

Trusted life source for generations



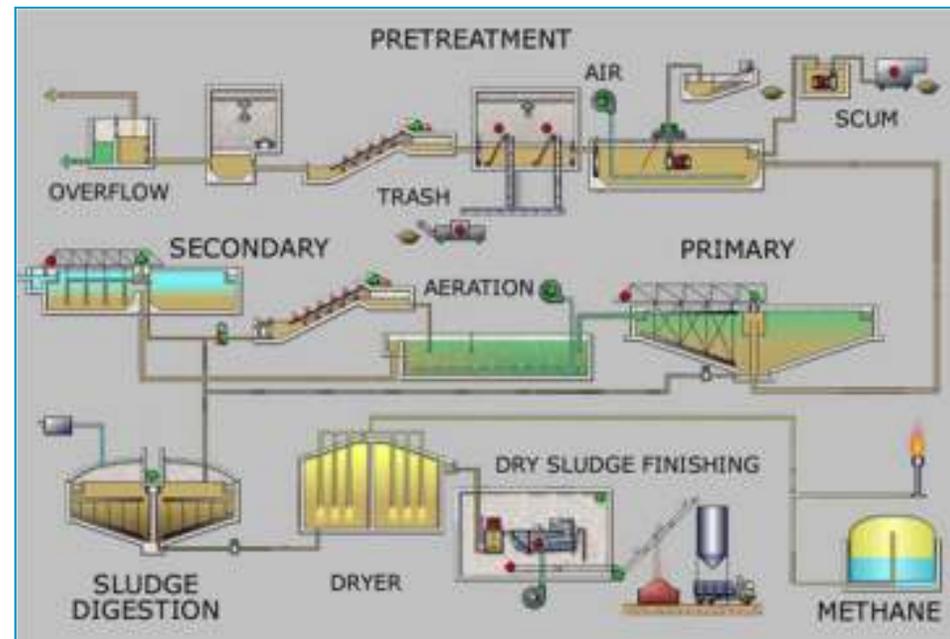
# Wastewater Pasteurization Pilot Project

**Shana Epstein**  
**Ventura Water General Manager**

**City Manager Report**  
**June 18, 2012**

# Cleaning Wastewater

- 7 – 9 million gallons per day
- Multi-step process
  - Primary
  - Secondary
  - Tertiary
  - Disinfection
  - Detention ponds
  - Release to Santa Clara River Estuary



# Challenges

- **Continuous improvement**
- **Exceed compliance**
- **Capitalize on resource**



# Disinfection Alternatives

- Chlorine
- Ultraviolet Light
- Pasteurization
  - Innovative technology
  - Environmentally protective
  - Energy efficient



# Pasteurization Process

- **Common process**
- **Heat as disinfectant**
- **Contact time**
- **Immediate cooling**



