



Energy Planning & Casino Efficiency

Santa Ynez Chumash Environmental Office

Josh Simmons
Environmental Director

Santa Ynez Band of Chumash Indians
August 7, 2012



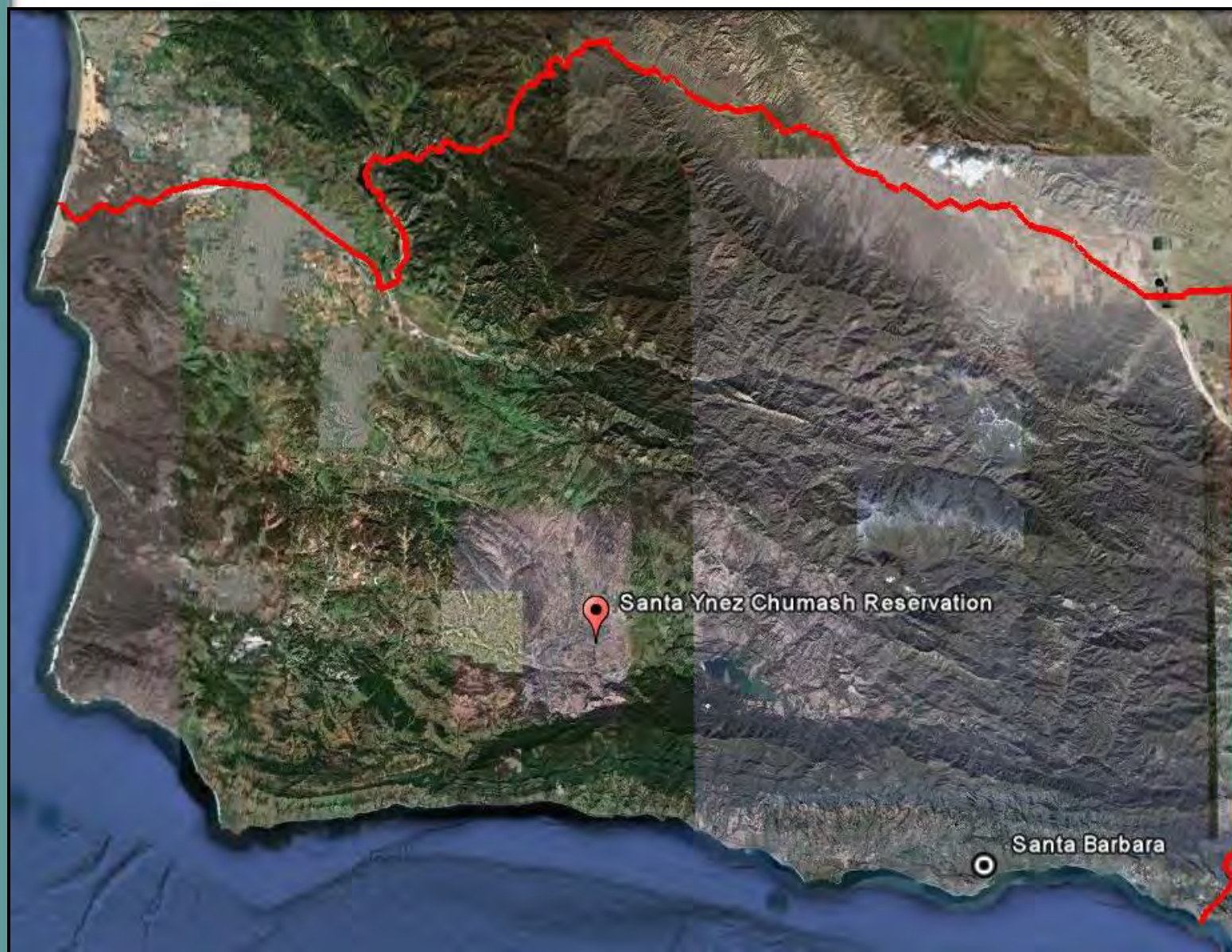


SANTA YNEZ
BAND OF
CHUMASH
INDIANS





SANTA YNEZ
BAND OF
CHUMASH
INDIANS



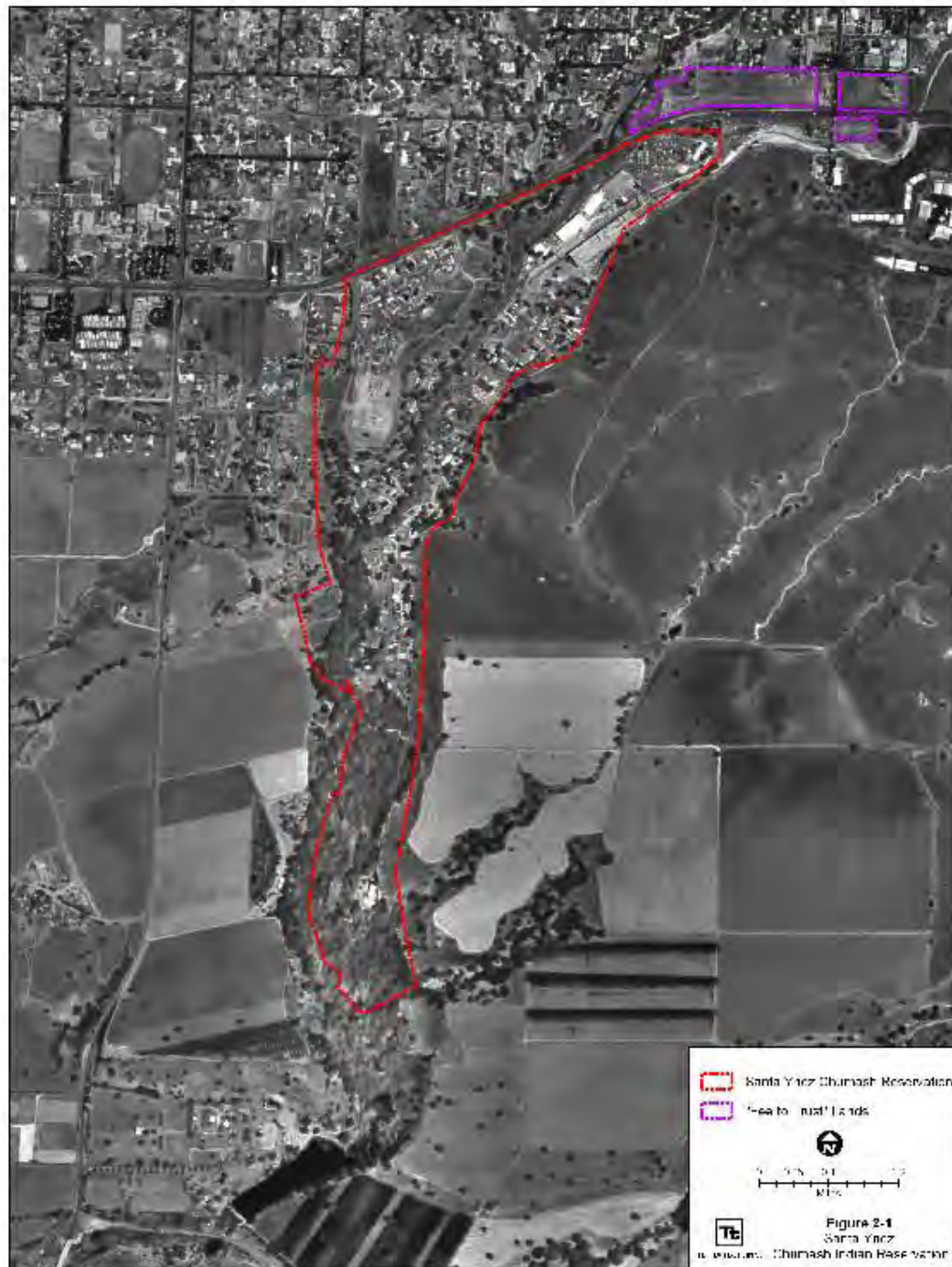


SANTA YNEZ
BAND OF
CHUMASH
INDIANS





SANTA YNEZ BAND OF CHUMASH INDIANS



Source: USGS Alaska Data Library 2002 map 1 C-12442-18



SANTA YNEZ BAND OF CHUMASH INDIANS





SANTA YNEZ
BAND OF
CHUMASH
INDIANS





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

***“Plans are nothing.
Planning is everything.”***

-Dwight Eisenhower



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

DOE “First Steps” Grant Program

- **First Steps Toward Developing Renewable Energy and Energy Efficiency on Tribal Lands**

apps1.eere.energy.gov/tribalenergy/government_grants.cfm

- **Energy Planning process based on DOE Guide to Tribal Energy Development**

www1.eere.energy.gov/tribalenergy/guide



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Planning Steps Summary

- 1. Determine Past, Current, and Future Energy Use**
- 2. Develop a Strategic Energy Plan**
- 3. Investigate Energy Options**
- 4. Build Capacity**

Steps do not have to be sequential



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 1: Determine Your Energy Use





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 1: Determine Your Energy Use

- **Gain access to energy data**
