



Sustainable Affordable Housing: The Challenges of Water

New Partners for Smart Growth Conference

**Getting It Right:
Connecting Housing, Community Development,
Water and Sustainable Neighborhoods**

February 6, 2010





Community HousingWorks

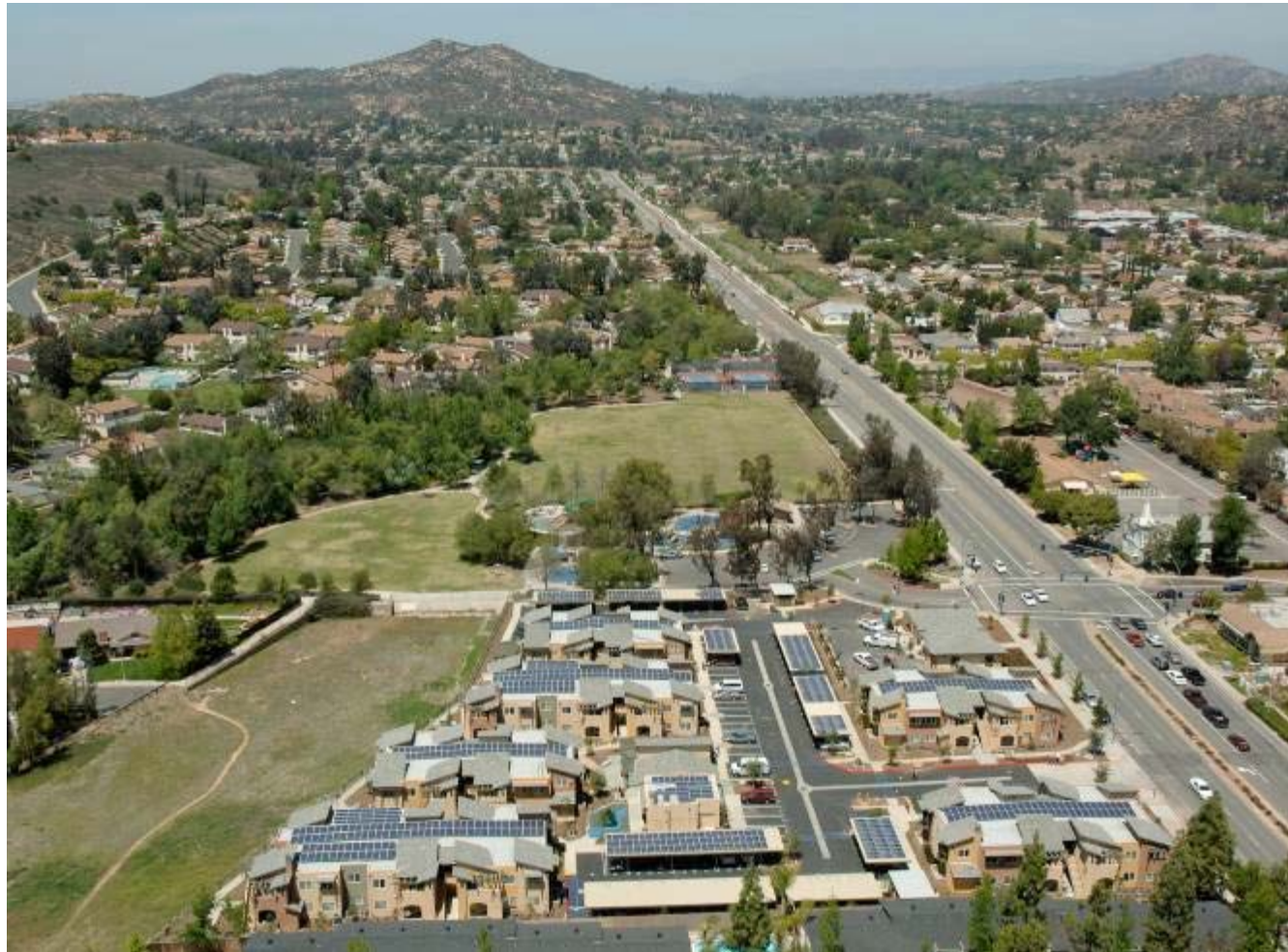


- San Diego County
- Nonprofit, 26 years
- Over 1,600 apartment homes, 30 complexes
- Part of NeighborWorks network
- “Help people and neighborhoods move up in the world”



