# **Environmental Sustainability**

## 2064 Committee

September 16, 2014



www.toaks.org/2064



#### Agenda

- Welcome
- Recap of July 1<sup>st</sup> Meeting
- Summary of current City sustainability programs & projects
- Carbon Footprint
- Zero Waste
- Energy
- Topics for October meeting
- Adjournment to October 21



#### Energy Action Plan – May 2012

- Goal: 10% energy & greenhouse gas reduction by 2017
  - Increase offsite renewable energy usage by 10%
  - Increase onsite renewable energy generation 2%
  - Increase alternative fuel city vehicles to 2/3rds of fleet (currently 57%)
  - Direct Access 16 largest accounts

#### City Facilities

Solar at Hillcrest

 3 LEED Certified Buildings (Leadership in Energy & Environmental Design)

Energy Efficiency upgrades – many

facilities



### Newbury Park Library

- Pervious pavers for water infiltration
- Storm water cisterns to capture rainwater
- Solar (rooftop 2016)





# Hill Canyon Wastewater Treatment Plant 100% Energy Self-Sufficient





Conservation

**Optimization** 

Renewable Energy

#### Hill Canyon Renewables



800 kW Cogen Energy

500 kW Solar Array

Both Power Purchase Agreements



Cost to City: \$0

\$3,000,000 in Grants for PPA companies

\$300,000 in annual Savings over grid produced electricity

#### CRPD Solar Canopies

- 4 CRPD Parks with Solar Canopies
  - Borchard
  - Conejo Community
  - Conejo Creek South
  - Dos Vientos

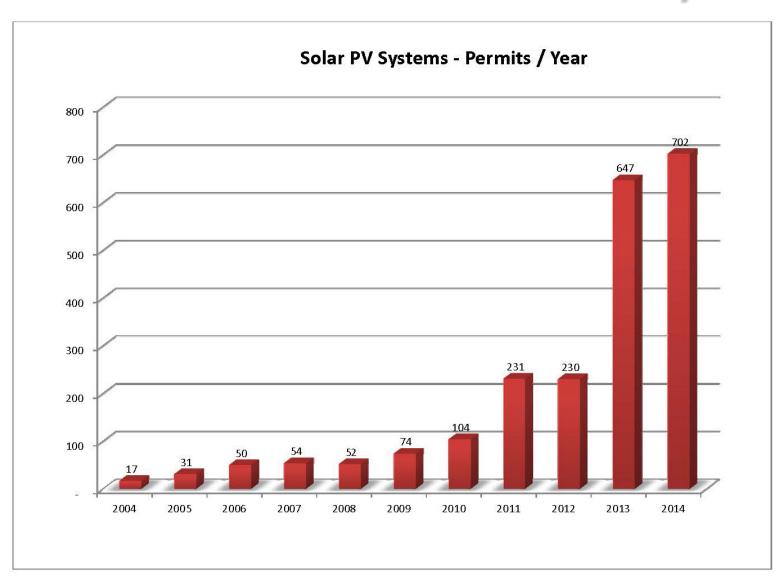


#### Other Solar Projects

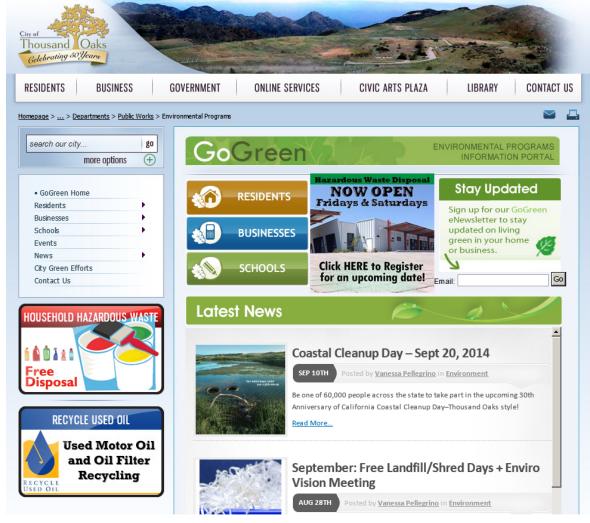
- Westlake Plaza (6/14) 30,000 SF
- Oaks Mall Parking Structure (7/14) 61,500 SF
- Oaks Mall rooftop



### Solar Permits Issued Annually



#### GoGreen Programs



toaks.org/GoGreen











#### Solid Waste & Diversion

 75% citywide diversion goal by 2020 (AB 341) currently 70%

Two year school outreach
 & infrastructure grant
 www.cvusdrecycles.org

Integrated Pest
 Management (IPM) grant
 targeting residents &
 lawncare



#### Household Hazardous Waste Facility

- LEED facility
- Based on analysis of 30 facilities by Dr. Tseng
- International best practices (cert. in process)
- UCLA Sustainability Extension teaching facility







#### **Business Programs**

- Commercial/waste recycling analysis
- Green business certification California
   Green Business Network
- Small business hazardous waste disposal





City of Thousand Oaks

### Energy/Water Efficiency & Money

- PACE/EMPOWER/HERO loans
- Energy efficiency & renewable energy generation
- Water conservation improvements
- Rebates