- **Implement ongoing collection**
 - **Energy Data Sources:**
 - Departments and Building Operators
 - Utilities (PG&E, SoCalGas)
 - Energy monitoring systems
 - Energy Star Portfolio Manager
- **Organize & analyze data**
- **Prepare baseline(s)**
- **Determine future use**
 - **Based on current/past use and plans**

Step 2: Envision your Energy Future



SANTA YNEZ
BAND OF
CHUMASH
INDIANS





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 2: Develop a Strategic Energy Plan

- **Start with a conceptual plan (10 yrs)**
 - **Update annually**
 - **Include past major accomplishments**

SYCEO Conceptual Strategic Plan ENERGY PROGRAM

2008 – 2010

- Assisted with the installation of solar on 5 homes, TH, and HC
- Arranged building performance evaluation for one home
- Secured \$500,000 for Santa Ynez Chumash Energy Efficiency, Conservation, and Renewable Energy Project
- Worked with Bren Group Project on developing a Chumash Community Energy Management & Climate Action Strategy

2011

- Bren Group Project completed Energy Management & Climate Action Strategy
- Hire Energy Specialist to administer project
- Begin formal training of 30-60 community members in various areas of energy efficiency (EE) and renewable energy (RE) for buildings
- Arrange documentary to market the program (possibly televised)

2012-2013

- Complete formal training and certification of 30-60 people
- Provide up to 4,056 hours of paid EE and solar on-the-job training for 30-60 people
- Retrofit 25 tribal member homes and 4 commercial buildings w/ EE measures
- Install solar on 10 tribal member homes
- Create and distribute documentary and/or case study to market/share energy program
- Start a solar panel cleaning service for community members
- Develop a business plan for an solar panel cleaning business focused on non-tribal properties; begin implementation

2014-2017

- Develop a business plan for a renewable energy and energy efficiency installation firm
- Form a renewable energy and energy efficiency services business that utilizes program graduates and serves the SYBCI Community, Santa Barbara County, and other Tribes
- Provide similar training programs to other Tribal communities to expand potential workforce (for a fee or as part of a grant)
- Expand solar panel cleaning service and business throughout SB
- Hire/promote an Energy Program Manager

2018-2022

- Open satellite office in northern or southern California
- Expand energy services business to serve non-Indian homes and businesses throughout northern or southern California
- Expand solar panel cleaning service business beyond SB



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 2: Develop a Strategic Energy Plan

- **Start with a conceptual plan (10 yrs)**
 - **Update annually**
 - **Include past major accomplishments**
- **Identify community goals and values**
- **Create Vision Statement**
- **Identify, inspire, and empower energy champions**
- **Release plan for public comment***
- **Submit plan for approval***



