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## Identifying Sustainable Design Opportunities in Tribal Hotels and Casinos Focus: Mescalero Inn of the Mountain Gods Hotel & Casino

Diana Fuller  
University of Illinois at Springfield  
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**ENERGY**



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# Personal Profile

- Mescalero Apache Tribal Member
- Illinois State University-May 2012

Major: Renewable Energy Economic and Public Policy

Minor: Native American Studies

Capstone Project and Publication: Implementing Sustainable Business Practices in a hotel and expanding green certification markets in the Midwestern United States

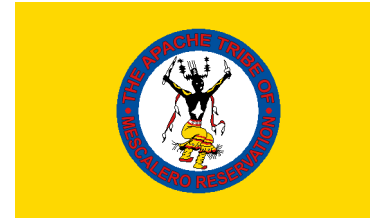
- University of Illinois at Springfield-May 2016

Major: Environmental Studies

Focus: Sustainable Development and Policy

Capstone Project: Natural Resource Planning with Mescalero Apache Tribe

- **Mission:** Work with tribal and non-tribal communities that would like to advance sustainable development.
- Mother & Wife





# Project Overview



Topic: Identifying sustainable design in tribal hotels and casinos.



What is sustainable design?



Tribal examples

- Blue Lake Rancheria
- Rincon Band of Luiseno Indians
- Forest County Potawatomi Tribe of Wisconsin



Inn of the Mountain Gods Hotel and Casino



Inn of the Mountain Gods Hotel and Casino Sustainable Design Opportunities



Resources



Conclusion



# Background

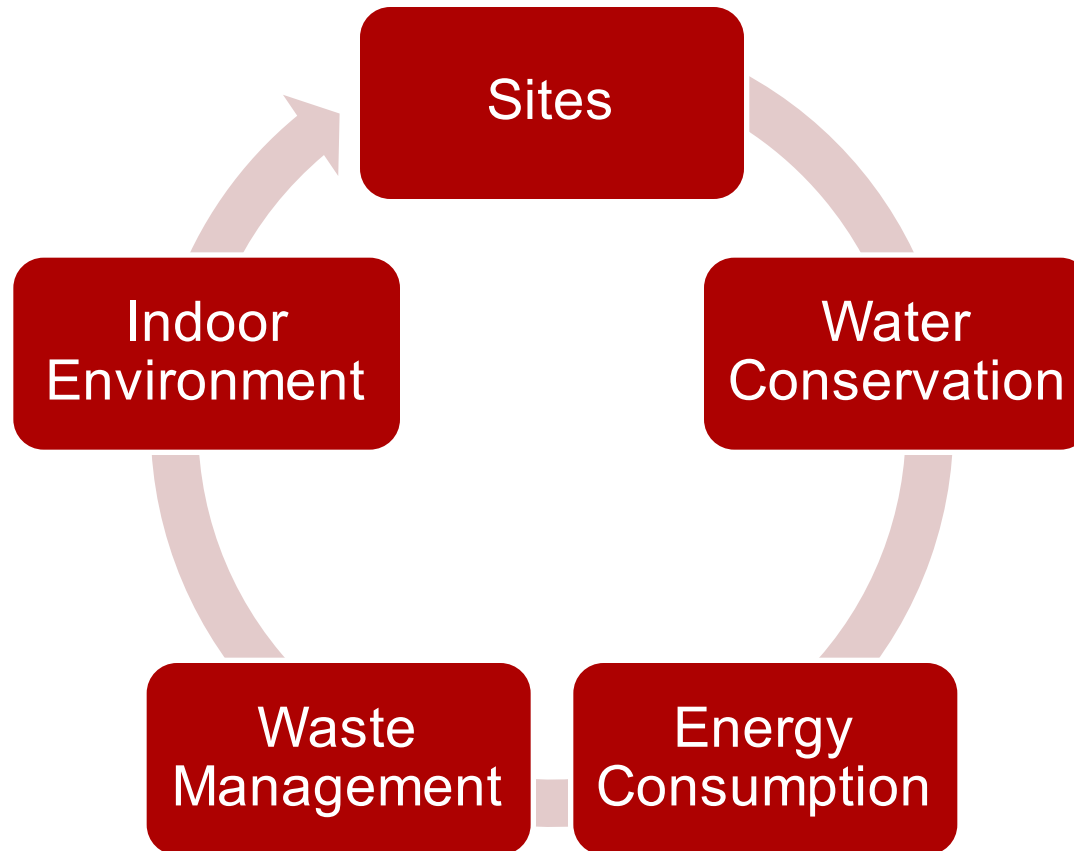
- Traditional Native American Structures
  - Orientation, local materials, knowledge of place
- Sustainable design is becoming more common
  - Economic, environmental and social benefits
- Tribal hotels and casinos
  - Economic foundation



“We call for a more sustainable and culturally appropriate development that is guided by the values and teachings of our ancestors. We call for an economic base that would truly empower our people rather than the pockets of transnational corporations, western cities, tribal, state and federal government. We call for an end to the colonization of our lands for energy purposes and we demand a better government that is more accountable to the people”.-Roberto Nutlouis of the Indigenous Youth Coalition of Pinon (S. P. Halliday, 1997).



