STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

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DWS Circular Letter #2015-09

TO: Community and Non-Transient Non-Community Public Water Systems

FROM: Lori Mathieu, Public Health Section Chief, Drinking Water Section

DATE: July 7, 2015

RE: Inspection of Hydropneumatic Storage Tanks and Asset Management Plans

A conventional hydropneumatic storage tank catastrophically failed at a community public water system on June 23rd, 2015. The tank exploded and a pump station was totally destroyed. Thankfully, the explosion occurred around 3:00 am and no injuries or loss of life occurred. The distribution system depressurized and major emergency measures were required to restore and sustain water service. A preliminary analysis indicated that several factors contributed to the tank's failure including internal corrosion, age, and construction. Hydropneumatic water and wastewater tanks have failed similarly in California http://www.acwajpia.com/filecabinet/rmnopw/hydropneumatic_tank_insp_9-28-12-jh.pdf and regrettably a loss of life did occur in one event. The DPH strongly recommends that all operational hydropneumatic tanks be evaluated. The evaluation should consider structural integrity, manufacturer's pressure ratings, age and expected service life, and condition of internal coating systems. Public water systems should further verify that pressure relief valves are installed and operational and high pressure alarms are installed and operational. Current operational pressure settings of hydropneumatic tanks should be reviewed to determine if the current operating pressures comply with the manufacturer's recommended range. If a tank is found to be structurally deficient and requires immediate replacement, the system pressure may need to be reduced temporarily to prevent a catastrophic failure of the tank.

The catastrophic failure of public water supply infrastructure provides an excellent reminder of the importance of an asset management plan. The plan assesses the age and the condition of water system components to set aside reserve funds to replace aging components before catastrophic failure and the resulting loss of water supply occurs. The DPH's asset management plan checklist is posted on the website at http://www.ct.gov/dph/lib/dph/drinking_water/pdf/AM_Checklist.pdf. An excellent source of funding to replace or rehabilitate aging infrastructure is the DPH's Drinking Water State Revolving Fund (DWSRF), http://www.ct.gov/dph/dwsrf. The program offers long-term low interest loans to community and non-profit non-community PWS for capital improvement projects. Please contact me at 860-509-7333 or Lori.Mathieu@ct.gov for further questions or concerns on hydropneumatic tanks.

cc: Ellen Blaschinski, Branch Chief – Regulatory Services Branch, DPH
Local Health Directors
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DPH
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