

The Encina Wastewater Authority's Biosolids Management Program

Leveraging High Transportation Costs to Fund
Infrastructure and Environmental
Performance Improvements

Encina Wastewater Authority

- Carlsbad, California
- Joint Powers Agency
- 350,000 Residents
- 125 Sq. Mile Service Area
- Encina Water Pollution Control Facility
- Protect the Pacific Ocean
- Produce Renewable Resources

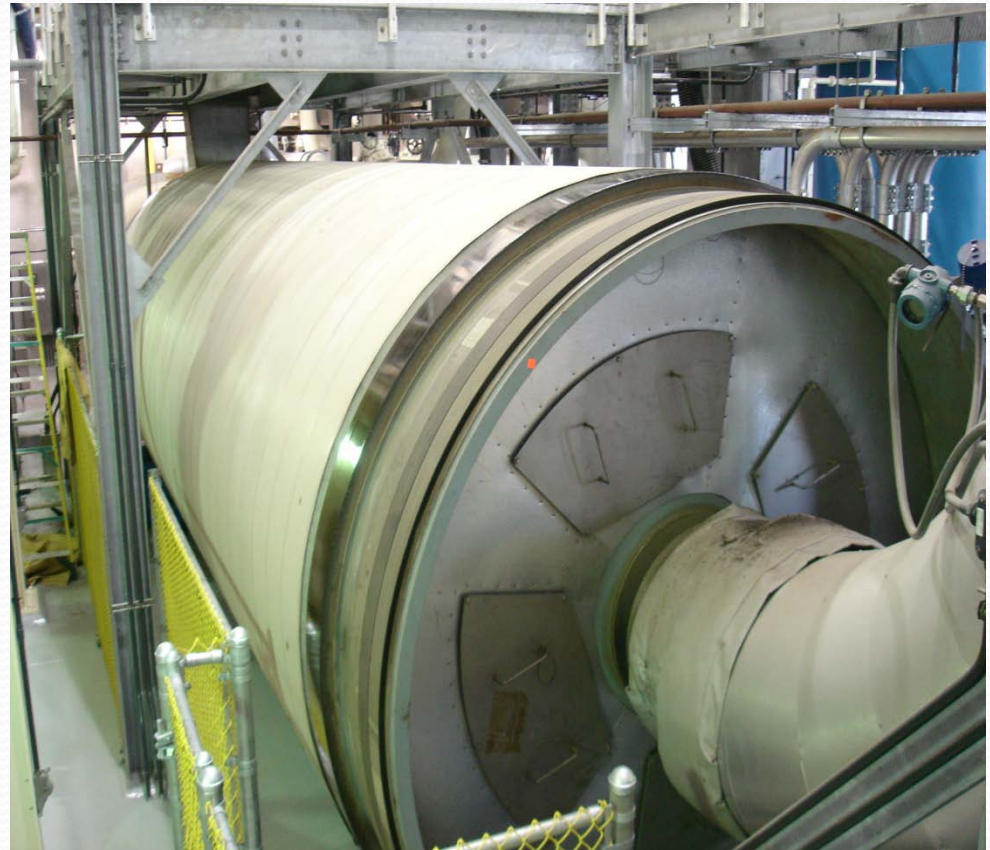


Biosolids Crises

- Facilities at End of Useful Life
- County Regulations
- 125 Tons per Day of Residual Solids
- 5 Tractor Trailers per Day, 7 days a week
- Yuma, Arizona – 400 mile round trip
- 730,000 transportation miles/year
- \$2.1 Million Net Transportation Costs FY 2008
- 60% Increase from FY 2004 – FY 2008

Biosolids Strategic Plan

- Unrestricted Use Product
- Environmental Management System
- Diversified Portfolio
- 1st Place EPA's National Clean Water Act Recognition Program Award for Exemplary Biosolids Management in 2006



Plan Execution

- Alternative Fuel Contract with CEMEX
- 125 tons per week
- 1 Tractor Trailer a day, 5 days a week
- Victorville, California - 260 mile round trip
- 67,500 transportation miles/year
- \$235,000 Net Transportation Costs in FY 2010
- Diversified Portfolio

Life Cycle Costs (in Millions)

