

Overview: Rhinebeck Water Treatment Plant: Vulnerability Assessment

Rhinebeck Village gets its drinking water from the Hudson River and relies on a water treatment plant located on the bank of the river. 2012 Superstorm Sandy revealed that our water treatment plant is precariously vulnerable to sea level rise. This is due to an increase in the frequency and devastation of massive storms and climate-change-related rising levels of the Hudson River.

After Superstorm Sandy, Heinz Sauer, who at the time was a Village Trustee, led an effort to do a vulnerability assessment and research. The Village government worked with Crawford and Associates of Hudson NY (C&A). In 2016 a \$12,750 grant was received through NYSDEC Hudson River Estuary Program to do the assessment and recommendations from an engineering standpoint.

Crawford and Associates delivered the vulnerability report in June 2017. The report also includes a plan for measures to take to address the threats. We are including Crawford's original study (the first of its kind in the region) on the impacts to our water treatment plant due to sea level rise.

The vulnerability assessment showed that the water treatment plant is sufficiently elevated to avoid flooding in all sea level rise (SLR) scenarios; though pending research may indicate that the plant should develop measures to protect against saltwater intrusion in the future from an event like Superstorm Sandy when combined with predicted sea level rise.

Because of this analysis, the Village:

Sought another grant to protect the LLPS (Low Lift Pump Stations). Having received the \$32,500 grant from Climate Smart Communities program in December of 2017, the Village implemented the floodproofing protection as recommended in the vulnerability assessment. As a result of this study we "fortified" the low lift pump stations.