PRESENTATION TITLE

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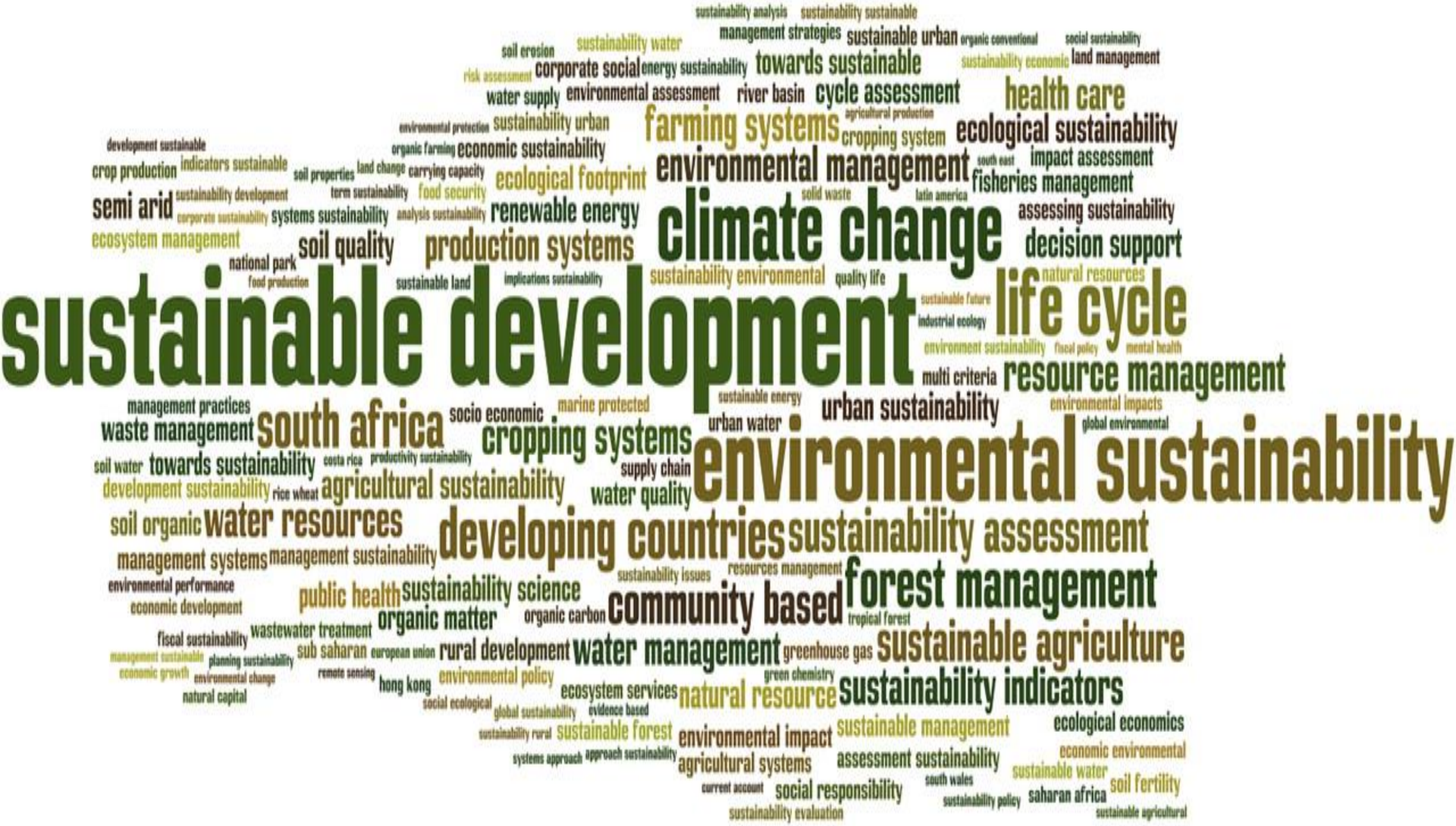
Aramark Leisure

What does “Sustainability” mean to you?

Hundreds of Definitions



My Job in a Nutshell

Sustainability

- Environmental
  - Food
  - Retail
  - Operations
- Social/Socioeconomic
  - Supporting local and native economies
  - Accessibility

Engineering

- Infrastructure
  - Renovations
  - New buildings
  - External (parking lots)
- Facilities
  - Water/energy use
  - Cleaning
  - Transportation

Systems Engineering: tying everything we do together through sustainability in all of its forms

Aramark Leisure: What do we do?

- 60 sites, approximately 6000 employees
- Parks, Conference Centers, Cultural Attractions
- 5437 rooms, 2889 in Parks, 2548 in conference centers

Wharton
University of Pennsylvania

Georgetown University
Hotel and Conference Center

Kellogg
School of Management

Man Made vs. Natural Systems

How do we “engineer” reduced impact to nature?

- Communicate the problem?
- Use technology and operational improvements to enable solutions?
- Use social science data to inform us, as well as enable us to develop education/communication that will influence consumer decisions?

What is the Problem?

