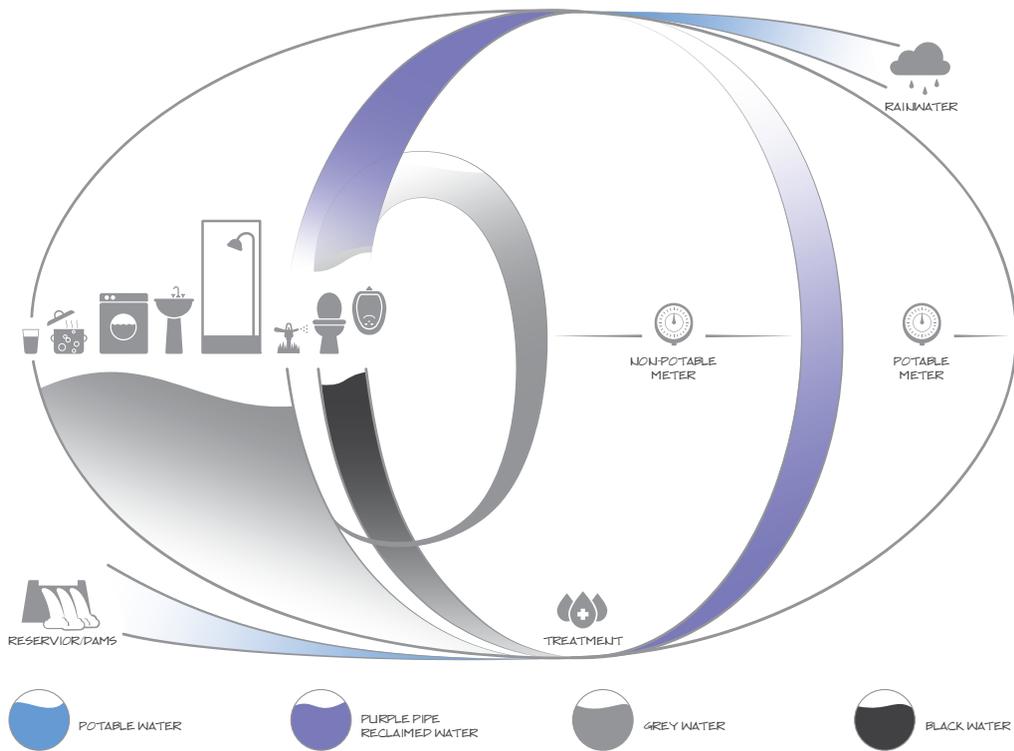


Sequim Civic Center - LEED® Gold Certified

Case Study

The new 33,000 sf civic center embodies the city's latest adoption of sustainable thinking. Contributing to the active conservation measures is the center's future-ready water system. The center has infrastructure in-place to separate grey and black water and a switch-over strategy to tie into the future citywide reclaimed purple pipe infrastructure. Reclaimed water is used to supply dual flush water closets and low-flow urinal flush valves. Once activated, the system is projected to reduce site water consumption by **38%**.



Seattle Public School

Seattle School District has a dedicated resource conservation team that tracks and monitors the 100+ site enterprise. In the latest round of major capital projects, the RCM and capital projects teams embraced the latest smart irrigation technologies to improve conservation measures at two schools. The technology utilizes artificial intelligence to predict irrigation needs. The system is tied into the building's water metering and controls systems and programmed to analyze facility use, weather (NOAA feed) and watering schedule to control the actual watering cycle and duration. The programming and zoning of the system also include the types of plants and grass served by the irrigation system to minimize water use. The water conservation measures reduced the site consumption.



Nordstrom

Conservation through system specifications has an impact on the specialty fashion retailer that operates 344 US and 6 Canadian stores. Adapting to the various code jurisdictions while accounting for guest and custodial effects, restroom fixture selection continues to evolve for the full line and RACK stores. In recent years this has included a blend of low-flow water closets (1.28 GPF and 1.1 GPF) and waterless and low flow (.125 GPF) urinals. With the recent entrance into the Canadian market, two stores in Toronto are contributing to the reduction of the urban Heat Island Effect, stormwater discharge demand and overall building cooling load through green roof solutions.



NDA Manufacturing Facility

The precision demanded of this manufacturing facility embodies the requirements of a chip manufacturing or mission-critical data center. Tight tolerances for temperature compounded by the full redundancy requirements gave cause to evaluate energy and water conservation strategies, as well as exact site location. Located in a coastal water district with 44 inches average rainfall, the results of the study exemplified the challenges and benefits of a water cooled system.

Requiring over 100,000 gallons of water a day, the annual operational cost of the water system was 53% less of an air-cooled system and required 45% less energy to operate annually. However, additional savings were available through site selection, as the rates between the five possible water and three electrical utility districts varied. The water costs differed more significantly than the electric rates with demand charges included. The heavy electric use from a data center allowed the owner to negotiate a lower rate for electricity.

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