

General Project Theme: Water Treatment/Filtration in Edwardsville

Project Idea 1: Has the water treatment process been adequate?

Proposed Research Question: (stated as a testable question)

How well does the water treatment plan combat contaminants such as microplastics?

Proposed Hypotheses: (stated as mutually exclusive answers to your research question)

If the water treatment plan is adequate, then the microplastic percentage will be low.

Keywords:

Microplastics

Water Infrastructure

Water Treatment Plan

Contaminants

WASH(Water, Sanitation, and Hygiene)

Found Review Articles: (list the citation and what it says about your topic)

Levin, Ronnie, et. al. "US Drinking Water Quality: Exposure Risk Profiles for Seven Legacy and Emerging Contaminants." *Nature News*, Nature Publishing Group, 22 Sept. 2023, [www.nature.com/articles/s41370-023-00597-z](https://www.nature.com/articles/s41370-023-00597-z). Accessed 06 Sept. 2025.

Found Research Articles: (list the citation and what it says about your topic)

*Plastic and Human Health: A Micro Issue?* | *Environmental Science & Technology*, [pubs.acs.org/doi/10.1021/acs.est.7b00423](https://pubs.acs.org/doi/10.1021/acs.est.7b00423). Accessed 03 Sept. 2025.

Found SciComm Articles: (list the citation and what it says about your topic)

Christensen, Jen. "Nearly Half of the Tap Water in the US Is Contaminated with 'Forever Chemicals,' Government Study Finds." *CNN*, Cable News Network, 22 Mar. 2024, [www.cnn.com/2023/07/05/health/pfas-nearly-half-us-tap-water-wellness](https://www.cnn.com/2023/07/05/health/pfas-nearly-half-us-tap-water-wellness). Accessed 06 Sept. 2025.

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Project Idea 2: Which stakeholders would be most affected should the water filtration process fail?

Proposed Research Question: (stated as a testable question)

How are vulnerable communities affected by untreated/unclean water?

Proposed Hypotheses: (stated as mutually exclusive answers to your research question)

If the water treatment plan were to fail, then children, the elderly, the immuno-compromised, and the uniformed will be affected the most.

Keywords:

Water Treatment Plan

Contaminants

Immuno-Compromised

WASH(Water, Sanitation, and Hygiene)

Found Review Articles: (list the citation and what it says about your topic)

Cescon, Anna, and Jia-Qian Jiang. "Filtration Process and Alternative Filter Media Material in Water Treatment." *MDPI*, Multidisciplinary Digital Publishing Institute, 1 Dec. 2020, [www.mdpi.com/2073-4441/12/12/3377](https://www.mdpi.com/2073-4441/12/12/3377). Accessed 03 Sept. 2025.

Found Research Articles: (list the citation and what it says about your topic)

“Principles of Water Treatment.” *Google Books*, Google,

[books.google.com/books?hl=en&lr=&id=dSZHAAAAQBAJ&oi=fnd&pg=PR15&dq=%22water%20treatment%22&ots=aHNz11ugPA&sig=nw4q5GY5KF\\_ee9kaVpFvr8aK3yo#v=onepage&q=%22water%20treatment%22&f=false](https://books.google.com/books?hl=en&lr=&id=dSZHAAAAQBAJ&oi=fnd&pg=PR15&dq=%22water%20treatment%22&ots=aHNz11ugPA&sig=nw4q5GY5KF_ee9kaVpFvr8aK3yo#v=onepage&q=%22water%20treatment%22&f=false). Accessed 03 Sept. 2025.

Found SciComm Articles: (list the citation and what it says about your topic)

Paddison, Laura. “Scientists Discover Concerning New Source of ‘forever Chemicals’ in

Drinking Water.” *CNN*, Cable News Network, 6 Jan. 2025,

[www.cnn.com/2025/01/06/climate/forever-chemicals-pfas-drinking-water-drugs-wellnes](https://www.cnn.com/2025/01/06/climate/forever-chemicals-pfas-drinking-water-drugs-wellnes).

Accessed 03 Sept. 2025.