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 3: Assess Your Options





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

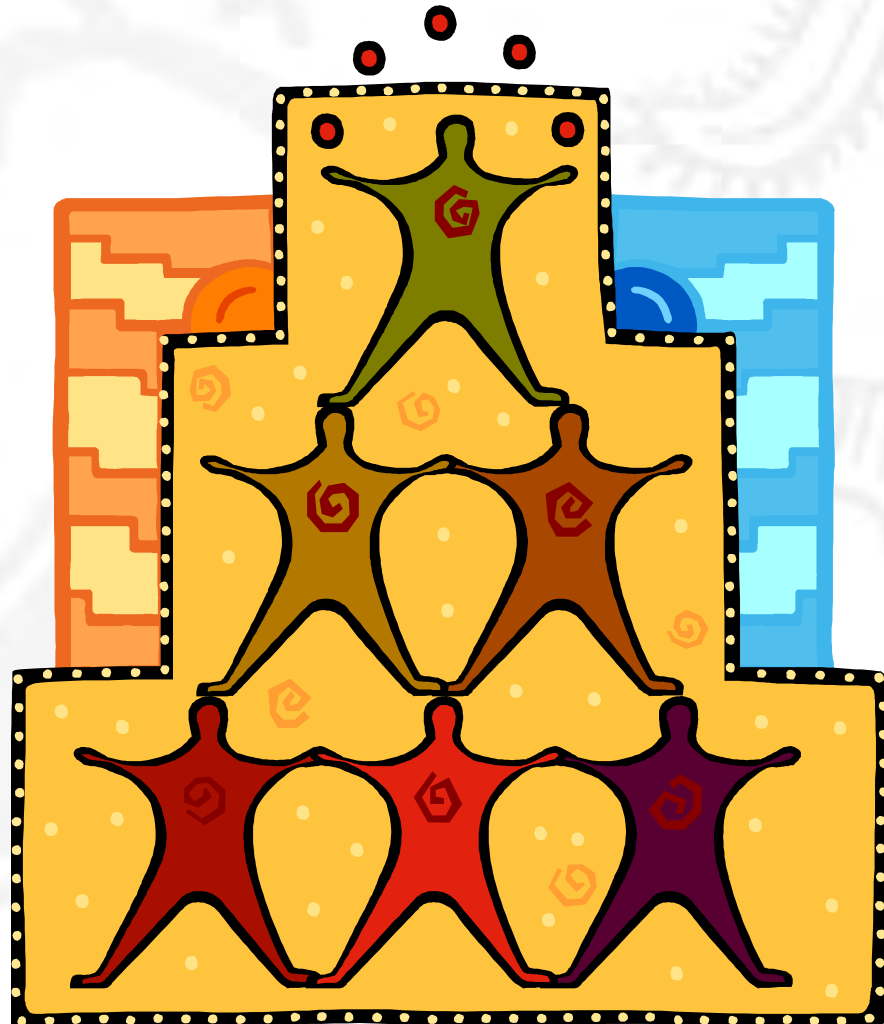
Step 3: Investigate Energy Options

- **Identify energy options**
 - Ongoing research
- **Evaluate options**
 - Preliminary investigation
 - Full feasibility study
- **Select (or prioritize) options**
- **Implement “ripe” opportunities**



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 4: Build Your Capacity





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 4: Capacity Building

- **Training**
 - **Staff training**
 - **Community member training**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 4: Capacity Building

- **Training**
 - **Staff training**
 - **Community member training**
- **Inform and involve community**
- **Share outside of community**
- **Seek and obtain funding**
 - **Chumash Community Energy Program**



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Chumash Community Energy Project



Climate Showcase Communities
Local Climate and Energy Program

www.epa.gov/statelocalclimate/local/showcase/santaynez.html



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Chumash Community Energy Project

Community Member Training

Energy Efficiency & Solar

Formal Training

Paid Apprenticeship



Building Performance Upgrades

25 Homes, 4 Commercial

Installed by Trainees

Subsidized by CSC Grant



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Step 4: Capacity Building

- **Training**
 - **Staff training**
 - **Community member training**
- **Inform and involve community**
- **Share outside of community**
- **Seek and obtain funding**
 - **Chumash Community Energy Program**
 - **Government Solar Project**







SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Chumash Casino Resort

➤ Chumash Casino

- 180,000 sq. feet
- 2,000 slot machines, 40 tables
- 1,000 person capacity showroom
- 4 restaurants, 12 bathrooms

➤ Chumash Resort & Spa

- 80,000 sq. feet
- 106 rooms
- Pool, hot tub





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Chumash Casino Resort

- **2 parking structures**
- **43 vehicle fleet**
- **1,700 employees**
- **Serves 10,000 – 15,000 daily**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Chumash Casino Resort

➤ **Goals:**

- **Reduce environmental footprint**
- **Lower operating costs**

➤ **Keys to Success:**

- **Ongoing research**
- **Continuous monitoring & evaluation**
- **Support of Tribal Leadership**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

➤ Building Shell

- Double walled insulation
- Reflective EPDM roof liner





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- **Building Shell**
- **Understanding Energy Use**
 - **Utility Energy Audits**
 - **EPA Assessment**
 - **Energy Monitoring**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- **Building Shell**
- **Understanding Energy Use**
- **Variable Frequency Drives (VFDs)**
 - **Chilled Water Pumps**
 - **Boilers**
 - **Condenser Fans**
 - **Air Ventilation**
 - **Water Features Pump**
 - **Pool & Hot Tub Pumps**
 - **RO System**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- **Building Shell**
- **Understanding Energy Use**
- **Variable Frequency Drives (VFDs)**
- **HVAC Management**
 - **Regular Maintenance**
 - **Economizer**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Building Shell
- Understanding Energy Use
- Variable Frequency Drives (VFDs)
- HVAC Management
- Whole Building Energy Management
 - Johnson Controls





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Building Shell
- Understanding Energy Use
- Variable Frequency Drives (VFDs)
- HVAC Management
- Whole Building Energy Management
- Demand Response Program
- Solar Thermal
 - Domestic Hot Water
 - \$63k investment, \$45k rebates (SoCalGas)



HEAT TRANSFER: Solar Collectors
2011- 720 tubes installed for domestic hot water heating



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Building Shell
- Understanding Energy Use
- Variable Frequency Drives (VFDs)
- HVAC Management
- Whole Building Energy Management
- Demand Response Program
- Solar Thermal
- Pool & Spa Heating
 - STA-RITE Max-E-Therm





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- **Energy Efficient Appliances**
 - **Energy Star**
 - **Heat Recycler 1100 System**
 - **Griddle heat**
 - **Turbo Pot**





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

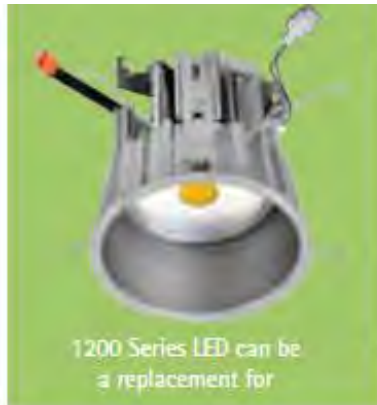
Energy Initiatives

- Energy Efficient Appliances
- LED Lighting

All lighting in this Photo is LED. The General down lights are Halo 1200 Series. The cove accent lighting is 24 volt RGB LED strip. The edge lit acrylic are CK power core RGB fixtures.



