
Requirements for Agricultural Buildings

The purpose of this document is to provide information about general Fire Code requirements for new Agricultural Buildings constructed in Merced County. It is intended to be general information only and may not address every situation that could arise. Contact the Merced County Fire Prevention Office at 385-7347 if you have questions or need additional information.

Plan Check & Fire Inspection Fees

This fee is for providing services directly related to the project. Many projects require plan checks and inspections by the Merced County Fire Prevention Office. Fees for these services are based on the costs for providing the service. Fire plan check fees are \$85.00 per hour. The fee for inspecting new projects for an "Agricultural Building" is between \$85.00-\$255.00. These fees are also collected at the time that the building permit is issued.

Access Requirements

Access must be provided so that fire apparatus can get within 150' of any part of a structure. Access roadways must be 20' wide with a vertical clearance of 13'6" and capable of supporting vehicles weighing 75,000 pounds. More detailed requirements can be found in the **Fire Access** document. Some exceptions may be granted as outlined in the Fire Code.

On-Site Water Requirements (assumes the area is not served with a municipal water system)

An approved on-site water supply for fire suppression is required for many new projects located in rural areas where municipal water systems do not exist. This water supply must be accessible from an approved access roadway that is at least 20' wide with a vertical clearance of 13'6". On-site water supplies may include tanks, cisterns, swimming pools, and ponds, but must be accessible and available year around.

A dry fire hydrant or other approved access must be located not less than 50' or more than 150' or as approved from the building being protected. Structures requiring less than 5,000 gallons, pole barns, and one and two family residences equipped with approved automatic sprinkler systems are exempt from providing on-site water storage. Required on-site water supplies for other structures equipped with automatic fire sprinkler systems may be reduced by up to 75%.

Because of the expense that may be associated with providing an approved water supply it is strongly recommended that the proposed water supply be approved by the Fire Marshal prior to submitting plans.

National Fire Protection Association (NFPA) Standard #1142 is used to calculate the amount of on-site water supply that is required for structures where no municipal water supply is available. This standard is a method to determine the minimum requirements for alternative water supplies. It is mainly to assist the fire department. The following formula will be used:

$$\text{Gallons of on-site water} = \frac{\text{Volume of structure (in cubic feet)}}{\text{Occupancy Hazard Classification}} \times \text{Construction Classification}$$

Volume of Structure = Total volume of structure in cubic feet

Occupancy Hazard Classification

- 3 for severe hazard uses such as hay storage, wood storage and manufacturing
- 4 for high hazard uses such as feed stores, repair garages, warehouses and stores
- 5 for moderate hazard uses such as farm storage, restaurants, and unoccupied buildings
- 6 for low hazard uses such as churches, offices, service stations, stables
- 7 for light hazard uses such as homes, schools, offices

Construction Classification

- Type I (masonry non combustible) = .50
- Type II (metal or non-combustible) = .75
- Type V (wood and wood frame) = 1.5

The required water supply may be increased by up to 50% for structures located within 50' of property lines or other buildings.

Automatic Fire Sprinklers

Automatic fire sprinklers are only required by the current California Fire Code or other authorities having jurisdiction. Automatic fire sprinklers are not generally required but they can reduce water supply or fire access requirements. However, see California Fire Code Chapter 23 regarding high piled storage requirements for more information.