Water Conservation: Drivers and Challenges in Commercial Building

WEBCOR BUILDERS

The Opportunity: Water Conservation in Commercial Buildings

Buildings consume 13.6% of potable water in the United States (US Geological Survey)

low impact development strategies in urban areas of the state has the potential to increase water supplies by 405,000 acre-feet of water per year by 2030 (UCSB)

California's Commercial, Industrial and Institutional Sector consume 2.5 million AF per year – approximately 1/3 of total water use in urban areas. Estimates for cost-effective strategies suggest that potential for water savings is 710,000 to 1.3 million AF per year (NRDC)

Landscape irrigation practices in the United States consume large quantities of potable water. Outdoor uses, primarily landscaping, account for 30% of the 26 billion gallons of water consumed daily in the United States.

What are the Factors?

Environmental Certification

- LEED
- BREEAM, Green Globes and Others

Legislative

- Cal Green
- Clean Water Act

Cost

- First cost
- Continued Maintenance

Convenience

- Maintenance
- Annoyance

San Francisco Public Utilities Commission Building
LEED-Platinum

Sustainability

- Wind Turbines
- Photovoltaics
- Maximized Glazing
- Green Roof
- Efficient HVAC
- Raised Floors
- Light Shelves
- Operable Windows
- Thermal Shaft