# Sustainable Design Concepts





# Blue Lake Rancheria

## Blue Lake Rancheria

- Wiyot, Yurok, and Hupa people
- Humboldt County, CA
- 91 acres
- 17 miles south of Eureka and 5 miles east of Arcata
- Largely rural terrain between the Northern CA coastal mountains and the Pacific Ocean

## Blue Lake

### Casino & Hotel

- 44,504 sq. ft.
- 3 restaurants
- 102 guest rooms
- 750 machines, 18 table games and bingo
- Designated a Disaster Relief Center and Regional External Evacuation Zone

## Climate Action Champions

- 35% reduction in Energy at hotel in 2010
- 500 kW solar array
- Micro-grid with over 950 kWh of battery storage
- 175kW biomass co-generation system with hydrogen fuel cell technology
- Electric vehicles
- More Green Goals!



Google Maps location for Blue Lake Rancheria



Source: Blue Lake Casino & Hotel Website



Blue Lake Rancheria Seal Source: Blue Lake Rancheria Website

"Education, begun early and continued throughout life, is one of the Blue Lake Rancheria Tribe's top priorities." -Claudia Brundin, Chairperson, Blue Lake Rancheria Tribe



# Rincon Band of Luiseño Indians

## Rincon Band of Luiseno Indians

- Northeast corner of San Diego County, CA
- 4,634.57 acres
- Water Conservation
  - Lake Henshaw
  - Wells
- Endangered Species
  - Arroyo Toad

## Harrah's Resort Southern California

- 1,700 slot machines
- 68 table games
- 1,000+ hotel rooms
- 3 pools, pool bar & 400 ft. lazy river
- 23,000 sq. ft. of meeting space
- 2,200 seat conference venue
- 9 restaurants

## Green Committee

- Retrofitted 10,000 light fixtures. Saving 3.5 million kWh and over \$250,000
- In 2015 installed a solar plant that generated 113,986 kWh. Reducing the casino's usage by 25%.
- Same year, reduced water consumption by 2.5%
- Increased recycling by 10.5% diverting 468 tons of waste



"Our participation in this event is one of many ways we strive to uphold the principles outlined in our Code of Commitment and support the communities in which we are privileged to operate. Caesars recognizes the importance of being a responsible steward of our environment and is committed to environmental sustainability and energy conservation. Throughout the company, we are taking innovative steps to lower our energy consumption, operate more efficiently, and reduce our environmental footprint."



# Forest County Potawatomi Tribe

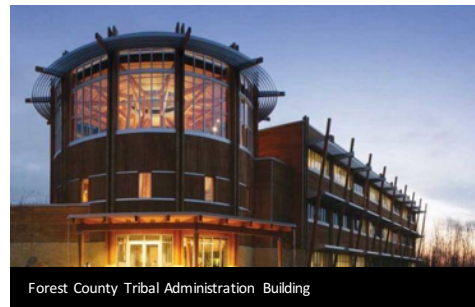
## Forest County Potawatomi Tribe of Wisconsin

- Nicolet National Forest of Northeastern Wisconsin
- 12,280.18 acres
- Environmental Concerns
  - Air quality
  - Water
  - Solid waste
  - Wildlife



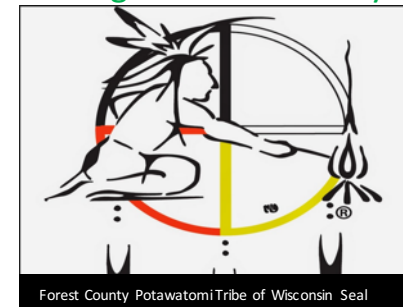
## Potawatomi Carter Casino Hotel

- 1,400 gaming machines
- 32 table games
- 100 guest rooms
- 2 restaurants
- Spa, fitness center, lobby bar and meeting space.



## Greenfire

- 1,720 205 W metal halides upgraded in parking structure to 55 W LED's. A 73% reduction in energy use (Potawatomi Bingo Casino)
- Carter Casino Energy study recommended 11 ECM's that would save 34.66% for energy savings.
- Now have 30 kW solar PV and 2-MW anaerobic digester and biogas generation facility



"The traditional values of the Forest County Potawatomi Community teach us to respect all living things, to take only what we need from mother earth, and to preserve the air, water, and soil for our children. Reflecting these values, we take leadership in creating a sustainable and healthy world. We resolve to reduce our own environmental impacts and to take steps to remedy the impacts of others. We encourage others to do the same. We also seek legislative and policy changes that protect the environment for all people, including generations to come."