**Cree LR6-DR1000 Series LED Module
used to replace T5 HO fluorescents
and halogens in lower ceilings**



90 W Halogen PAR 38
Reflector Lamp



120W Incandescent
BR40 Reflector Lamp



32 W Compact
Fluorescent Luminaire

SustainableLEDesign

COOPER Lighting

Halo 1200 Series LED Module used to replace twin lamp fluorescents



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- **Energy Efficient Appliances**
- **LED Lighting**
 - **Annual Savings:**
 - **585 MWh**
 - **\$58,000**
 - **Occupancy Sensors**



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Energy Efficient Appliances
- LED Lighting
- Load Sensor Power Strips





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Energy Efficient Appliances
- LED Lighting
- Load Sensor Power Strips
- MELINK Intelli-Hood





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Energy Efficient Appliances
- LED Lighting
- Load Sensor Power Strips
- MELINK Intelli-Hood
- Customer & Employee Shuttle Buses





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- **Energy Efficient Appliances**
- **LED Lighting**
- **Load Sensor Power Strips**
- **MELINK Intelli-Hood**
- **Customer & Employee Shuttle Buses**
- **Alternative Fuel Fleet Vehicles**
 - **2011 Lincoln MKZ Hybrid (Luxury Fleet)**
 - **2010 Ford Flex-Fuel Mini Bus (E-85)**
 - **Electric Security Carts**



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Energy Efficient Appliances
- LED Lighting
- Load Sensor Power Strips
- MELINK Intelli-Hood
- Customer & Employee Shuttle Buses
- Alternative Fuel Fleet Vehicles
- Chumash Biofuel Program





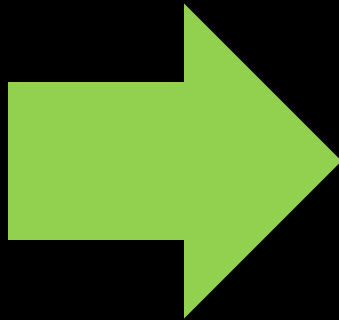
CHUMASH



**USED COOKING
OIL**









SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

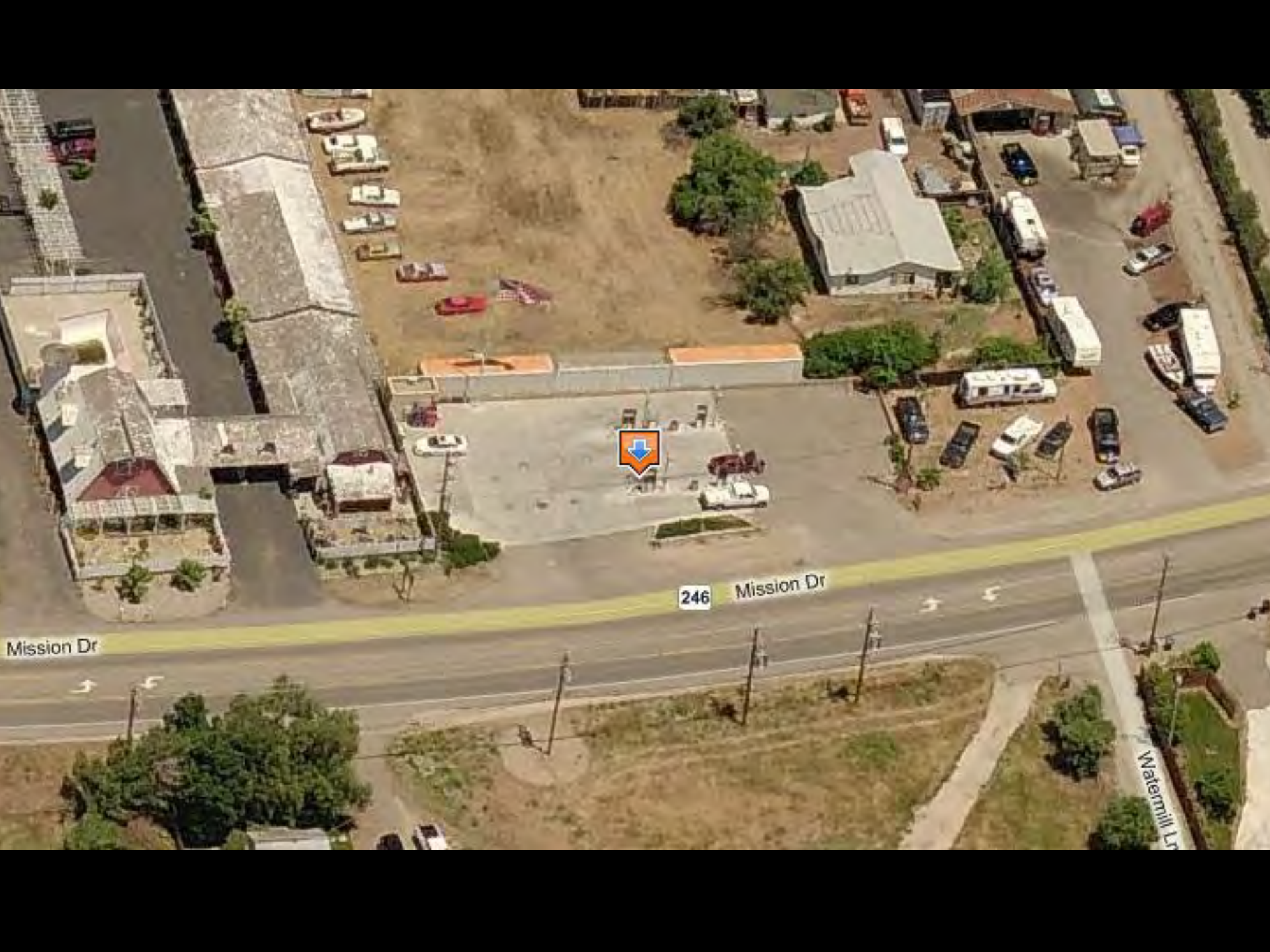
- Energy Efficient Appliances
- LED Lighting
- Load Sensor Power Strips
- MELINK Intelli-Hood
- Customer & Employee Shuttle Buses
- Alternative Fuel Fleet Vehicles
- Chumash Biofuel Program
- Compressed Natural Gas
 - Vehicles and Fueling