Biosolids Crises

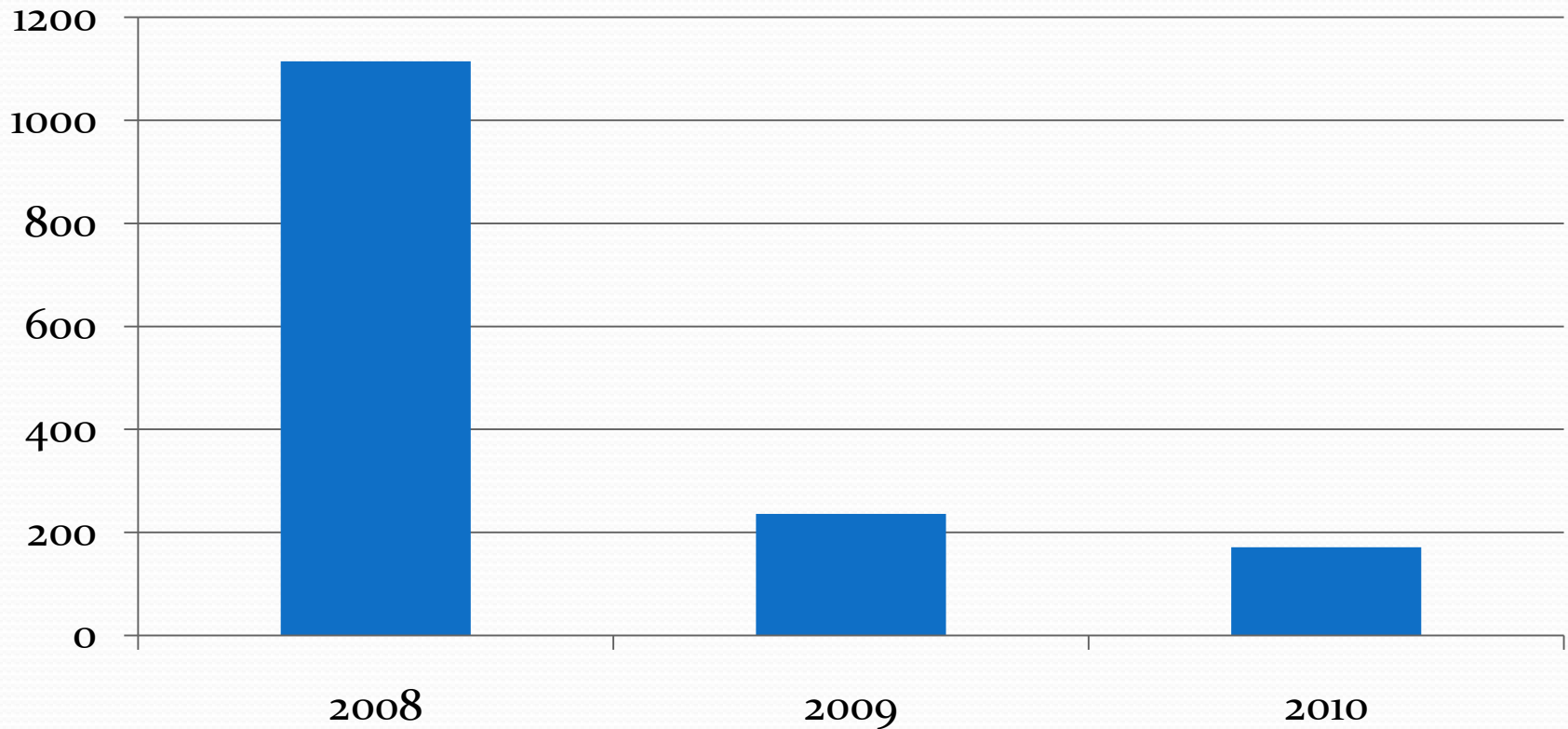
Capital	\$ 18.80
Transportation	\$ 69.44
Operating	<u>\$ 7.82</u>
Total Costs	\$ 96.06
Annualized	\$ 4.80

Biosolids Strategic Plan

Capital	\$ 27.90
Transportation	\$ 7.80
Operating	<u>\$ 34.45</u>
Total Costs	\$ 70.15
Annualized	\$ 3.51

Green House Gas Emissions

Metric Pons Per Year Based on CCR General Reporting Protocol



Questions?

Kevin M. Hardy
General Manager
Encina Wastewater Authority
khardy@encinajpa.com