

## **Storm Water Application & Challenges**

#### Spring 2019



Rainwater cistern tank at manufacturing facility in Ohio.

www.highlandtank.com

### STORMWATER REUSE

There are many benefits to harvesting and reusing rainwater. Sustainable water management, reduced dependence on municipality water, less storm water runoff, and cost savings are some of the reasons that facilities work to incorporate rainwater harvesting systems in their operations.

A nationally-known manufacturer of high quality entry door systems, windows, siding, and manufactured stone needed 45,000 gallons of water a day for their manufacturing processes. The company did not have access to public water. They would have had to run one mile of pipe from the local municipality at an initial cost of \$325,000. The average annual cost would have been \$300,000.

The manufacturer had two wells on site, but these could only provide 43,200 gallons of water per day – just short of the 45,000 gallons needed for production.

By utilizing Highland Tank's rainwater collection tanks, the manufacturer was able to collect water from a 544,000 sq./ft. roof area in addition to the two wells. Together, these sources filled two 60,000 gallon cistern tanks that fed three 30,000 gallon day tanks. The project featured vortex filters, transfer pumps, filtration and disinfection skid, booster pump, and controls.

Highland Tank's rainwater collection tanks offer storage for harvested water from multiple catchment areas, providing reliable water storage for reuse. Rainwater collection tanks are available for underground or aboveground installations at capacities ranging from 185 to 60,000 gallons. These factorywelded steel tanks are designed to meet NSF and AWWA codes. Visit our website to learn more.



## **PROJECT PROFILE**

- 544,000 sq/ft roof area
- Water Demand = 45,000 gallons per day

## **DESIGN CHALLENGES**

- Scale of building and burial depth of cisterns
- Storage volume and security
- Water supply 3 drilled wells 2 15 gpm
  - 1 0 gpm
- Alternate water supply 1 mile pipe run from local municipality

## **CONCEPTUAL DESIGN**

- 17 Vortex Filters
- 2 60,000 gallon underground cisterns
- 3 30,000 gallon aboveground day tanks
- Transfer pumps
- Filtration/disinfection skid
- Booster pump
- Controls









# HighDRG-Pure



Call 814-893-5701 today or visit us at www.highlandtank.com for more information on water reuse systems.

**Contact: Adam Hemminger** Email: ahemminger@highlandtank.com



Stoystown, PA One Highland Road Stoystown, PA 15563-0338 814.893.5701

### 717.664.0600 Watervliet, NY

Manheim, PA

958 19th Street Watervliet, NY 12189-1752 518.273.0801

4535 Elizabethtown Road

Manheim, PA 17545-9410

Greensboro, NC 2700 Patterson Street Greensboro, NC 27407-2317 336.218.0801

Friedens, PA 1510 Stoystown Road Friedens, PA 15541-7402 814.443.6800

Mancelona, MI 49659-7968 231.587.8412

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Lebanon, PA 2225 Chestnut Street Lebanon, PA 17042-2504 717.664.0602

Clarkston, MI 4701 White Lake Road Clarkston, MI 48346-2554 248.625.8700

Mancelona, MI 9517 Lake Street