Yosemite National Park Example

El Altar, Ecuador – 17,451’

Chacaltaya, Bolivia – 17,785’

Any Guesses?

17,635.5’

17,635.5 ft.

4.2 Million Visitors

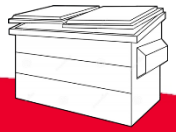
+

2800 Combined Staff

= 2200 Tons of Trash

=3919 Dumpsters stacked

~68% is from Aramark operations

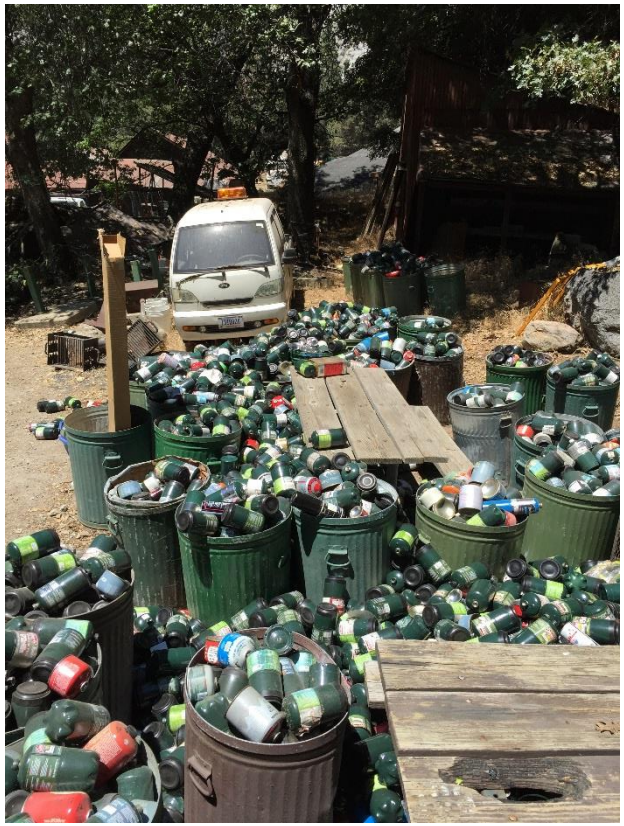


Climate of waste?

See the video, here: https://youtu.be/DdiyE6ppcnk

Follow Up to Video

- 5.2 million visitors to Yosemite in 2016 (1M more than 2015)
- 3600 tons (1000 tons more than 2015)
- ~40,000 propane tanks



What is the REAL challenge?

- Consumer behavior: buying and disposal habits
- Enormous amounts of visitors
  - Millions of more people
  - Pushed further into the back country
  - Bringing items from gateway community
- Local, remote municipalities built for permanent residents only
- Limited government resources

What are Some Solutions?

Technology
Operations
Communicatons

Food Waste Minimization

- What are we buying?
- What is the packaging?
- How can we eliminate items/packaging?
- How can we divert more?

Technology Implementation

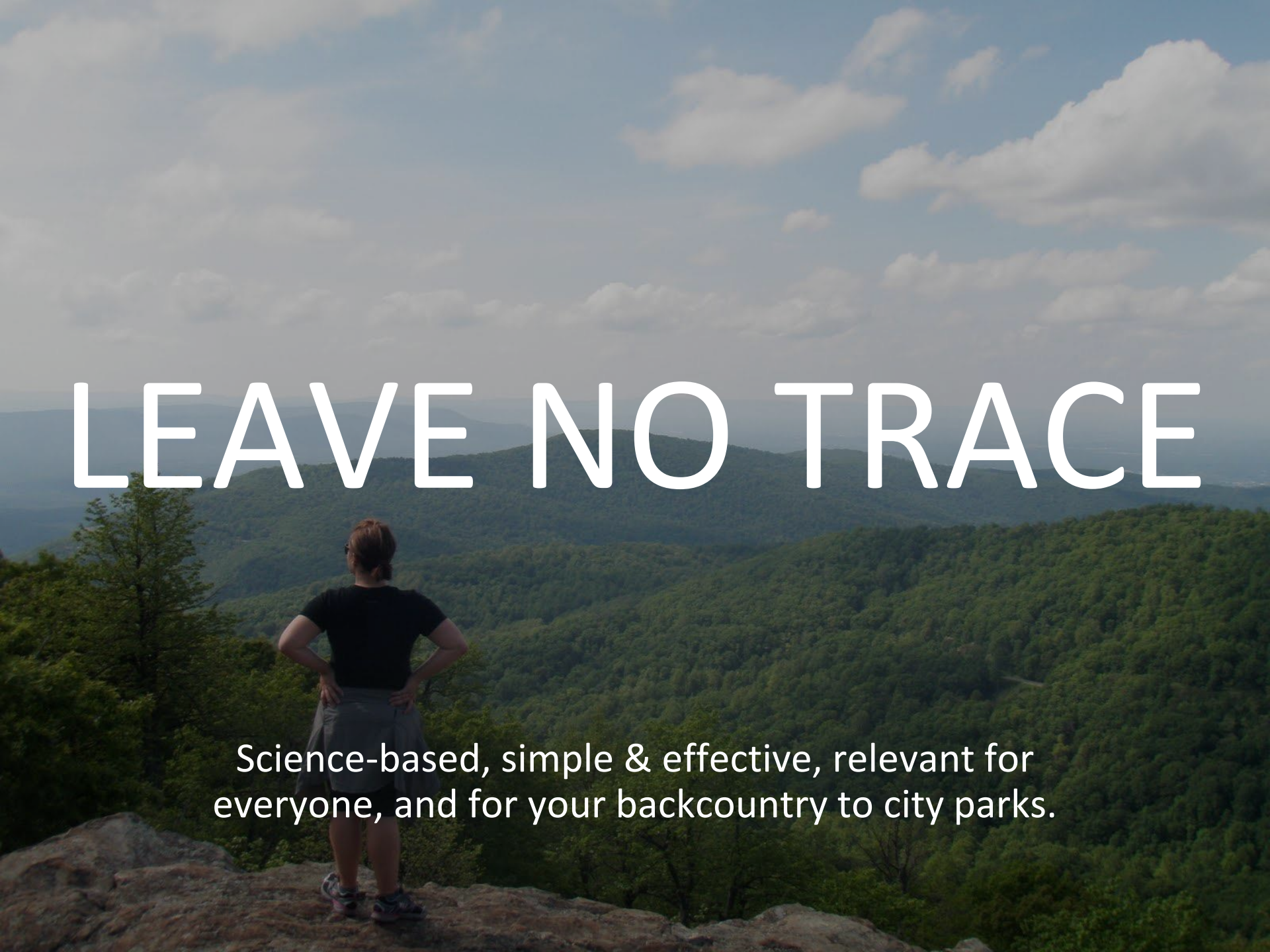
- Anaerobic Digesters: Food waste/composting
- Sifters and sorters for better separation at the landfill
    - More automation
- Better Infrastructure for NPS operations
    - Bear-proof
    - Co-located recycling and trash in all areas