#### Other Programs

- Integrated pest management
- Biochar added to soil to retain water and nutrients



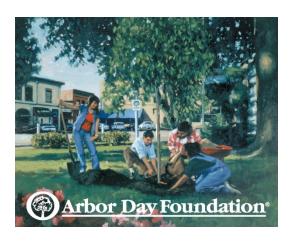


#### **Awards**

- Solar Champion Award
- Top 50 Bike-Friendly Cities in America
- Top 50 Greenest Fleets
- Tree City USA
- Trail City USA National Hall of Fame
- Americas 50 Greenest Cities Popular Science







#### Anticipated Changes

- Plastic bag ban (Padilla, SB 270)
- Commercial organic waste diversion (Chesbro, AB 1826)
- Pharmaceutical regulations just released



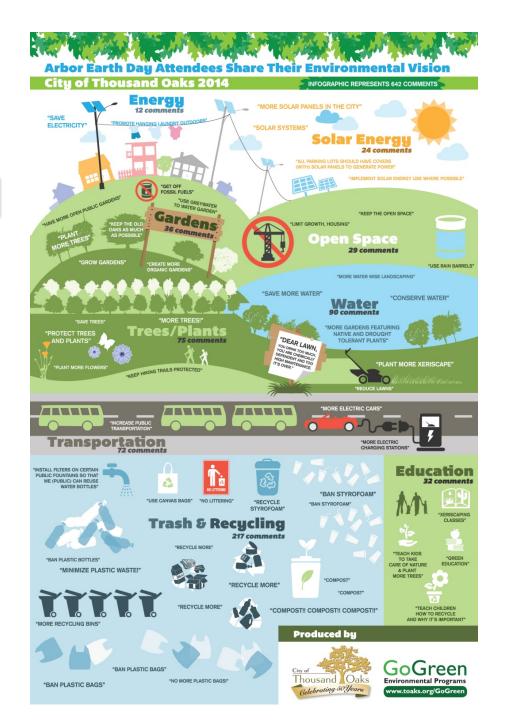




# Share Your Environmental Vision

Arbor Earth Day – 2014

642 comments



## Local Climate Change Risks Identified in City General Plan

Increases in extreme precipitation & runoff



Less water overall



Increased energy demand



Migration corridors critical for wildlife



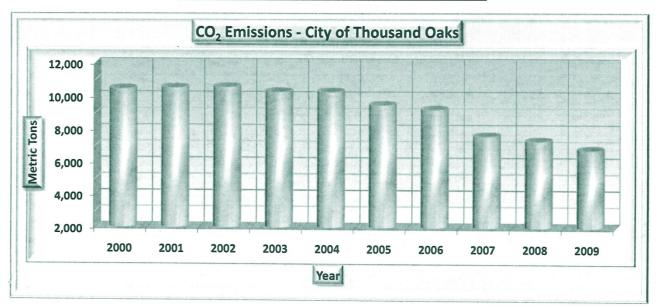
Increased fire risks



# California Climate Registry – Greenhouse Gas (GHG) Tracking

City of Thousand Oaks

CO <sub>2</sub> Emissions	
Year	Metric Tons
2000	10484.0
2001	10554.0
2002	10602.8
2003	10315.1
2004	10308.3
2005	9515.0
2006	9244.0
2007	7632.8
2008	7330.0
2009	6797.2



#### Tracking & Reporting (Future)

- Utility Management System
- Environmental Indicators Report



#### Resource Documents

www.toaks.org/gogreen under City Green Efforts tab

Energy Action Plan 2012
Source Reduction & Recycling Element Summary 2014
Household Hazardous Waste Element Summary 2014



# 2064 Environmental Sustainability Vision

- What is our 50 year environmental sustainability vision for the community?
- Basic definitions
  - Carbon footprint
  - Zero waste
  - Zero net energy



#### Carbon Footprint



The Carbon (or Ecological) Footprint is a way to measure the environmental impact of an individual or organization's daily operations, measured in units of carbon dioxide, based on how fast we consume versus replenish resources.

#### Zero Waste

Designing & managing products and processes to avoid & eliminate the volume & toxicity of wastes and conserve/recover leftovers

#### It's not WASTE until it's WASTED!



#### Net Zero Energy

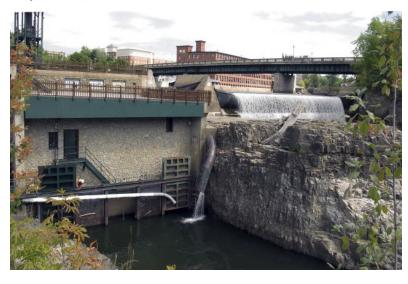
Net Zero Energy describes buildings whose energy consumption & emissions are fully offset by renewable energy, preferably onsite.

#### **CA Goals:**

- New residential 2020
- New commercial 2030
- 50% existing commercial retrofit by 2030

#### Largest City In Vermont Now Gets All Its Power From Wind, Water And Biomass

reported 9-15-14



# **Environmental Sustainability**

### Committee Recommendations for:

Carbon Footprint
Zero Waste
Net Zero Energy