Water Use and Reuse

- Waterless Urinals
- Low Flow Fixtures

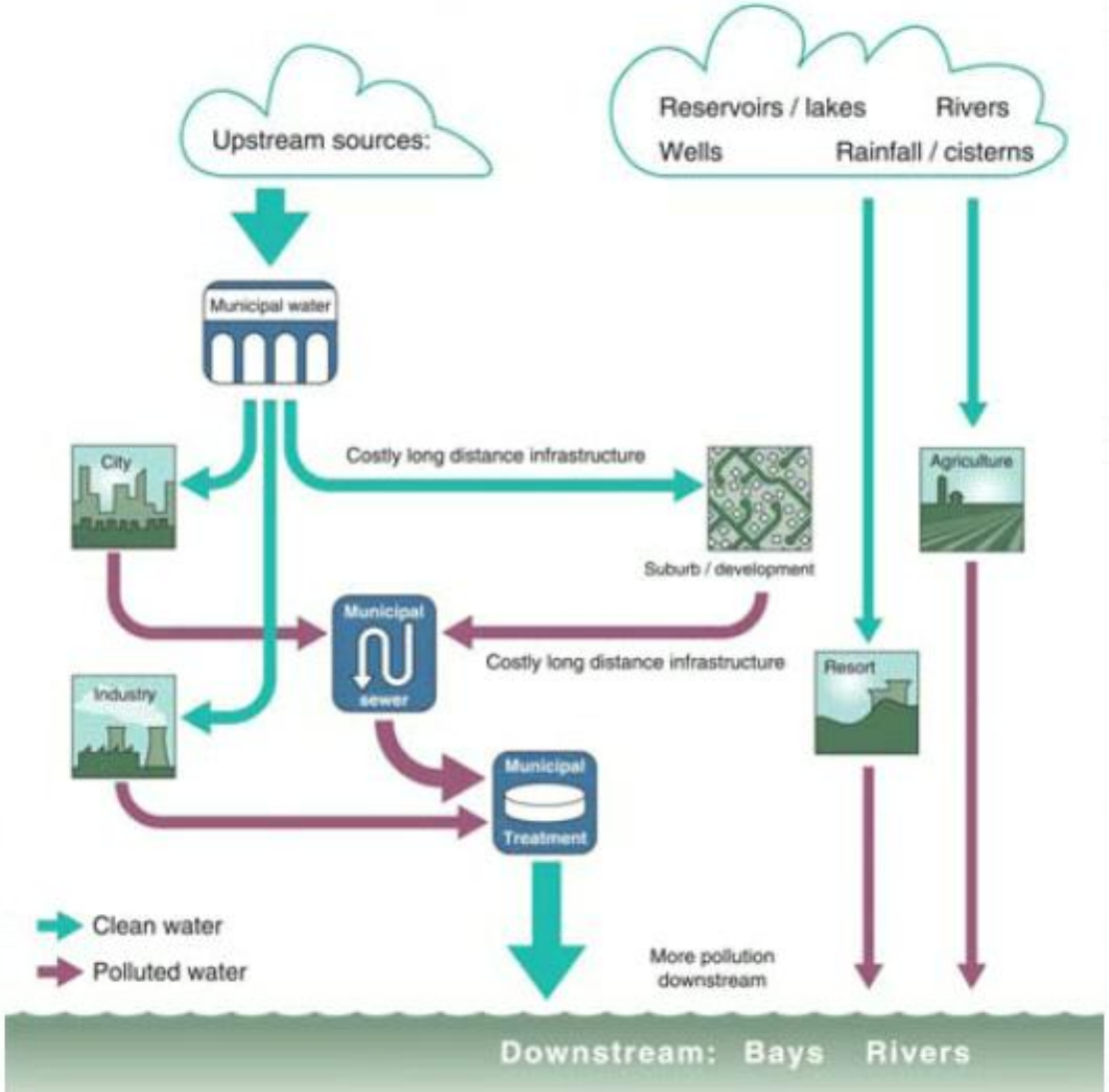
Webcor and Climate Earth Collaboration

- Environmental accounting expertise
- Data management
- Scalable strategy

- Construction expertise
- Virtual building platform
- Historical database
- Project pipeline