Overview: SOLARA

- 2007, Poway (in-land San Diego)
- 56 units, 2-story garden; 2.5 acres, surface parking
- Adjacent to FEMA blue line stream floodway
- Integrated green design, before LEED for Homes





Overview: SOLARA



First apartment complex in CA to be fully powered by Solar
First apartment complex in CA to be Zero Energy New Home (ZENH)

Carbon Footprint– *reduced by 95%*

- Equivalent: Planting > 5,400 trees/yr
- Equivalent: Eliminating > 300 cars/yr



Context: Challenges of Water

- California and Southwest--Imported
 - Over 90% San Diego
 - Reductions – 30% from Ca Water Project; over 50% from Colorado River
- Perfect Storm – Climate Change, 3rd year of Stage 2 Drought (mandatory 20% reduction use)
- USDA names 29 farm counties disaster areas
- Nexus--water and energy
 - In California, 19% of energy consumed for water. Saving water saves energy
- Water- is it the new oil?

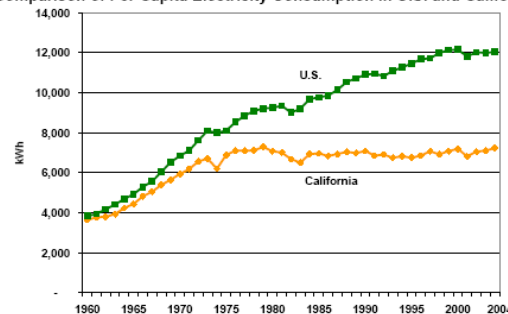




Context: Challenges of Water

- Flattening of demand despite pop. growth
- AB 32 - GhG by 2020 to 1990 levels
- SB 375 – Regional Planning to meet GhG goals
- California Green Statewide Building Code (effective 2011)– additional 20% water reductions for interiors
- Title 24 - CA Energy Code (since 1974)

Comparison of Per Capita Electricity Consumption in U.S. and California



Source: California Energy Commission, 2005.¹⁰



SOLARA: Interiors

- Mandatory low flow shower heads and faucets (1.5 gal/minute bathrooms, 2 gal/minute kitchen)
- Dual Flush Toilets
 - Choice– 0.9 gal or 1.6 gal
 - Saves approx 67% water/yr
 - Widely used in Australia
 - Resident Education
- Laundromats
 - Conservation
 - Energy Star
- Submetering- not done
 - City of San Diego pending ordinance

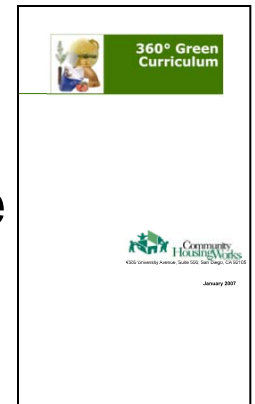




SOLARA: Landscape

Exterior Water Use- typically 70% usage

- Planting
 - Native plants
 - Naturalized plants (Mediterranean climate)
 - No turf (adjacent to City park)
 - Irrigation
- County of San Diego draft landscape ordinance
- Used “water budget” on lemon grove
- Operations— education for landscape maintenance
- Green Curriculum for residents;
Public art celebrating sustainability





SOLARA's recycled glass path, winding through Meyer lemon grove



SOLARA: Landscape

Exterior Water Use

- Bioswale
 - Storm water filtered and released into grassy floodway
 - SWWPP - CA requirements re stormwater protection to prevent silt and runoff into streams

- Operations Results
 - Significant reductions water, landscape maintenance

- Parking Reductions- variance



Native plants enhanced with public art



Other Water Conservation

- Water Conservation not used
 - Grey Water re-use- code, lenders
 - Recycled water– more city investments
 - Rain collection
 - Artificial turf
 - Reported issues: hot, possible lead or plastic, need for drainage in installation



Rehab: Same Challenges

Domestic- all same

Landscape – huge opportunity

- CHW greening portfolio





Resources for Designing Water Conservation

- LISC guide on Greening Rehab

- Guidance in rating systems
 - USGBC - LEED
 - Build it Green (BIG)
 - Enterprise Sustainable Communities
 - NAHB
 - Others

- Demonstration Gardens

Mary Jane Jagodzinski

MJJag@chworks.org
(619) 282-6647 Ex 5710



Community
HousingWorks

Building Communities. Changing Lives
. www.chworks.org

