Living Technology:

Wastewater Treatment & Reuse

Centralized Model

'Once –through'

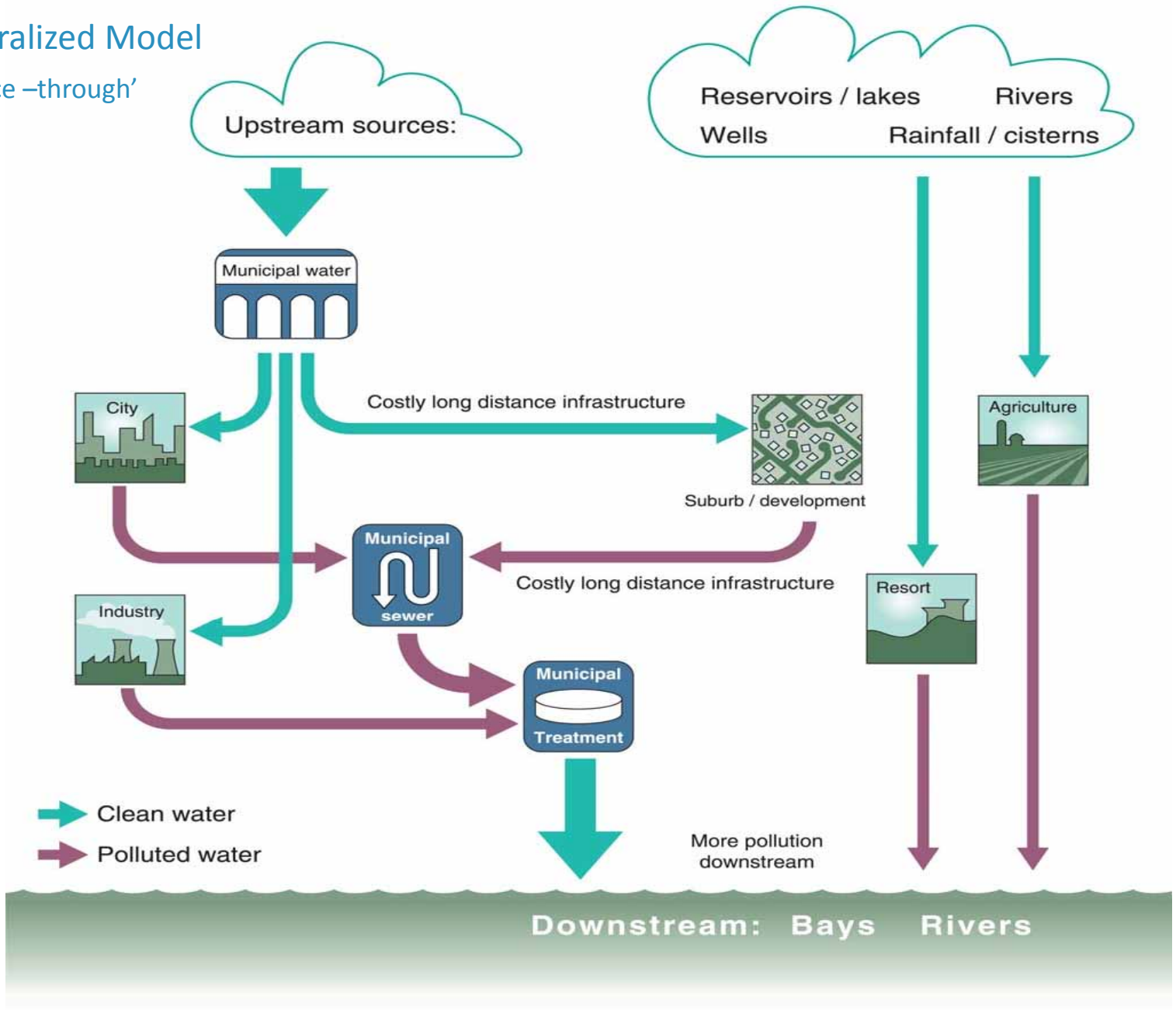


Figure 1: Where We Are Now: Centralized, Once Through Model