Clean Energy™

NO
PARKING
IN LOT
EXCEPT
FUELING





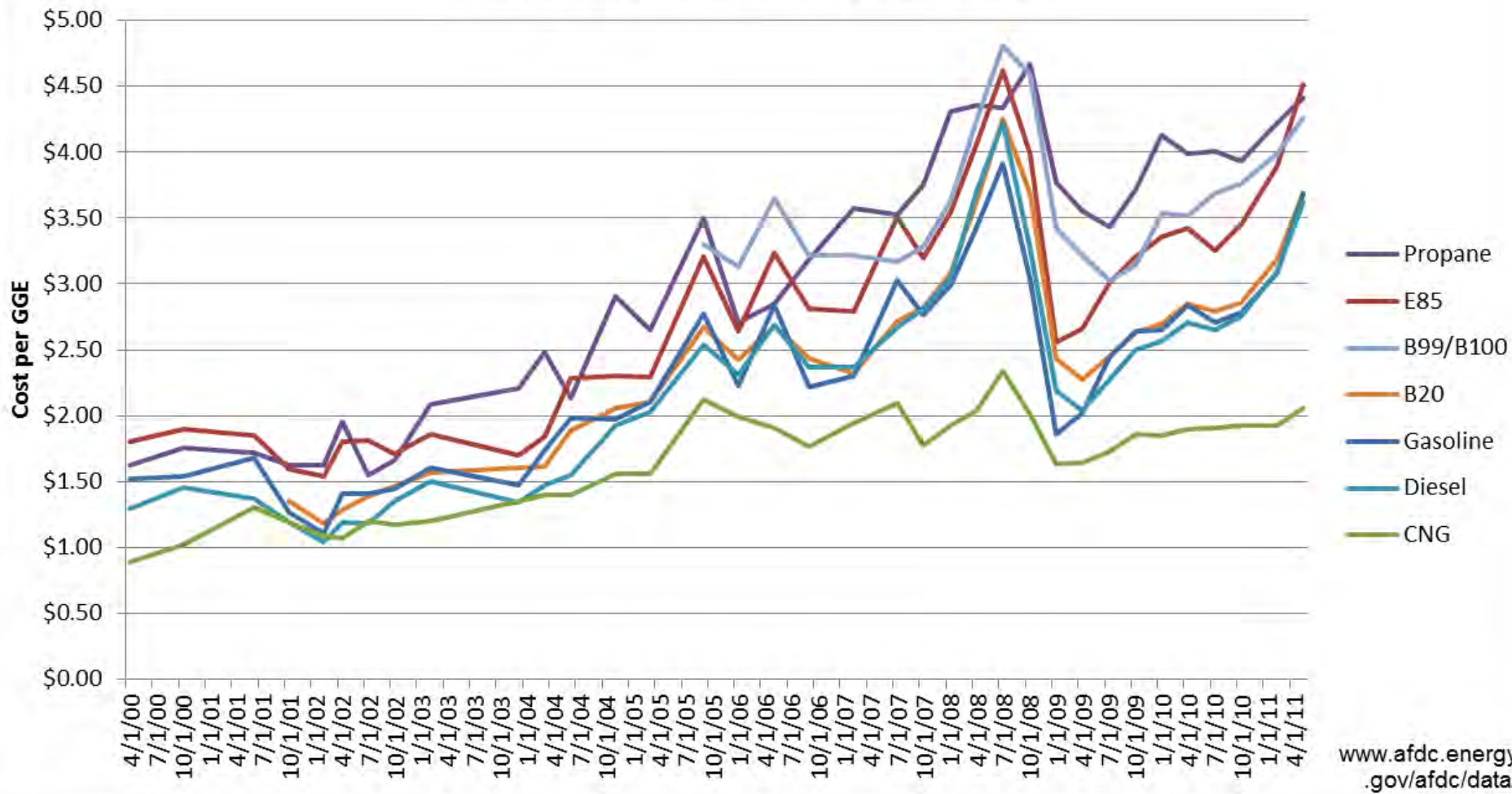
246

Mission Dr

Mission Dr

Watermill Ln

U.S. Average Retail Fuel Prices





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Energy Initiatives

- Energy Efficient Appliances
- LED Lighting
- Load Sensor Power Strips
- MELINK Intelli-Hood
- Customer & Employee Shuttle Buses
- Alternative Fuel Fleet Vehicles
- Chumash Biofuel Program
- Compressed Natural Gas
- Electric Vehicle Charging Stations







SANTA YNEZ
BAND OF
CHUMASH
INDIANS

On the radar

- **Fuel cells and PV for power**
- **Geothermal for heating and cooling**
- **Compressors on kitchen refrigerators and freezers**
- **Solar Thermal Pool Heating**



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Benefits

- **Cost Savings**
- **Reduced Environmental Impacts**
- **Safer, Healthier Workplace**
- **Increased Employee Productivity**
- **Higher Customer Satisfaction**
- **Positive Public Relations**
- **Green Marketing Opportunities**
- **Awards and Recognition**



SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Awards & Recognition

- 2012 SoCalGas Company's Energy Smart Award
- 2012 S.B. County Green Business Certification
- 2009 EPA Environmental Achievement Award
- 2009 CIWMB's Waste Reduction Program Award
- 2007 Santa Barbara County Green Award Program
- EPA WasteWise Program Certification
- EPA Food Recovery Challenge Participant
- Santa Barbara Independent Article
www.independent.com/news/2012/may/24/sustainable-chumash/
- GreenBiz.com Article
www.greenbiz.com/blog/2012/06/12/how-one-tribe-cut-casino-energy-costs-18-percent
- Real Green TV
www.tvguide.com/tvshows/real-green-2011/episode-24-season-1/real-green/340786
- Presentation Invitations





SANTA YNEZ
BAND OF
CHUMASH
INDIANS

Thank You Questions?

Josh Simmons

Environmental Director

Santa Ynez Band of Chumash Indians

Phone: (805) 688-7997 x15

Cell: (805) 245-9922

jsimmons@santaynezchumash.org

www.SYCEO.org