

City of Hayward Wastewater Collection and Treatment Service

Local Agency Formation Commission
July 10, 2014

City of Hayward

Home to:

- 150,000 residents
- Large industrial and commercial sector - dependent on reliable wastewater collection and treatment service
- State university and community college
- Regional hospital



California State University East Bay



Hayward City Hall

Description of Services

- Service Area
 - Nearly all of City of Hayward and a small number of properties in Unincorporated Alameda County
 - Current City population - 150,000
- Services Provided by City
 - Wastewater collection
 - Wastewater treatment
- Member of East Bay Dischargers Authority
 - Disposal of treated wastewater

Wastewater Collection System

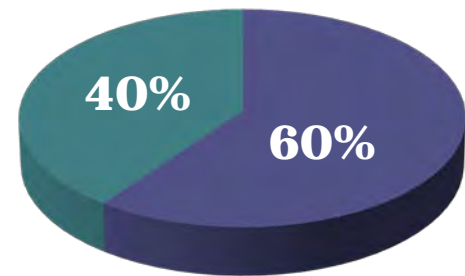
- 350 miles of sewer mains
- 9 lift stations
- Staffed by 10 FTEs



Water Pollution Control Facility

- Permitted capacity - 18.5 mgd
- Current average dry weather flow - 11.4 mgd

Wastewater Sources



■ Residential

■ Non-Residential

WPCF Infrastructure

- Primary through advanced secondary treatment
 - Primary clarifiers
 - Trickling filters
 - Solids contact basins
 - Secondary clarifiers
- Staffed by 28 FTEs
(including administrative and engineering personnel)



Phase I WPCF Improvement Project

- Completed in 2008 - \$58M project
 - Second trickling filter
 - Two new final clarifiers
 - Solids contact tank
 - Solids thickening facilities
 - 12kv electrical system
 - Two megawatt standby generator
- Increased performance, system reliability and redundancy



BIOFILTER

**NEW 12KV
SUBSTATION**

**EMERGENCY
GENERATOR**

**SOLIDS
THICKENING BLDG.**

BIOFILTER

**WEST
SUBSTATION**

EAST TRICKLING FILTER

**PRIMARY INFLUENT
DISTRIBUTION SYSTEM**

**#3 WATER
SYSTEM**

SOLIDS CONTACT TANK

**STORMWATER
STATION**

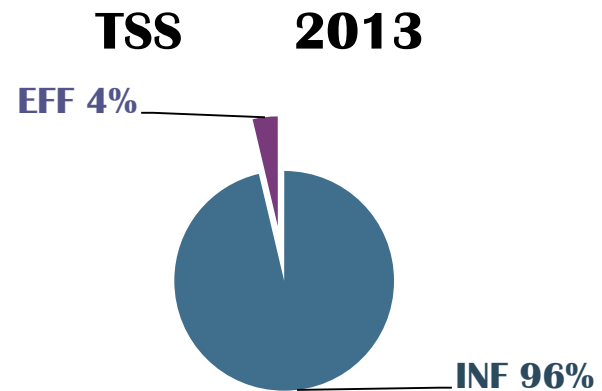
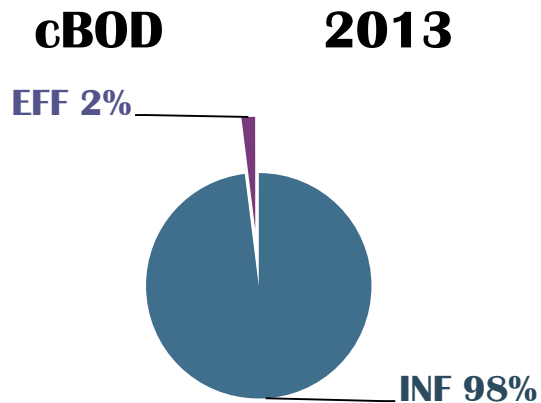
FINAL CLARIFIERS 1 & 2

**FINAL
CLARIFIER
ELECTRICAL
BLDG**

**WPCF PLANT UPGRADE
PROJECT COMPLETION
MAY 2008**

WPCF Removal Efficiency

- Common measures of wastewater treatment removal efficiency
 - Carbonaceous Biochemical Oxygen Demand (cBOD)
 - Total Suspended Solids



Looking ahead

- Collection System Master Plan - 2014
 - 98% complete
 - No significant issues identified
 - Some pipeline improvements needed
- WPCF Master Plan - 2013
 - New primary clarifier and trickling filter
 - New anaerobic digester (long-term)
 - Disinfection (long-term)

Long-Term Outlook

- Long range planning supports City's recently adopted General Plan strategies through 2040
- Sufficient capacity available to accommodate future economic and residential development

Sustainable Energy Sources

- Photovoltaic solar array - 1 megawatt
 - One of the largest in the county
- New co-generation system: 1.1 megawatt
- Second 1 megawatt solar project in next 3 years



Energy Production

- Co-generation system will make WPCF energy self-sufficient
- 1.6 million kW hours currently exported to PG&E grid
- RES-BCT Tariff - allows installation to exceed 1 MW and use surplus energy to offset demand at other City facilities

Recycled Water

- 2 to 4 mgd secondary treated wastewater supplied to Russell City Energy Center - reduces dependency on potable water
- Feasibility of recycled water distribution for irrigation and industrial use - up to 500,000 gpd - environmental review under way



Russell City Energy Center

Rates and Revenues

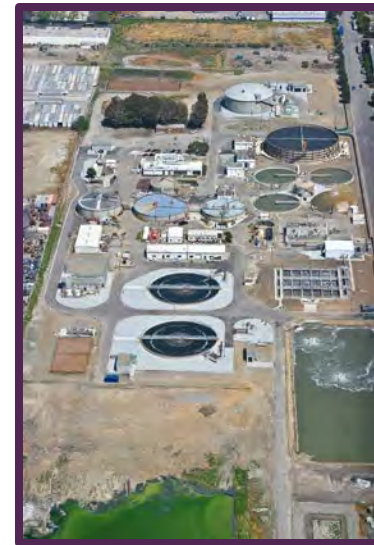
- Current single-family residential monthly billing: \$27.27
- 3% increase approved for FY 2015
- Future rate adjustments anticipated to be low-to mid-single digits
- Total revenue about \$18,500,000 per year

Future Challenges

- Implementing needed system improvements while maintaining reasonable rates
- Increasingly stringent regulatory compliance
- Developing and retaining a qualified workforce



WPCF 1961



WPCF Today