Decentralized Reuse

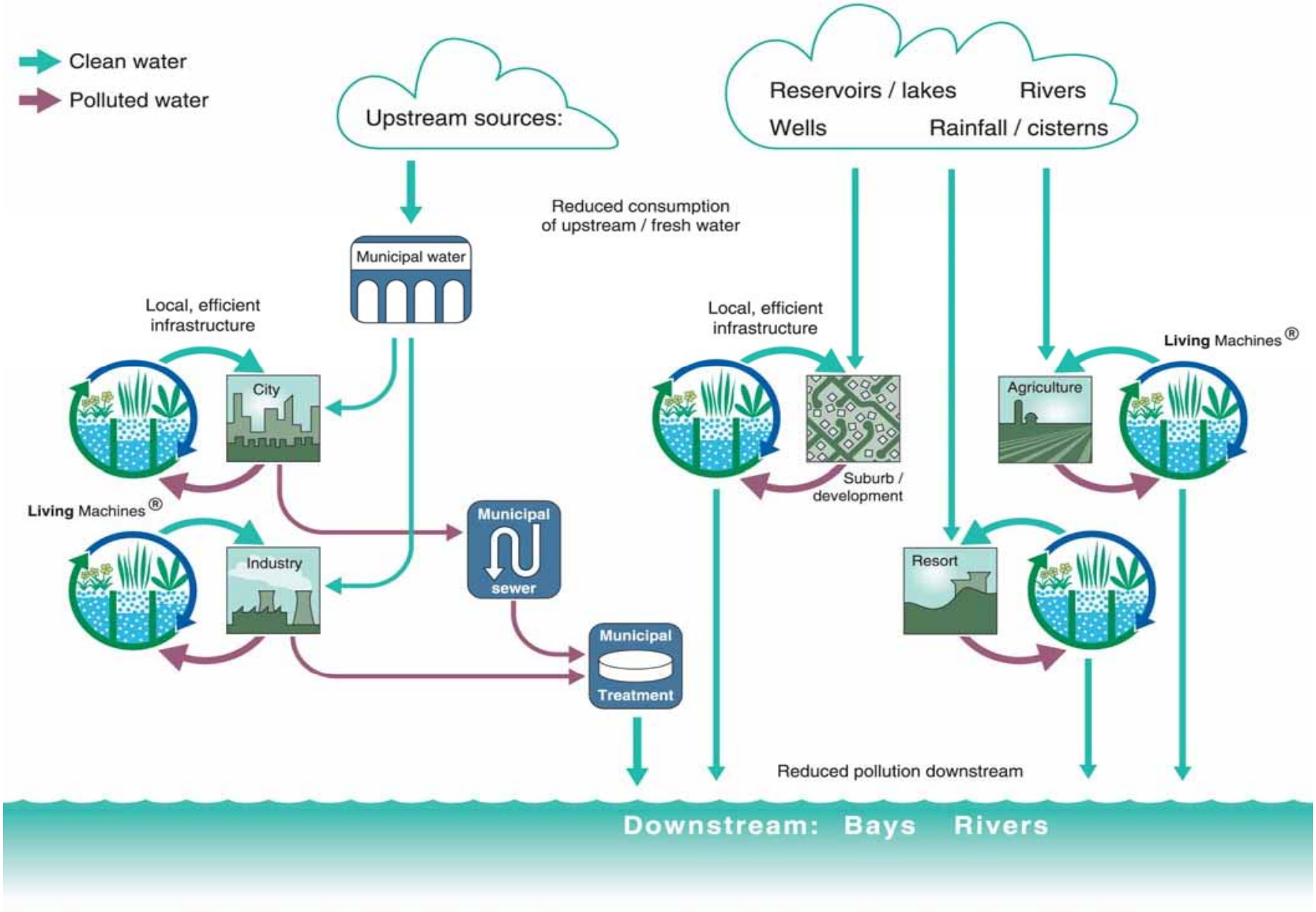
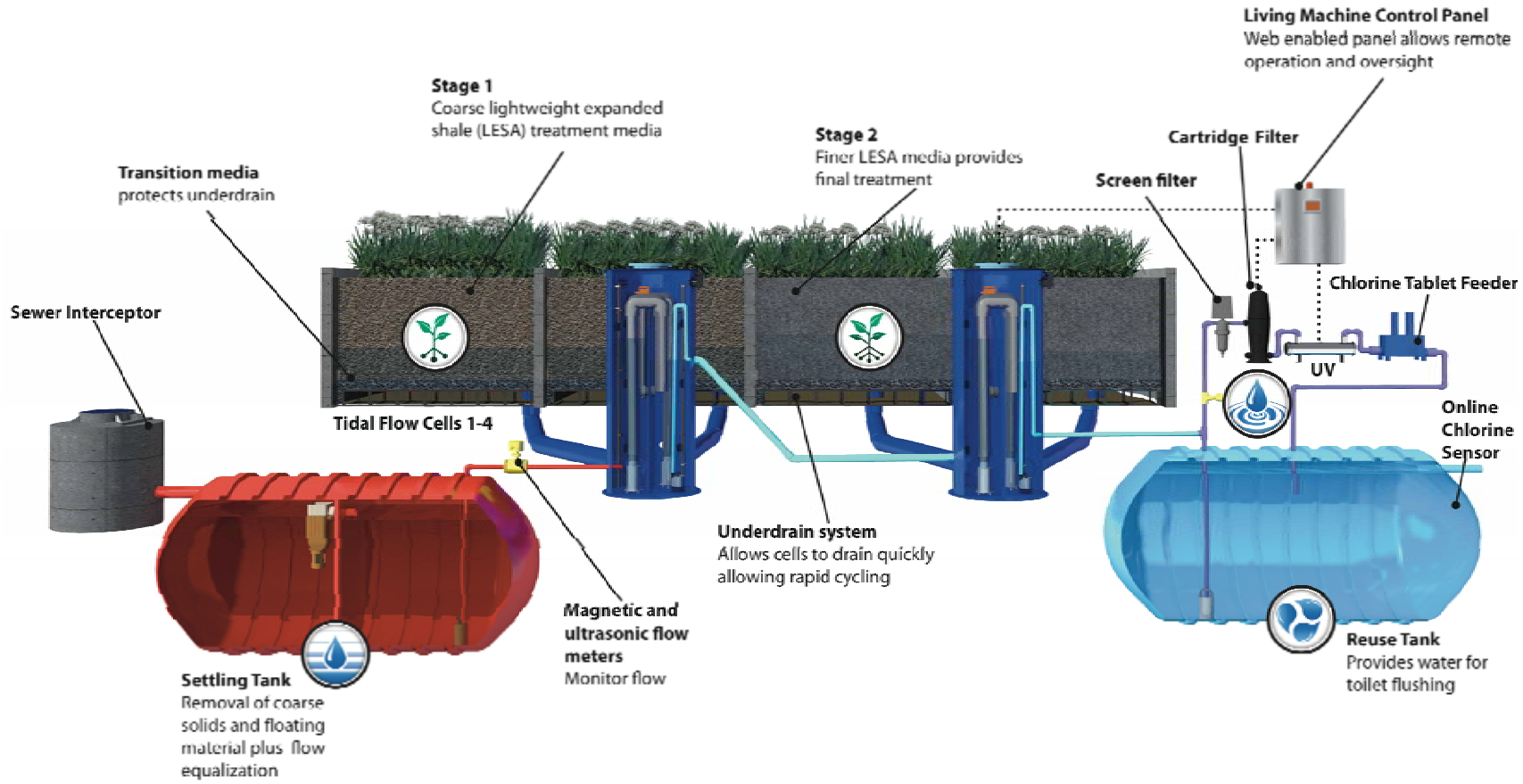


