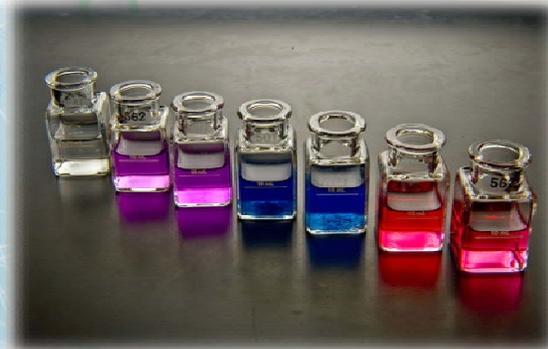


The Role of Innovative Technologies in Improving Sanitation



Sally C. Gutierrez, Director

Environmental Technology Innovation Clusters Program

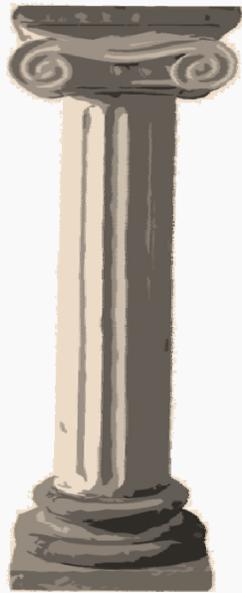
U.S. Environmental Protection Agency

Cincinnati, Ohio

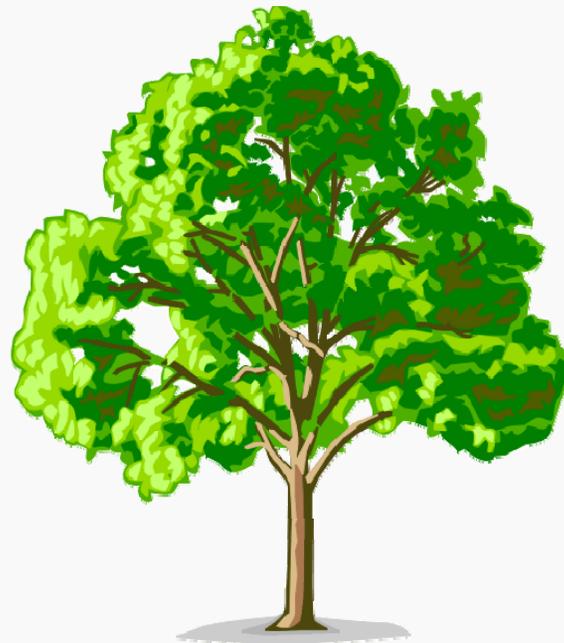
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Sustainability



Society



Environment



Economy

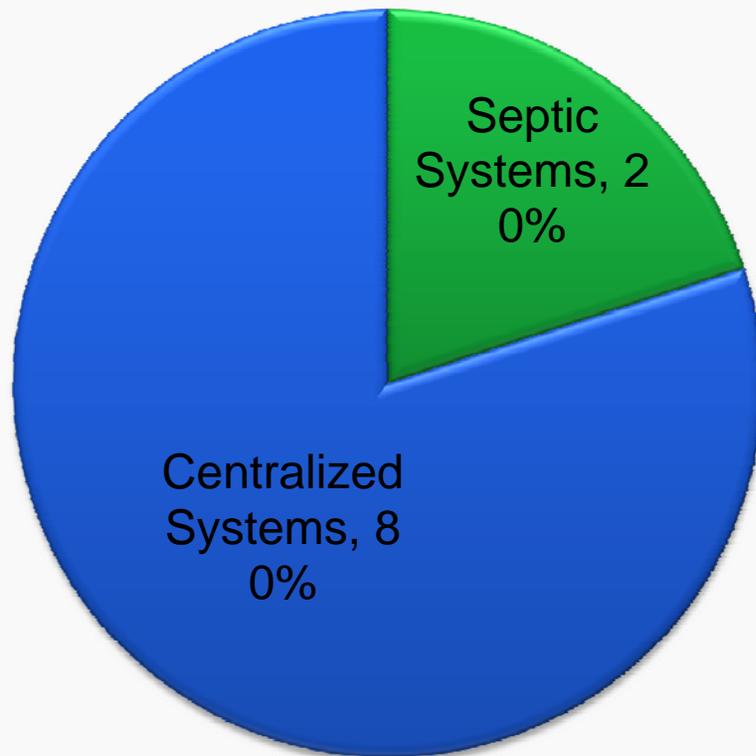


Paradigm Shifts in Wastewater

Old		New
WW as nuisance	→	WW as resource
Treat and discharge	→	Reuse, reclaim, recycle
Centralized systems	→	Decentralization as an option
Standardized wastewater solutions	→	Diverse solutions based on local needs