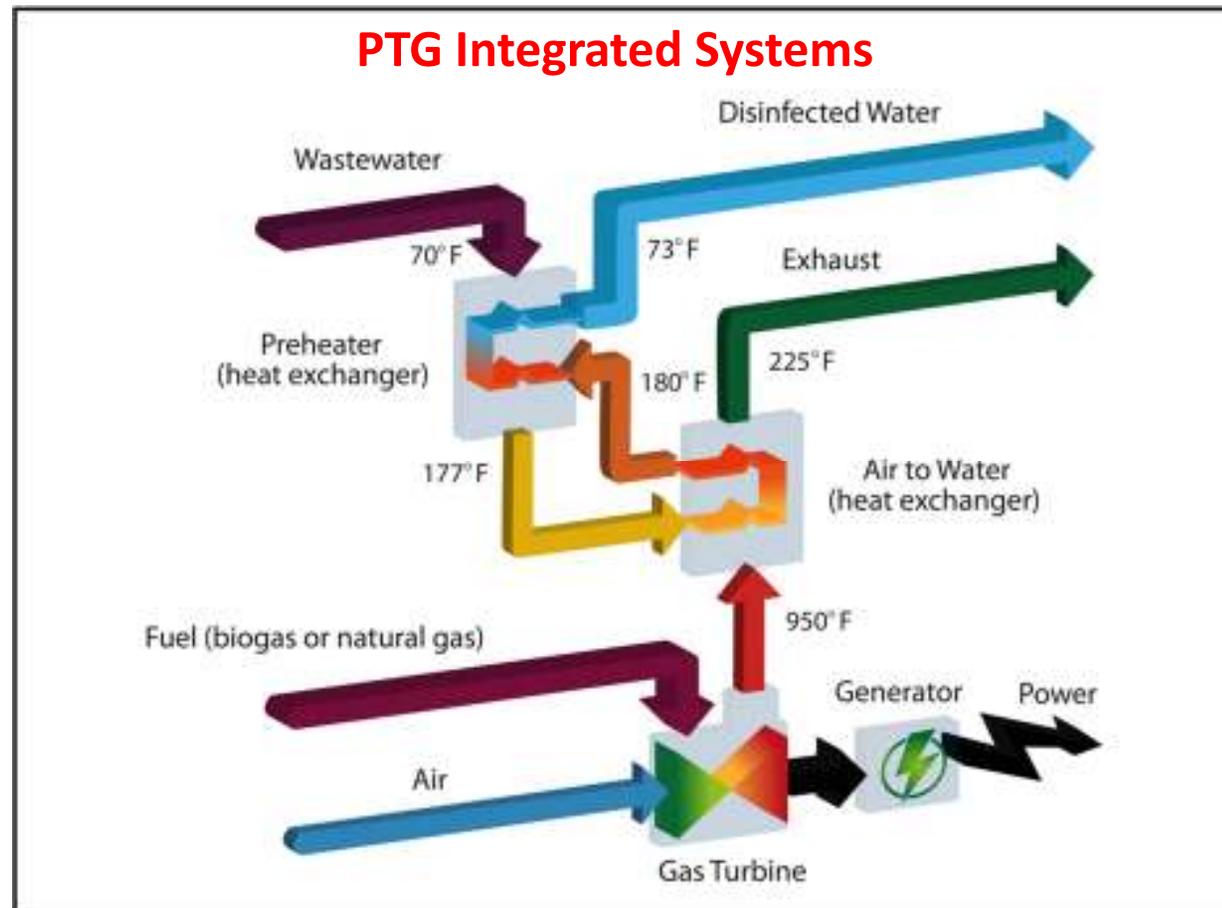
# Pasteurization Pilot

- Partnership with Pasteurization Technology Group (PTG)
- California Title 22 approved 2007
- Began testing at VWRF December 2011
- 500,000 gallons treated per day
- Potential to scale up to 20 MGD



# How It Works

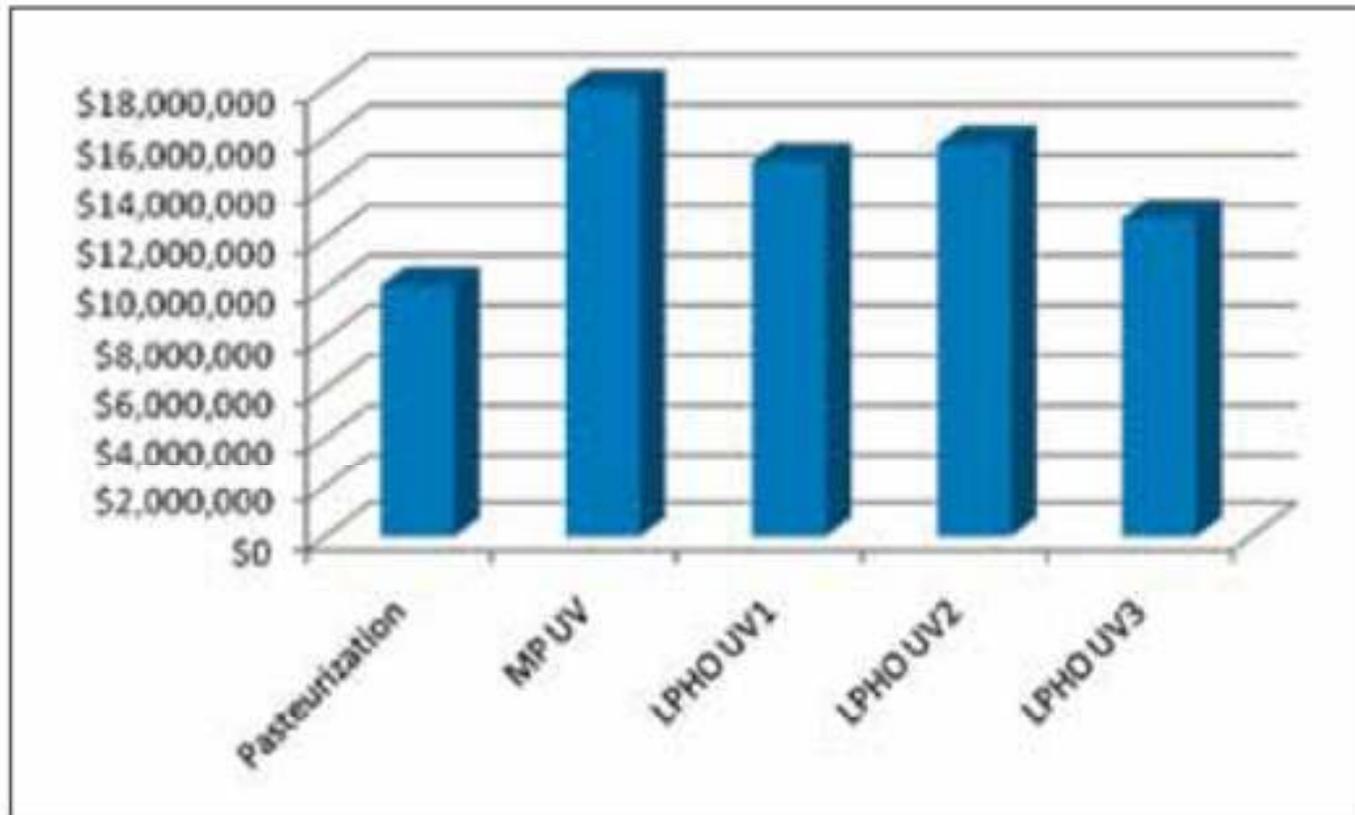
Tertiary  
treatment  
(disinfection)  
combined  
with  
renewable  
energy  
generation



# Technology “2 for 1”

- **Lowest cost, robust technology**
- **Non-toxic process, eliminate chemical use**
- **Sustainable, energy efficient system**
- **On-site renewable energy generation**

# Lifecycle Cost Comparisons



UV = ultraviolet.

MP = medium-pressure.

LPHO = low-pressure, high-output.

# Cost Analysis

- CIP Project Budgeted \$9M
- Eliminate chemicals \$250,000
- Annual current energy \$900,000
- Potential offset >50% energy costs



# Next Steps

- **Complete testing/optimization  
(6-12 months)**
- **Potential design options  
(12-24 months)**
- **Final design and construction  
(24-48 months)**

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# Questions?

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