
WATER DIALOGUE ONSITE REUSE



MARCH 23, 2016

NATURAL RESOURCES DEFENSE COUNCIL (NRDC)

WHO WE ARE:

- NRDC is the nation's most effective environmental action group, combining the grassroots power of more than 2 million members and online activists with the courtroom clout and expertise of over 500 lawyers, scientists and other professionals.
- Our dedicated staff work with businesses, elected leaders, and community groups on the biggest issues we face today.
- The NRDC Water Program envisions and is working towards a safe and sufficient supply of fresh water for people and the environment.

Right Water for the Right Use



Where is Onsite Reuse Being Done??



Source: SFPUC

Many Scales of Recycling Water



Source: <http://myob.com.au/blog/4-reasons-leaders-fail-to-scale-up-and-how-to-overcome-them/>

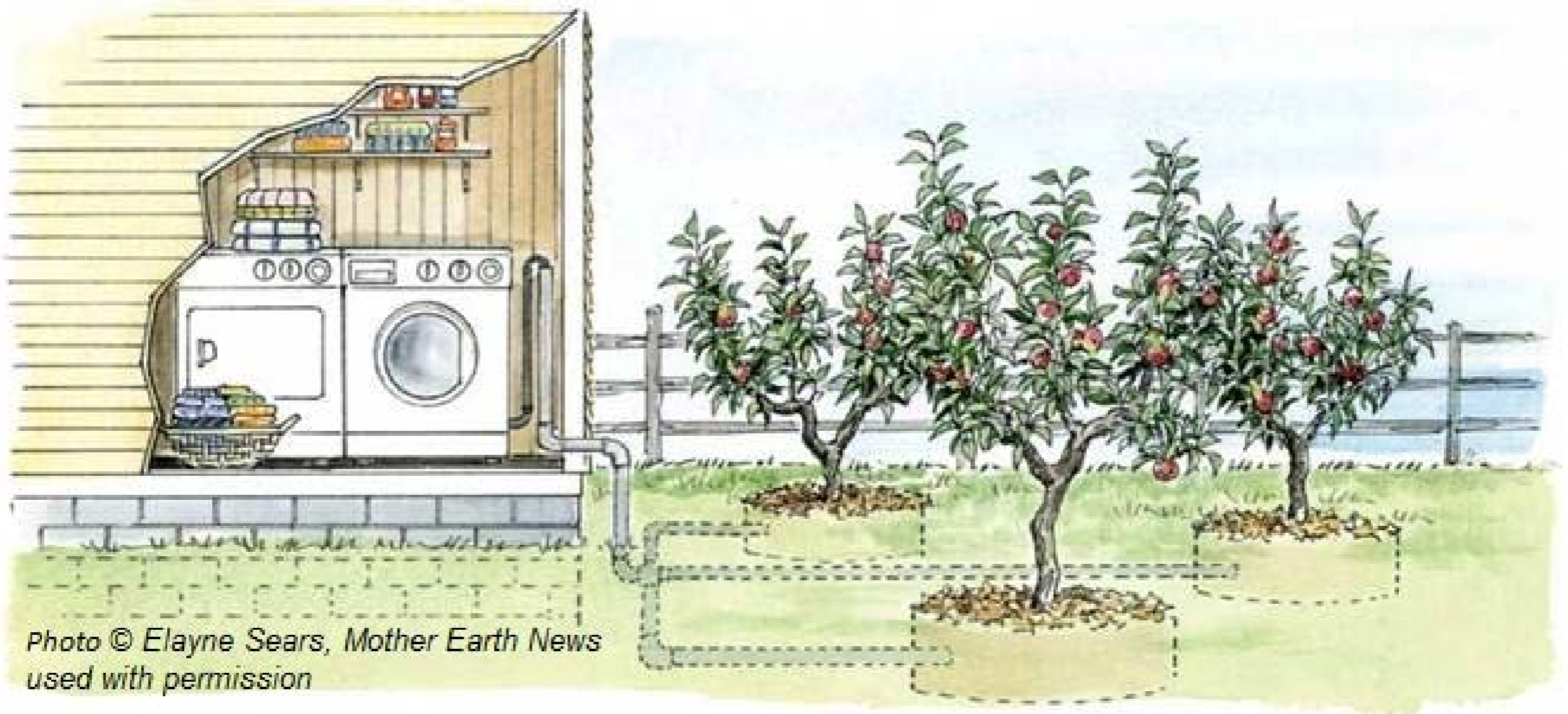
Showers to Flowers



Rainwater Capture

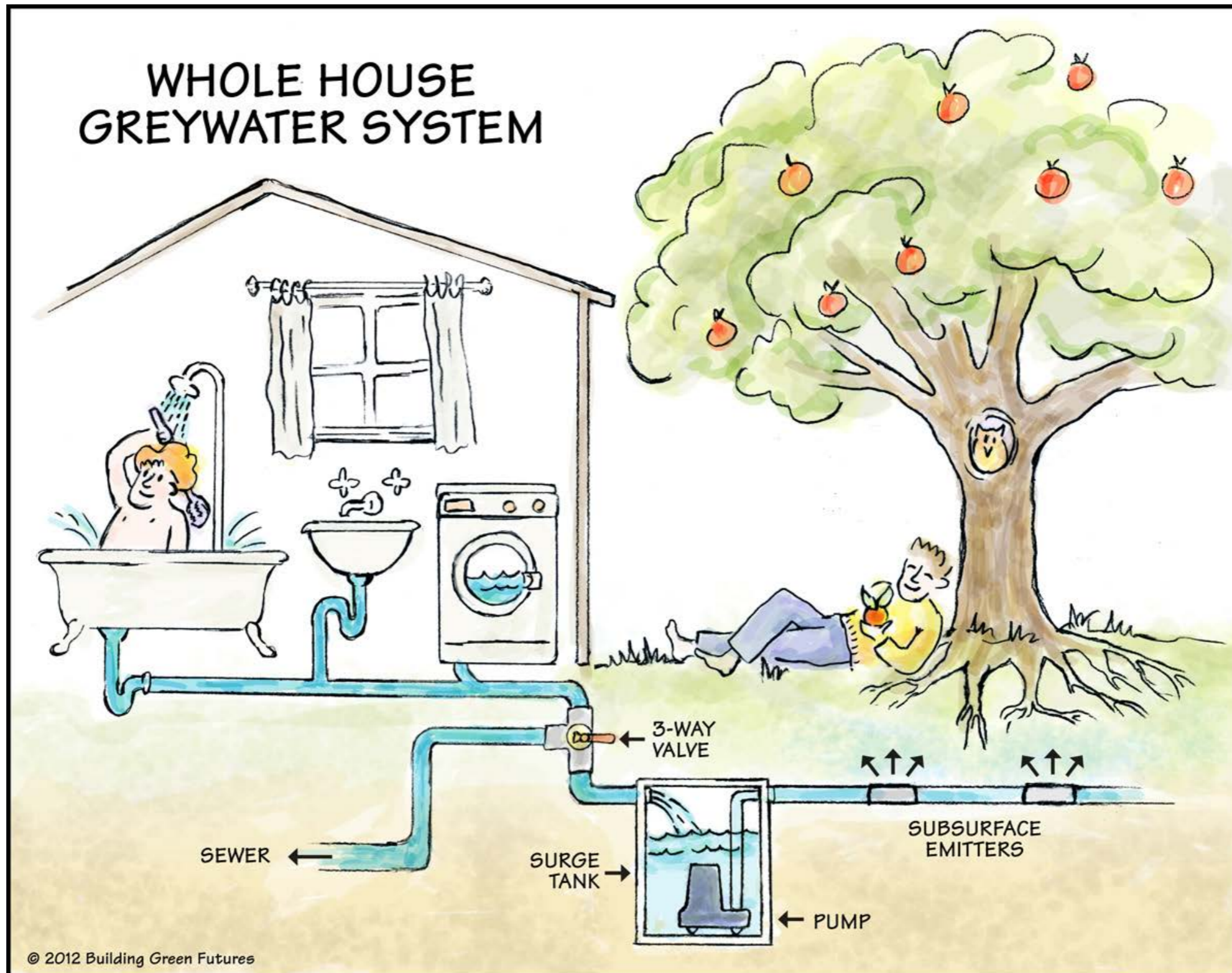


Laundry to Landscape

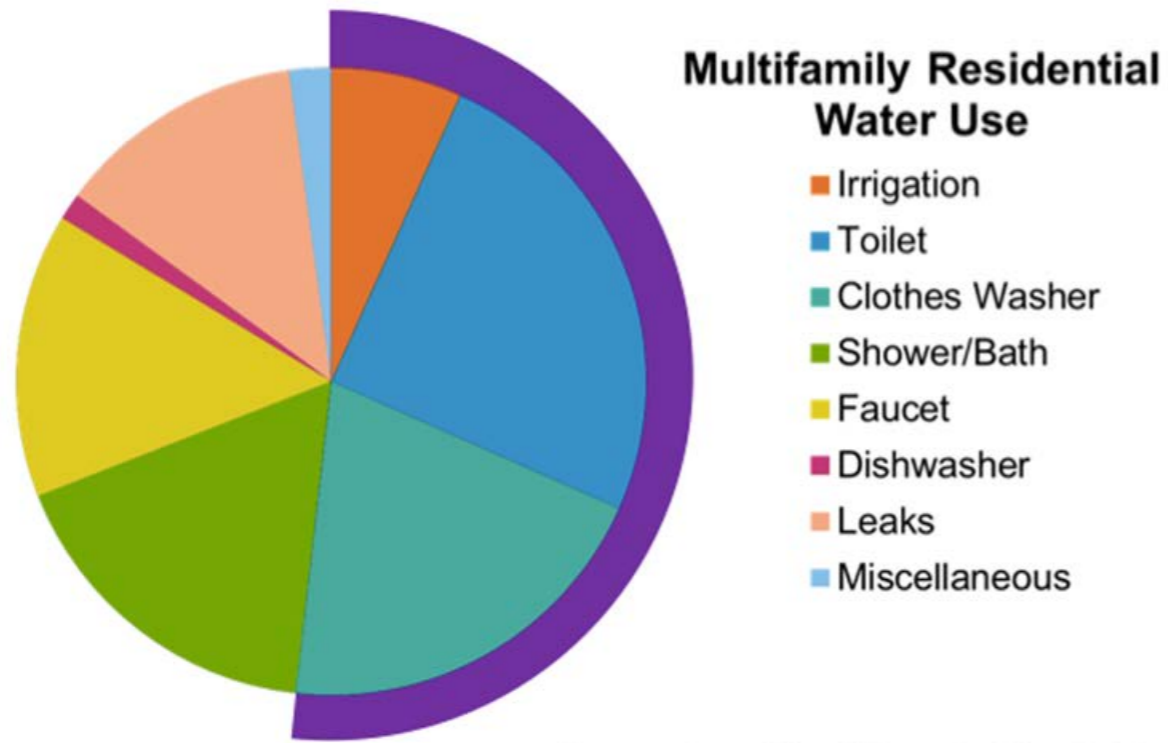


*Photo © Elayne Sears, Mother Earth News
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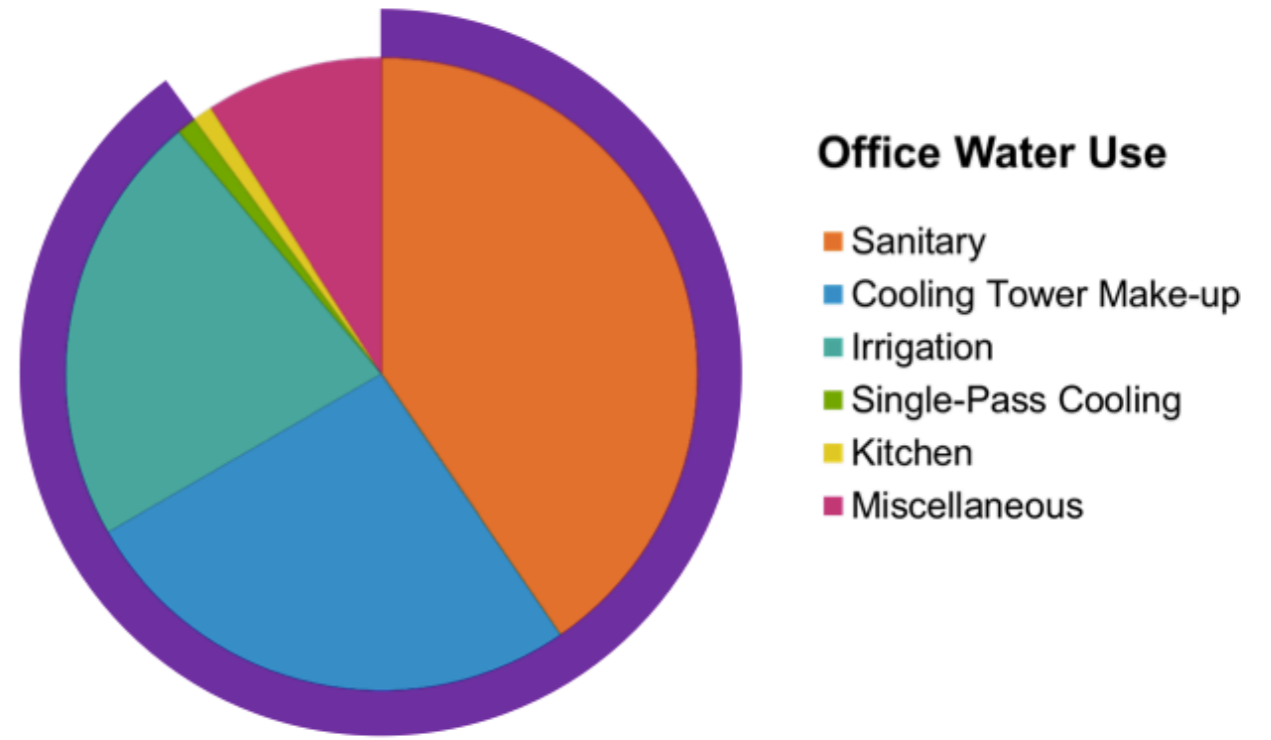
Whole House Residential Graywater Recycling