Wastewater Treatment in the US

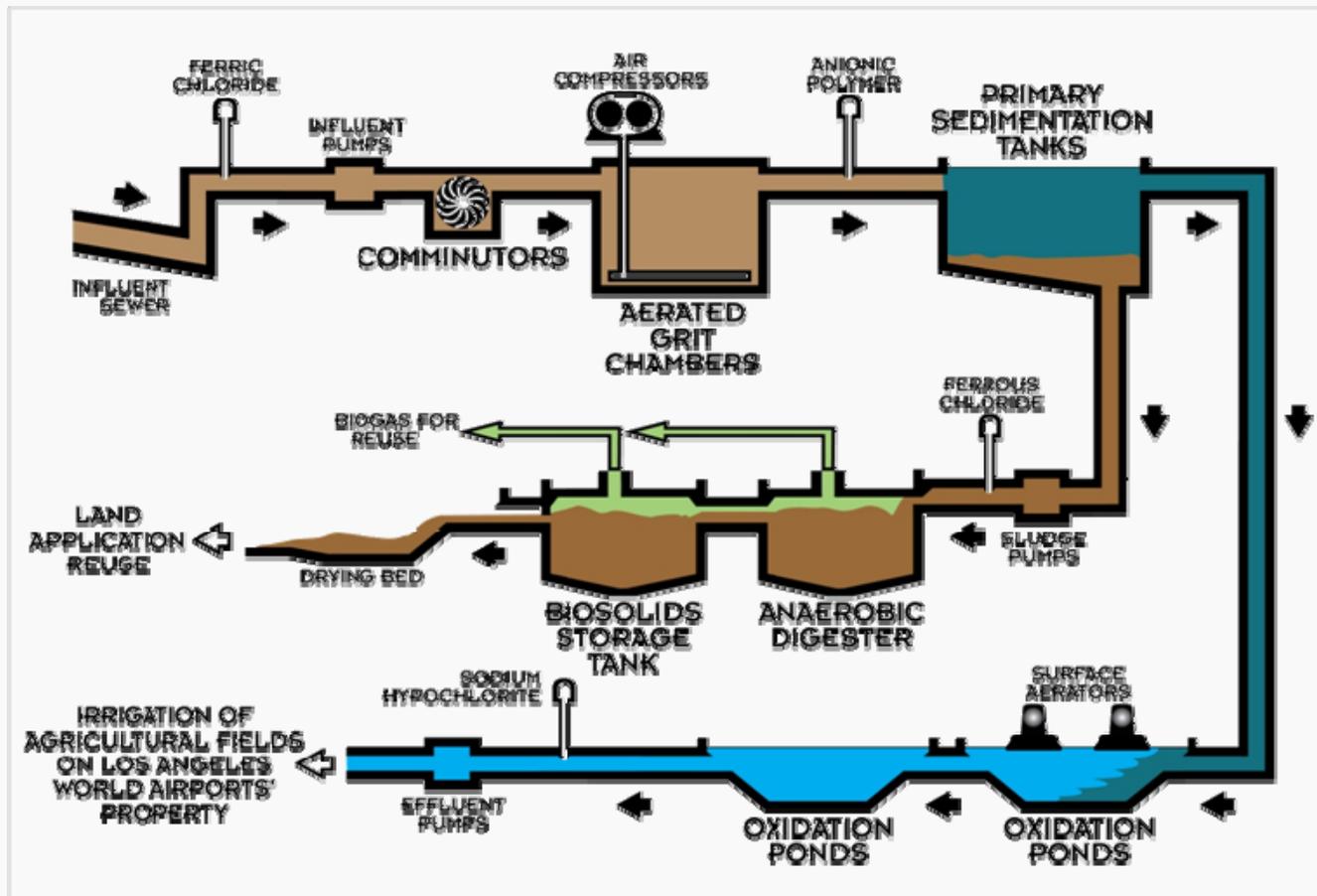


Estimated need for
wastewater infrastructure
investment:

\$298 billion over 20 years



Centralized Wastewater Reclamation: Los Angeles County Sanitation District





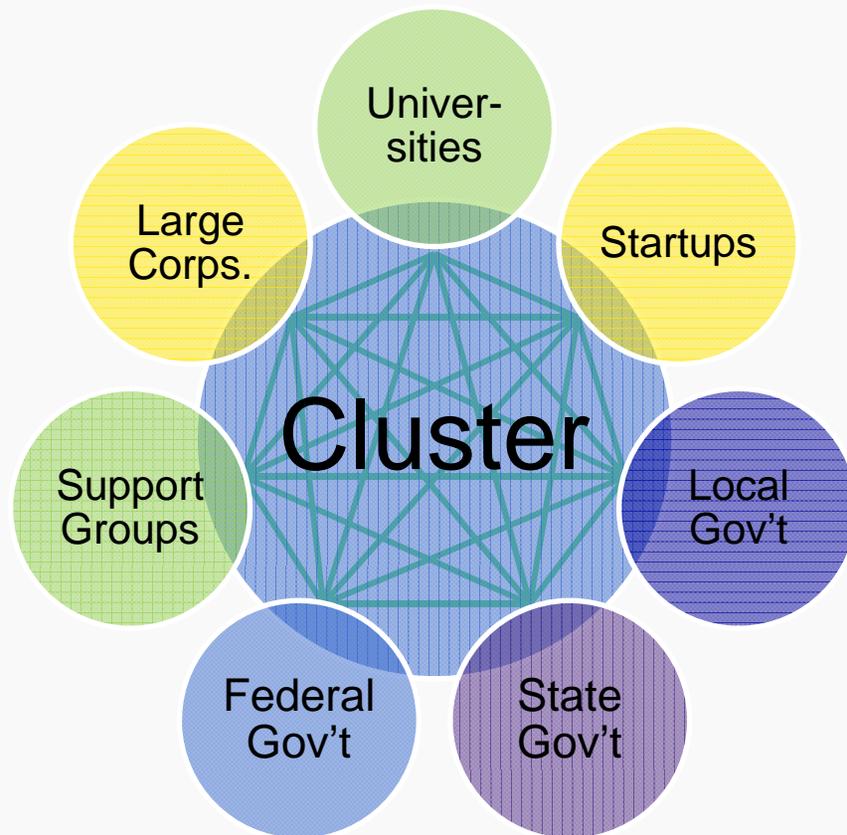
The Potential for Decentralized Systems



- Lower maintenance
- Wastewater to energy potential
- Nutrient recovery potential



The Cluster Concept



Clusters are **dense, regional networks** of companies and other groups in the same industry.

Cluster organizations get new technologies to market faster by:

- Connecting researchers to business partners
- Connecting start-ups to accelerators and other resources
- Streamlining testing and approval processes