Figure 2: Where We Need to Be: Decentralized, Ecological, On-site Water Recycling Approach

Site Integrated Wastewater Treatment and Reuse

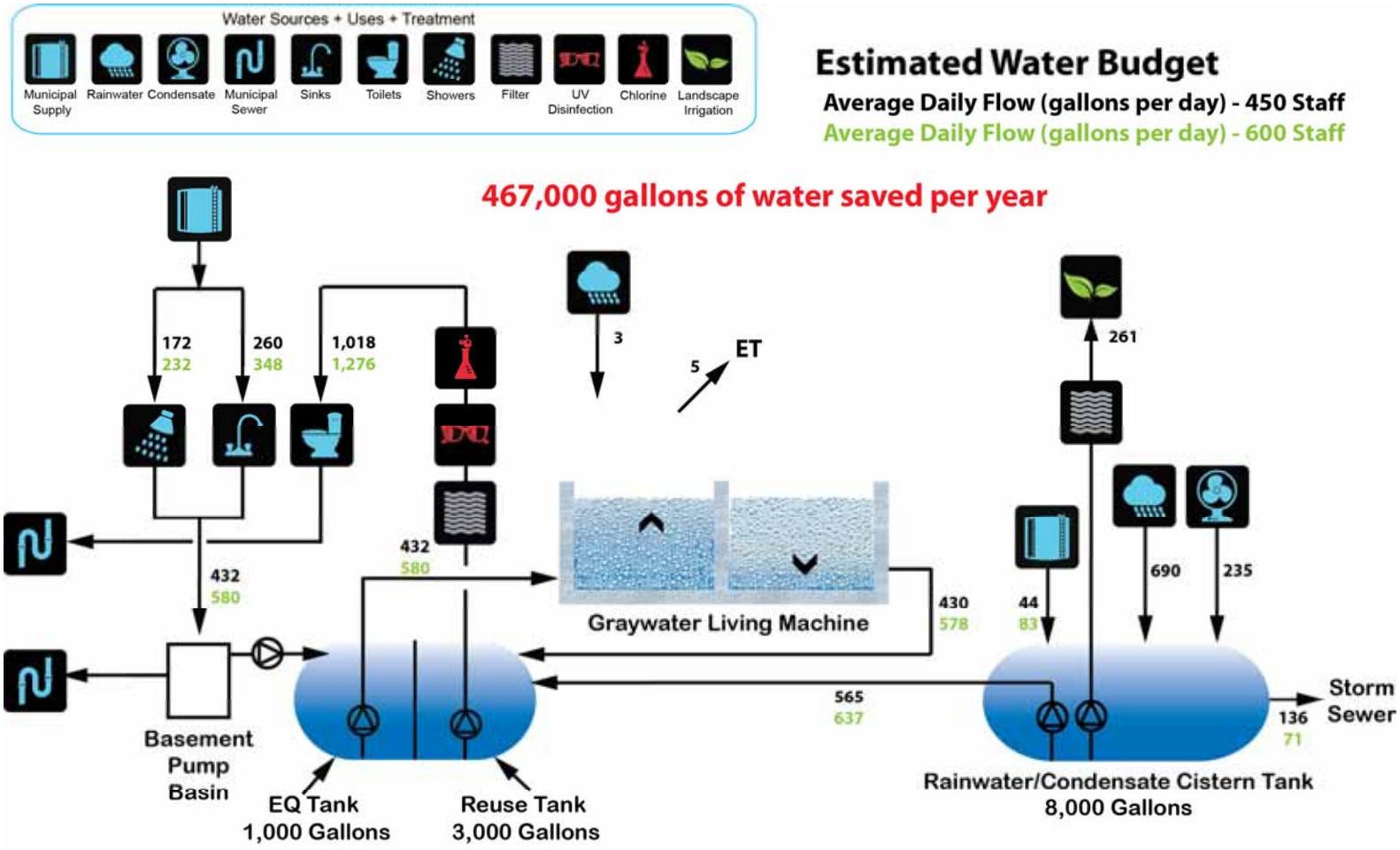
Living Machine Process Diagram



Project Profile: Charlottesville, VA Office Building

Integrated Water Reuse Master Plan

Dynamic Water Budget



Note: Average daily fixture flows assume only 10% flow on weekends. Condensate flow is 50% of maximum possible with further reduction of 65% on weekends. Summary potable water reduction and municipal sewer reduction does not include cooling tower use and blow down. Rainwater collection area is 11,000 ft2. Precipitation data is from actual Charlottesville data from a year which is close to the ten year average. Fixture usage is estimated as 3.5 trips per person with toilets using 1.28 gpf, urinals using 0.33 and sinks using 0.17 gallons per cycle and 1.5 cycles per use. Occupancy is assumed to 1/2 men with 67% urinal use.