# Inn of the Mountain Gods Hotel & Casino

## Mescalero, NM

- Otero County
- 462,769.858 acres
- Tularosa Basin on the western boundary
- Sacramento Mountains on the northern boundary
- Lincoln National Forest to the south
- 2<sup>nd</sup> largest water reserve in NM
- 168K acres of wood resources

## Inn of the Mountain Gods Hotel & Casino

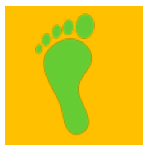
- 1,200 gaming machines
- 40 table games
- 273 hotel rooms
- 40,000 sq. ft. meeting space
- Indoor pool, fitness center, gift shop, golf course
- 6 restaurants

## Green Applications

- Strategic Energy Plan in 2011
- Upgrading fluorescents lights in back employee areas
- Guest room towels are 40% bamboo
- Standard towel and sheet program
- Room sensors controlling heating and cooling
- In house furniture restoration
- Separate cardboard
- High efficiency washers, but some still being upgraded



2021 Vision Statements: "Energy independence thru self-sustaining renewables"; "Economically independent thru diverse business development"; "Sustainable facilities that respond to growth" (Mescalero Apache Tribe, 2011)



# Inn of the Mountain Gods Hotel & Casino Sustainable Design Opportunities

## Energy Audit

- Identify Partner
  - Smart Energy Design and Assistance Center (SEDAC)
  - San Diego Gas & Electric
- Supplement questions
  - Cost of electricity
  - Number of light fixtures
  - Type of fixtures
  - Power rating
  - Cost to upgrade
  - Incentives, rebates, grants
  - Amount of energy savings
  - ROI
  - Renewable Energy Opportunities

## Water Audit

- Well system
  - No water bills
  - Mark Twain Hotel Example
- Supplemental questions
  - Water heating
  - Functional areas that use water
  - Flow rates
  - Meters
  - Upgrades to fixtures
  - Rebates, incentives, grants
  - Existing maintenance schedule

## Guest Rooms

- Suggestions
  - Recycling bins
  - Recycled amenities
  - Motion censored lighting
  - Motioned censored sinks
  - Energy Star electronics, windows and doors

## Purchasing

- Suggestions
  - Buy from local vendors
  - Recycle items that can't be restored
  - Salvage/reuse
  - Donate or sell gently used items
  - Purchase products that are organic or low VOC

## Waste Management

- Suggestions
  - Purchasing and providing recycling bins for entire resort
  - Recycle plastic, glass, metal, paper, office items
  - Compost or donate food
  - Educate staff on recycling process
  - Perform periodic waste audits



# Resources

- U.S. Environmental Protection Agency
  - Energy Star Program
  
- New Mexico Green Zia Environmental Leadership Program
  - Energy Efficiency Program
  
- U.S. Green Building Council
  - Leadership in Energy and Environmental Design (LEED)
  
- U.S. Department of Housing and Urban Development
  - Indian Community Development Block Grant Program

"Wherever it makes sense, I recommend that tribes develop these [local, regional, state, and federal] partnerships for tribal project roles, because it's just proven incredibly successful for us."

—Jana Ganion, Energy Director, Blue Lake Rancheria



# Resources

- U.S. Department of Energy
  - First Steps Toward Developing Renewable Energy and Energy Efficiency on Tribal Lands-2016 (FOA)
  
- U.S. Department of Energy
  - Strategic Technical Assistance Response Team (START)
  
- Otero County Electric Cooperative (OCEC), Inc.
  - Electric Cooperative Rebates
  
- U.S. Department of Agriculture Rural Development (USDA)
  - Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Loans & Grants (REAP)



# Conclusion

- Tribal casinos and hotels contribute to regional economies and are a significant source of revenue for the tribal communities.
- Sustainable design practices in tribal hotels and casinos will reduce negative impacts to the environment, increase revenue with cost savings in time, and contribute to the communities overall well being.
- Success stories evolved from effective partnerships that assisted with funding and technical advice. Also from engaging the community.
- Mescalero's Inn of the Mountain God Hotel & Casino has opportunities to implement energy efficiency and explore options for renewable energy.



# Ixehe! Thank you!



Pictures were taken during field visits to renewable energy installations at: 1,2,6) Blue Lake Rancheria 3,5,7) Navajo Tribe 4) Campo Tribe 8) Isleta Pueblo 9) Pit River Tribe