Developed by AdEdge Water Technologies, LLC, H₂Zero™ Backwash/Recycle Systems conserve water by storing and treating contaminated backwash water from filtration and treatment systems.

Nearly all water filtration related processes that remove target contaminants generate some liquid or solid residuals that need to be subsequently managed. Particularly with nuisance parameters such as iron and manganese, they present no hazards to human health or the environment. However, increasingly stringent regulatory discharge standards and emphasis on sustainability are demanding more environmentally friendly solutions for these residuals.

AdEdge H₂Zero™ systems can be customized and designed for most manufacturers’ adsorption, oxidation/filtration or coagulation/filtration systems, whether backwashing is infrequent or performed one or more times per week.

Key features include a vertical polyethylene or a steel tank for holding the backwash water, a reclaim pump skid, integrated controls, particle filtration, as well as information data for solids management.

System benefits include:

- Optimal use and maximum conservation of water
- Regulatory agency acceptance
- Environmentally friendly solution that requires little or no permitting
- Reclaim system can be automated for minimal operation and maintenance
- Can be integrated with a treatment system PLC and touch screen panel
- Contaminants are reduced in volume and safely managed on or off site
The figure below shows one type of recycle option for an iron and manganese removal system. Key components include a backwash holding tank, integrated controls, reclaim pump skid, particle filtration, and solids management.