

July 24, 2019



Mr. Joel Dock
Planner II
Planning and Design Services
Department of Develop Louisville
444 South Fifth Street, Suite 300
Louisville, KY 40202

Re: Breakers at Prospect
Case No: 19SUBDIV1001

Dear Mr. Dock,

Louisville Water is submitting this letter as requested by Louisville Metro Planning and Design Services to review and comment on a proposal for stormwater management for the proposed Breakers at Prospect (Breakers) residential development. Louisville Water has significant concern that the stormwater infiltration wells (system) proposed for the Breakers development may adversely impact the drinking water supply for the B. E. Payne Water Treatment Plant.

Louisville Water owns and operates two drinking water treatment plants (WTPs) serving more than 850,000 customers in an eight-county area. The two water treatment plants are the Crescent Hill WTP, a 180 MGD surface water treatment plant located just east of downtown Louisville, KY with intakes on the Ohio River; and the B.E. Payne WTP, a 60 MGD groundwater treatment plant located in Prospect, KY supplied by groundwater from riverbank filtration. The riverbank filtration system at the B.E. Payne WTP reflects a \$60 million investment by Louisville Water for and on behalf of the citizens of Louisville and adjoining counties. As a groundwater plant, the B.E. Payne WTP is not designed to treat contaminants associated with surface water run-off, including but not limited to: volatile and semivolatile organic compounds (e.g. oils, greases, solvents, pesticides, herbicides), nitrogen-containing fertilizers, and other hydrophilic, bio-stable chemicals. A full list of regulated compounds can be found here: <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>.

Louisville Water must comply with the requirements of the Wellhead Protection Program (WHPP; 401 KAR 4:220, SDWA Section 1428) to protect the quality of the drinking water supply. Any system that allows direct subsurface infiltration of surface water drainage runs counter to the principles of the WHPP and increases the risks of groundwater contamination. Contaminant inventory and risk elimination are central components of the WHPP. Under the WHPP, Louisville Water is required to delineate the wellhead protection area (WHPA) which establishes the steady-state boundary for the groundwater capture zone that supplies the B.E. Payne WTP (Fig. 1). The groundwater modeling that was conducted for delineation of the WHPA used a recharge value of approximately six inches per year. Further analysis would be needed to characterize the impact of greater infiltration rates. A copy of the Wellhead Protection Plan can be found here: <https://www.louisvillewater.com/water-quality/wellhead-protection>.

The Environmental Protection Agency (EPA), Region 4, has primacy of Class V injection wells in the Commonwealth of Kentucky and has the responsibility as the regulatory agency under the Underground Injection Control (UIC) Program and sole authority for approval of subsurface stormwater infiltration systems (<http://www.epa.gov/uic>). Any system that facilitates the conveyance, intrusion or infiltration of surface water directly into groundwater supplies within a registered WHPA should be subject to review by the EPA to determine compliance with UIC program requirements. Where UIC is applicable, program monitoring requirements still may not provide adequate protection of groundwater

supplies. Preventative measures must be in place. Once contaminants enter the groundwater supply, it will be very difficult, if not impossible or impractical, to remove them.

In summary, Louisville Water has concerns of potential contamination of the aquifer and opposes any type subsurface infiltration that release fluids into the groundwater supply in the wellhead protection area.



Sincerely,

Dr. Rengao Song
Director
Water Quality and Research
Louisville Water

Cc:
Jeaneanne Gettle
Director
Water Division
US EPA, Region 4
Atlanta Federal Center, MC 9T25
61 Forsyth Street
Atlanta, GA 30303-8960

Brian Smith
Chief
Safe Drinking Water Branch
US EPA, Region 4
Atlanta Federal Center, MC 9T25
61 Forsyth Street
Atlanta, GA 30303-8960

Peter Goodmann
Director
Division of Water
Department of Environmental Protection
Kentucky Energy and Environmental Cabinet
300 Sower Boulevard
Frankfort, KY 40601

David Johnson
Development and Stormwater Director
Louisville and Jefferson County Metropolitan Sewer District
700 W. Liberty
Louisville, KY 40203

