



## Water Tanker Fill Station Standard Drawings Include Options

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Many locations across the Forest Service fill fire tankers and engines using equipment, such as fire hydrants, that could contaminate drinking water. This practice exists because practical, code-compliant plans have not been easily accessible when a water tanker fill station was needed. In addition, an air gap mechanism that would handle the required flow without splashing and drenching the employees responsible for filling the tanker has not been available commercially and had to be developed (figure 1).

Water tanker fill station standard drawings are now available on the Forest Service internal Web network. These drawings should meet the needs of any water tanker fill location and eliminate the possibility of contaminating drinking water.

The standard drawings include pressure- and air gap-type fill stations (figures 2 and 3) that prevent backflow and potential contamination of the potable water supply. Both fill stations can be used with either a steel or wood support



Figure 1—Testing the air gap prototype. The prototype, built by mechanical engineering technicians at the Missoula Technology and Development Center (MTDC), produces no splash while operating.

### Highlights...

- Forest Service fire engines and tankers are often filled by using fire hydrants and other devices that don't protect drinking water supplies from contamination.
- Standard drawings for water tanker fill stations are now available.
- The drawings include pressure and air gap-type fill stations and options to suit almost any location.

structure and either a camlock quick disconnect or a pipe clamp connection between the tower and the fill hose. The steel structure has an optional swivel that allows the fill arm to swing away from the fill location when not in use. The air gap-type fill station can be constructed with either a self-draining blowoff or a gravity drain for winter shutdown. The standard drawings include keyed notes and details that support all fill station types and options. An engineer must assemble the kit of drawing parts and ensure the tower and foundation meet local structural requirements. The standard drawings for the fill stations, as well as sample operations and maintenance