Multi-Family or Commercial Scale



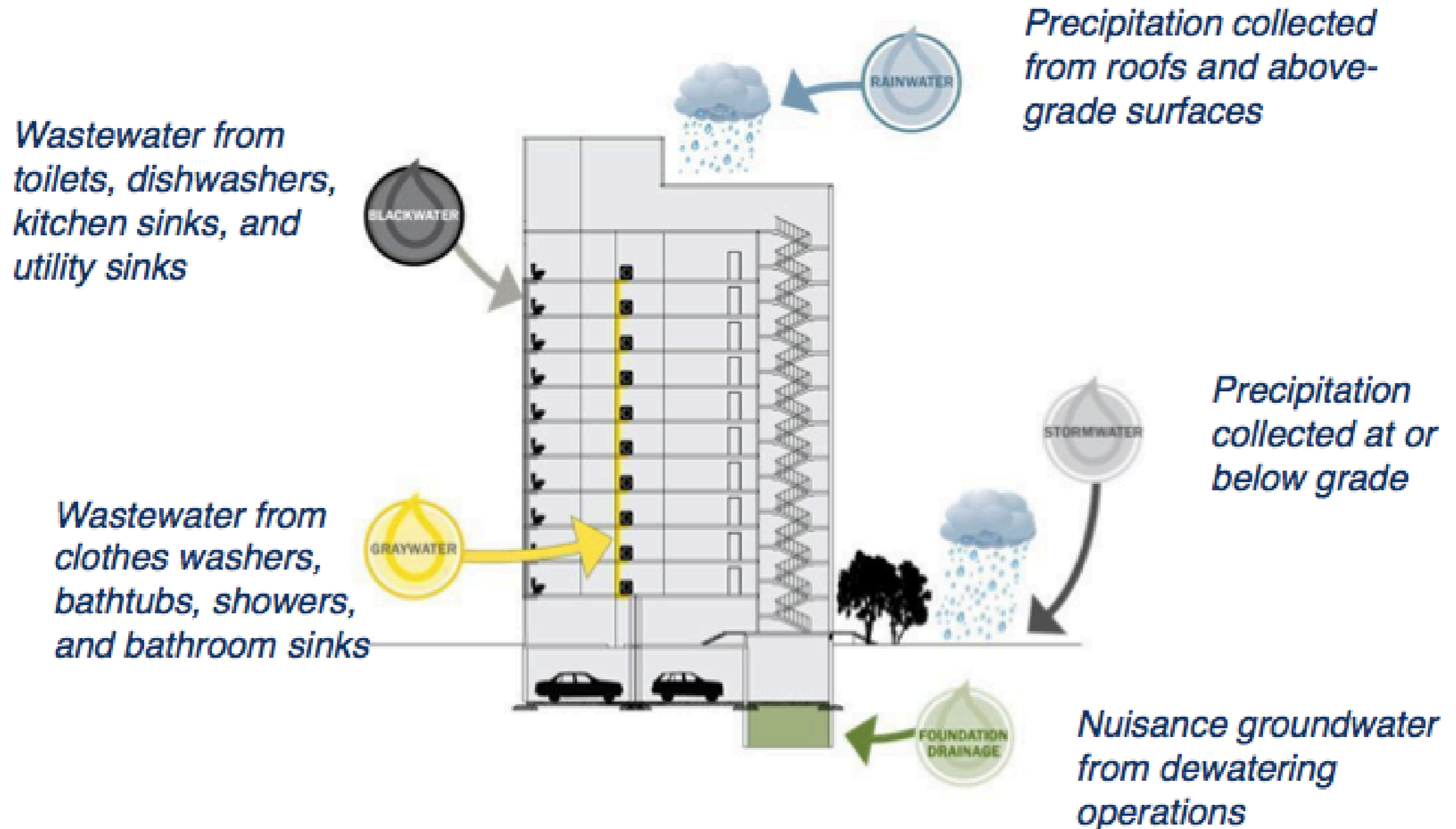
Source: adapted from Alliance for Water Efficiency