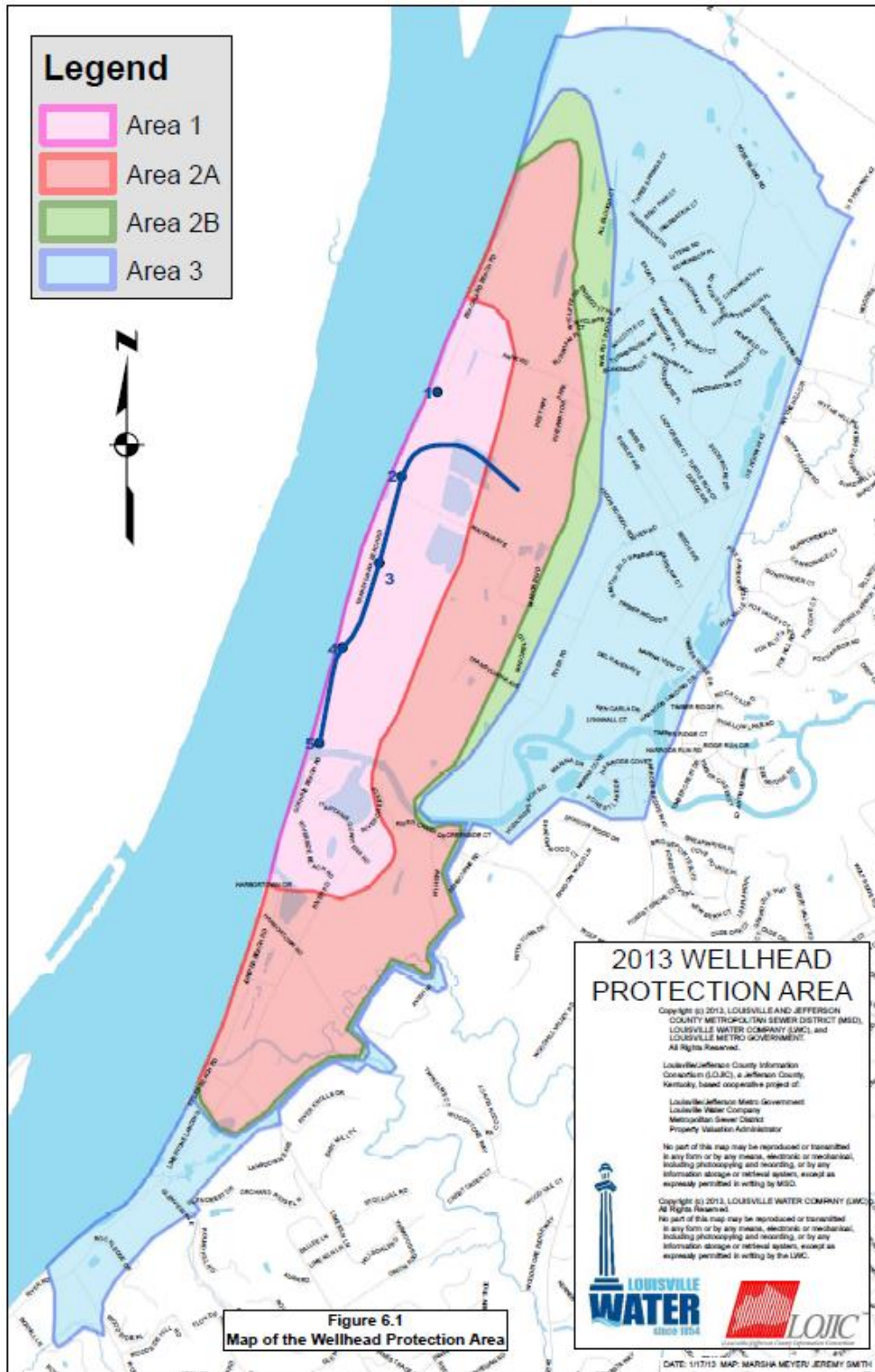


Figure 1. Steady-state wellhead protection area delineation for Louisville Water Company.