



# BBS MEMO

Ohio Board of Building Standards

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## Regulation of Storage Tanks in the Ohio Building Codes

For many years the Board of Building Standards (Board) staff has received calls inquiring as to whether the building departments have jurisdiction to enforce regulations relating to storage tanks of all shapes and sizes and for many different purposes. Without specific language in the Ohio Building Code (OBC), it was always a judgement call on the part of the building official to determine whether a tank was a regulated structure within the scope of the Board's rules. This resulted in many inconsistencies in enforcement policies across the State. Some building departments were looking at all aspects of tank installations, some were not looking at tank installations at all, and others were only looking at the foundations and the electrical portions of tank installations.

There exist many types and sizes of tanks used for many different purposes. There are tanks used for the storage of liquids such as water, industrial process chemicals, or fuel. There are tanks used for the storage of gases such as oxygen for hospital use or air used for factory tools. There are above-ground storage tanks, below-ground storage tanks, storage tanks within a building, storage tanks on top of buildings, and storage tanks attached to equipment. There are vertical tanks, horizontal tanks, spherical tanks, and tanks with floating roofs. There are tanks vented to the atmosphere and tanks that contain the pressure within the tank. There are tanks made of plastic, tanks made of steel, and tanks made of fiberglass...just to name a few!

To complicate the matter even further, other state and local agencies also have jurisdictional authority and require permits and approvals for storage tank installations. For example, the Ohio Environmental Protection Agency (EPA) has jurisdiction for public water systems which include the water supply tanks, the Ohio Department of Health (ODH) has authority for private water systems which include the water supply tanks, and the State Fire Marshal's Ohio Fire Code addresses the construction and installation of tanks utilized for the storage of hazardous materials and flammable and combustible liquids and gases (such as those found at motor fuel-dispensing facilities, bulk storage plants, industrial process plants, power plants, etc.)

Effective January 1, 2016, Board amended the OBC and the Residential Code of Ohio (RCO) Chapter 1 (Section 101.2) and added and amended definitions within Chapter 2 of the OBC, Ohio Mechanical Code (OMC), Ohio Plumbing Code (OPC), and RCO to clarify that the only tanks that are within the jurisdiction of the building departments are those tanks that are connected to and supply building service equipment. Building service equipment allows for the safe, sanitary, and energy efficient occupancy of a building and are within the scope of the OBC while industrial processes, piping, equipment, components, and systems are not.

There are many types of tanks that are located near, within, or on buildings, but not all tanks are within the scope of the building codes.

A few examples of tanks that are within the scope of the building code would be: a potable hot water tank supplying hot water for bathing, washing, and cooking within a building; a water tank dedicated to supplying fire protection systems for a building; an LP gas tank supplying a furnace, stove, or a hot water heater for a building; a diesel-oil fuel tank connected to a generator which supplies backup power to a building.

A few examples of tanks that are not within the scope of the OBC would be: water treatment plant tanks; waste water treatment plant tanks; aboveground municipal water supply tanks; aboveground gasoline tanks and jet fuel

tanks at bulk storage farms; underground gasoline tanks serving motor fuel dispensers at a fueling station; compressed natural gas tanks serving motor fuel dispensers; hydrogen tanks serving motor fuel dispensers; chemical tanks used in industrial processes; private sewage disposal tanks serving a residence; cisterns used for capturing rainwater for reuse in a building; and so on. These type of tanks would be considered process equipment. It is the Board's position that process equipment and the associated component parts such as tanks, process piping, tank supports, brackets, stands, concrete pads, foundations, and electrical wiring are outside the scope of the Board's rules.

When evaluating whether a given tank is within the scope of the code, first determine the purpose of the tank. If the purpose of the tank is related to the safe and sanitary occupancy of the building and the tank is connected to building service equipment, then it is likely that the tank is regulated within the scope of the building codes. As always, however, there are exceptions to this test. As previously mentioned, the ODH has statutory authority for the regulation of private water systems (including wells, tanks, and cisterns) and private sewage disposal tanks (septic tanks) which would generally be considered building service equipment. Additionally, the Ohio EPA has statutory authority for the regulation of public water systems (including elevated tanks supplying potable water to several buildings). As a result of these agencies having statutory authority for these systems, the Board exempted these type of tanks from the scope of the building codes.

It should be noted that the OBC does address the storage of flammable and combustible liquids and hazardous materials when located within a building. Even though the tanks used for storage of these hazardous materials are typically not associated with building services equipment, and therefore not regulated, the building must be designed with additional safety features in order to address the risks associated with these dangerous occupancies. As a result, details of the quantities and arrangement of how hazardous materials are stored within buildings or structures are required to be provided to the building official for approval of the building. In this case, the tanks are not being regulated, the safety of the building is.

If you have further questions regarding these requirements or would like to be added to our stakeholder list to receive notifications of future building code rule changes, please call the Board's office at 614-644-2613 or e-mail to [BBS@com.state.oh.us](mailto:BBS@com.state.oh.us).