Charlottesville, VA

System Modeling By: Living Machine Systems L3C

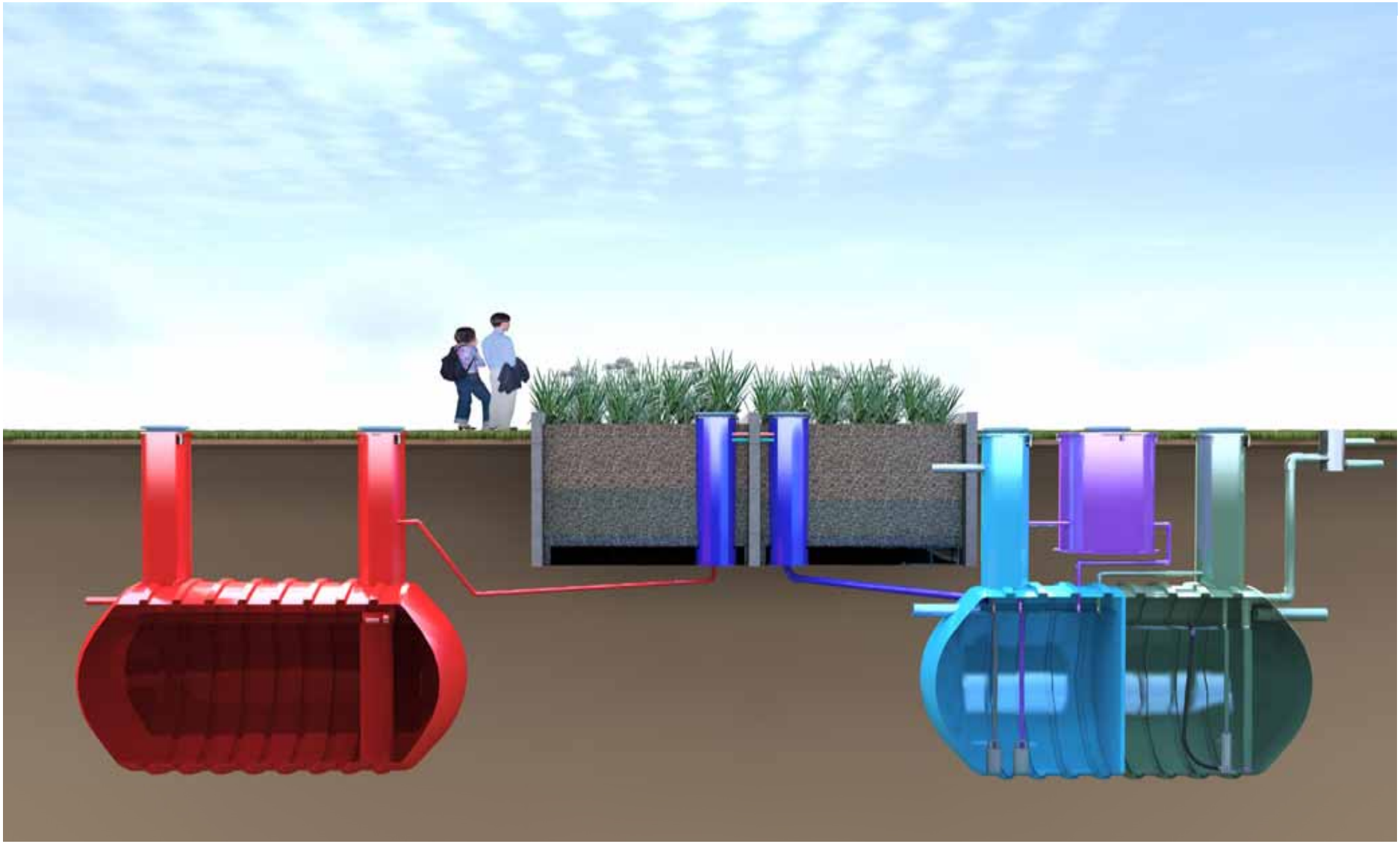
Summary

Municipal Potable Water Reduced 77%

Municipal Sewer Reduced 32%

Living Machine Process Diagram

Graywater Treatment with Integrated Rainwater & Condensate Capture



Project Profile: Lancaster County Low Income Community

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Thank You

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