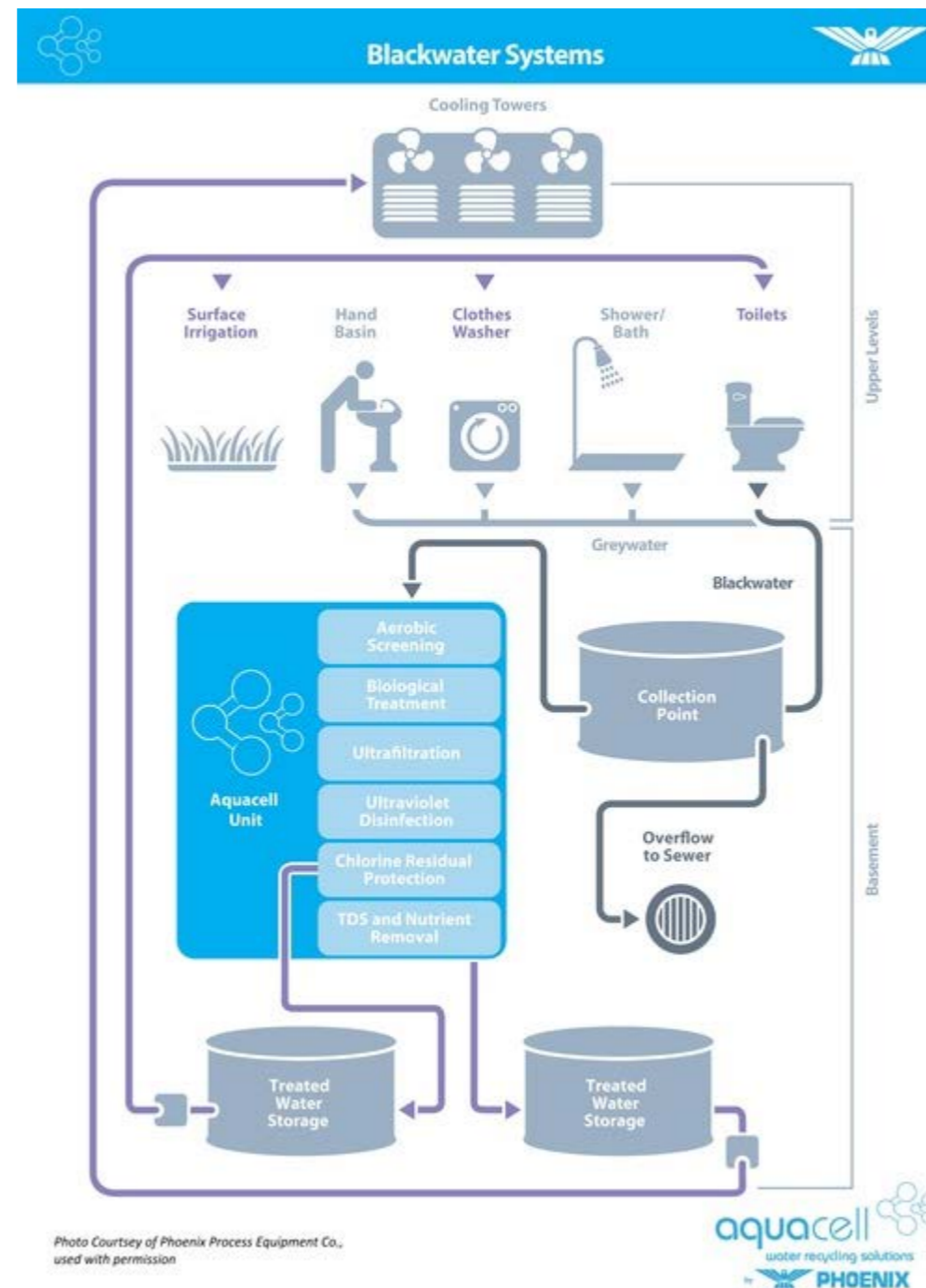
Source: USEPA

Source: SFPUC

Multi-Family or Commercial Scale

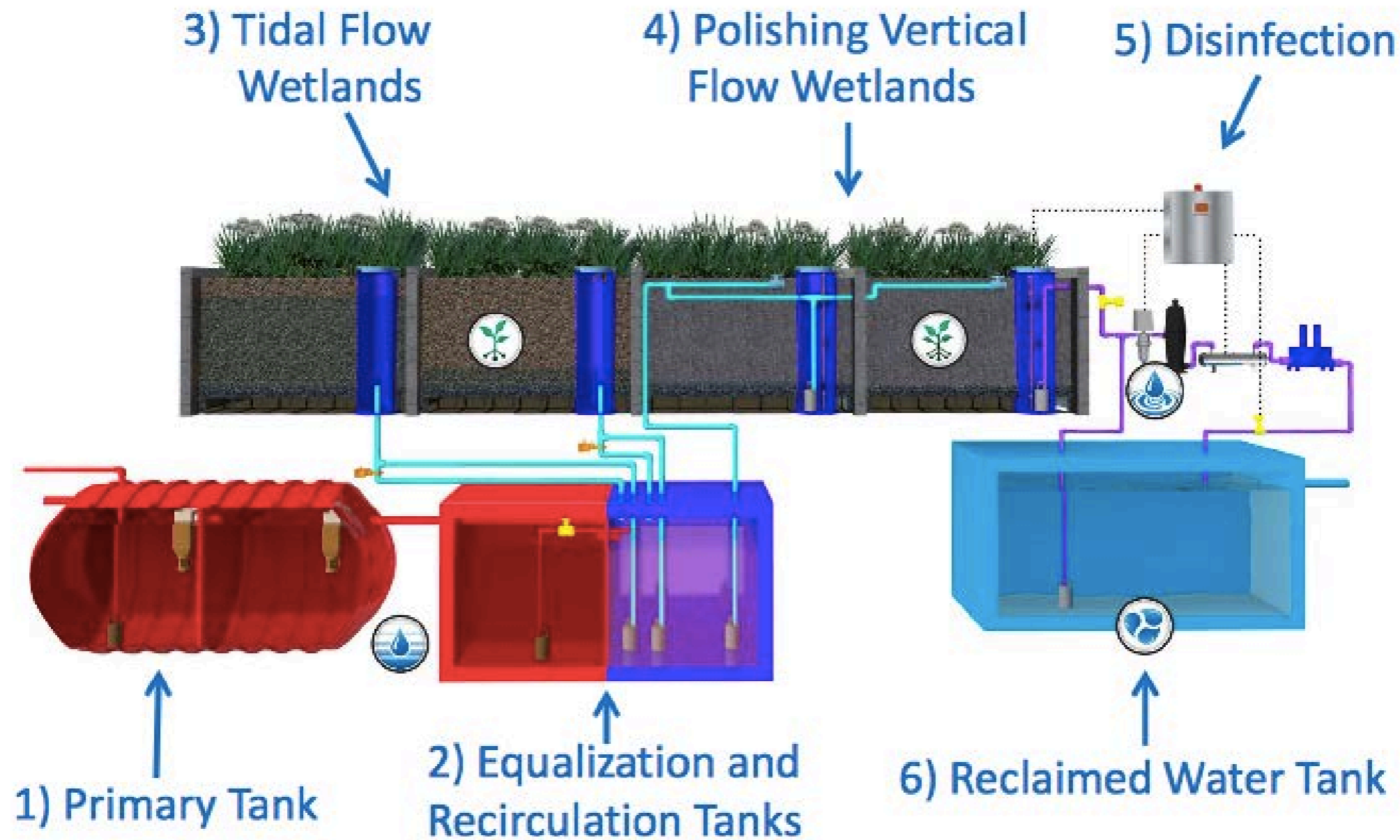


Membrane Bioreactor (MBR) Treatment



Source: aquacell

Wetland Treatment



Wetland Treatment



Source: SFPUC

District Scale



<https://www.flickr.com/photos/joebehr/22352855583>

District Scale



Pennant Hills Golf Course, Sydney, Australia. <http://voices.nationalgeographic.com/2012/01/16/sewer-mining-coming-to-a-community-near-you/>

Yarra Park Recycling Project @ Melbourne Cricket Grounds



Centralized Municipal Recycling

- Non-potable Distributed Recycling - Purple Pipe



- Indirect Potable Reuse

- Direct Potable Reuse





The Goal...



Questions?

THANK YOU

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