gpm at 10 psi residual pressure for two hours at airports in Indexes VI through VIII of AC 150/5210-6. Design the system to assure the availability of this waterflow from two adjacent hydrants.

6. WATER SYSTEMS.

a. When installing new water supply and distribution systems, plan for components, such as, wells, pumps, storage tanks or reservoirs, mains, hydrants, and valves. When extending existing systems, determine the capability of present components to support the additional requirements.

b. Space fire hydrants 300 to 500 feet apart along the periphery of aprons which are used for aircraft parking and passenger loading/unloading. Do not place hydrants in locations where they will constitute an obstruction to aircraft or vehicle movements.

7. EXTENT OF SYSTEMS.

a. These systems will provide resupply points for aircraft fire-fighting water/foam and/or tank trucks which are closer to aircraft operational areas than the hydrants installed off the airports.

b. A hydrant system installed along runway shoulders as a resupply point is not considered a suitable substitute for the aircraft fire and rescue equipment suggested in AC 150/5210-6. As aircraft accident locations are unpredictable, a hydrant system along a runway would not negate the need for aircraft fire and rescue trucks.

Chester G. Bowers, Director
Airports Service

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