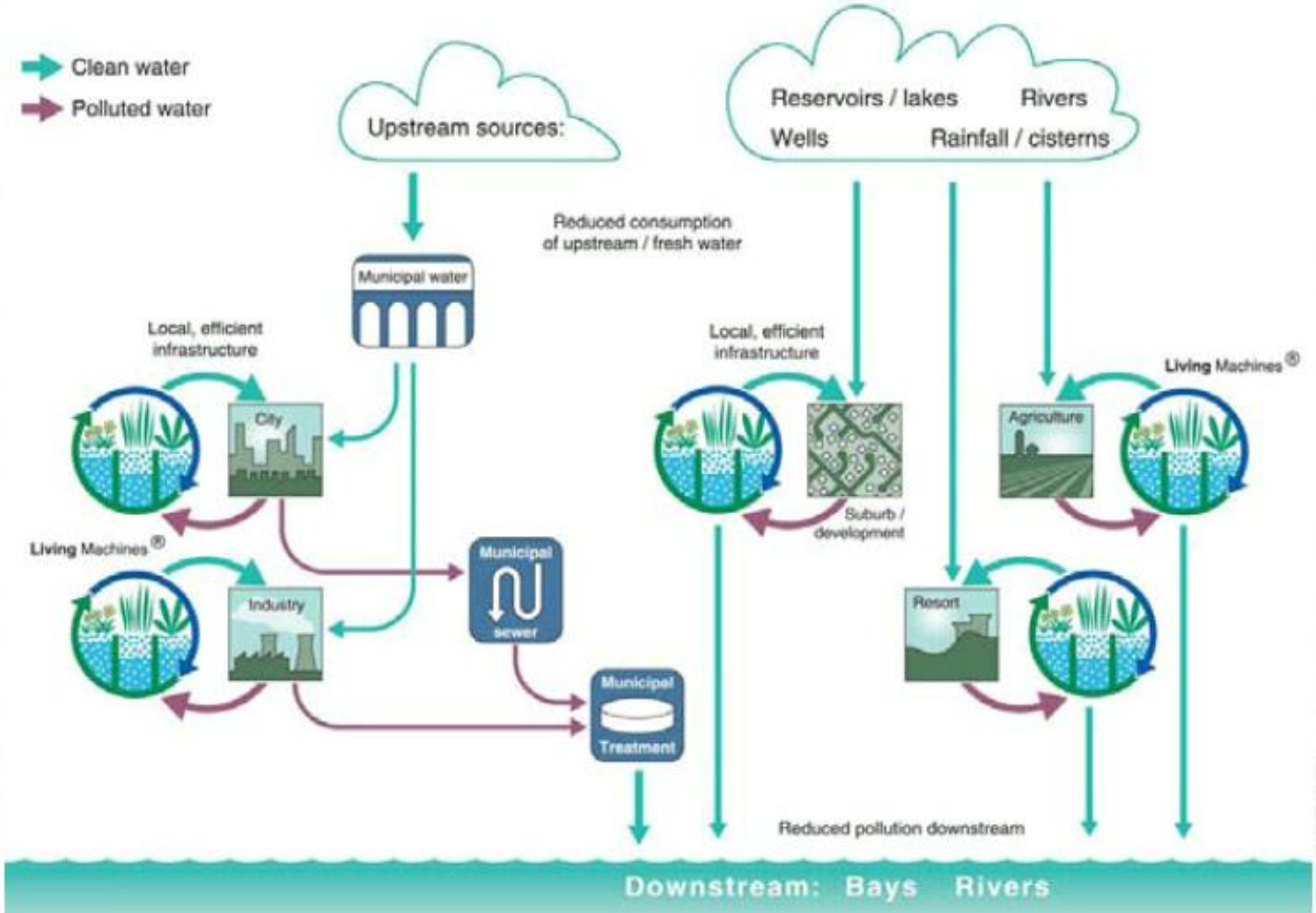
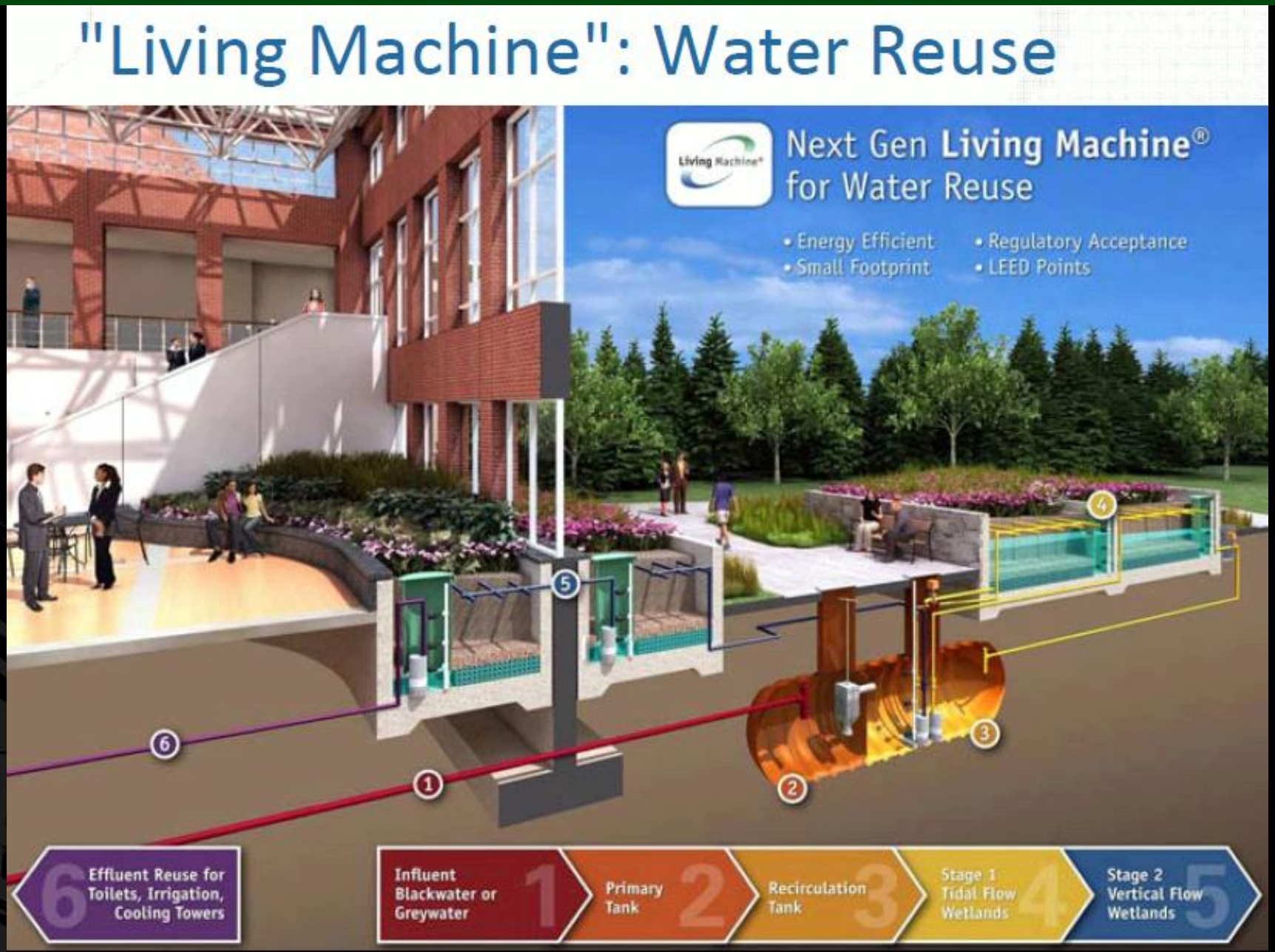
"Living Machine": Water Reuse

Where We Are Now: Centralized, Once Through Model



"Living Machine": Water Reuse

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