What do we need help with?

- Massive, widespread visitor campaign
- Outreach into gateway communities
- Influencing consumer/visitor behavior
    - Buying
    - Disposing
- Need help getting the visitor to actively participate in the waste program

Public/Private Partnership: Zero Landfill Initiative

Aramark Communications…Not Enough


LEAVE NO TRACE
Science-based, simple & effective, relevant for
everyone, and for your backcountry to city parks.

IMPACTS
FROM OUTDOOR USE

Impacts include wildlife, vegetation, water resource, soil, cultural resource, social.

THE SEVEN
LEAVE NO TRACE PRINCIPLES

- Plan Ahead & Prepare
- Travel and Camp on Durable Surfaces
- Dispose of Waste Properly
- Leave What You Find
- Minimize Campfire Impacts
- Respect Wildlife
- Be Considerate of Other Visitors

EXPLORING VISITOR ATTITUDES, VALUES, AND BEHAVIORS REGARDING WASTE IN NATIONAL PARKS

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RATIONALE FOR THE STUDY

Management Need: Data regarding park visitor attitude and behaviors regarding waste and recycling in national parks

Purpose: Examine behavioral influences for enhanced visitor compliance in reducing waste and increasing recycling compliance in national parks

STUDY BACKGROUND

- Increased Park Visitation
  - Each year, over 100 million pounds of waste is generated in national parks through a variety of means including park operations, by visitors to parks, and other sources
  - Recent trend data indicate that a continued increase in recreational use of public lands, including national parks, is likely to occur over the coming years

GOALS AND OBJECTIVES

Study Goal

The primary goal of this study is to explore specific visitor attitudes, values, and behaviors towards waste, and proper disposal of waste, in select national parks. This will be done through direct visitor observation paired with visitor surveys to better understand how national park managers can achieve waste management goals through effective educational and management strategies.

Study Objectives

- To explore current practices, educational strategies, infrastructure, and messages surrounding waste disposal in select NPS units through direct observation and visitor surveys;
- To examine specific visitor attitudes and values towards waste and proper disposal of waste in select national parks;
- To pair individual observational data with individual survey data for comparative analysis of observed behavior and reported behavior;
- To determine the most effective strategies for gaining park visitor compliance for appropriate waste disposal in national parks.

METHODS

Survey / Paired Survey and Observation

visitors that do not interact with

observation of visitors that interact

Paired

Administer surveys to visitors that interact with infrastructure

SAMPLING

Yosemite National Park (YOSE): June 5 – July 3, 2017

Grand Tetons National Park (GRTE): July 8 – August 4, 2017

Denali National Park (DENA): August 9 – September 6, 2017

Stratification:

- 2-3 sampling locations/sites in each park
- Two teams of researchers collecting data each day in each park
- a.m. or p.m.
- Weekday (i.e., Monday, Tuesday, Wednesday, Thursday, and Friday) or weekend (i.e. Saturday, and Sunday
- Survey of n^{th} visitors, paired surveying with visitor behavior observation, or observation of visitor behavior
- The limited sampling period spanning over ~one-month in each park

Contact Information

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Technology Implementation: Water

- Asilomar water reclamation:
  - Water City reclamation unit
  - Laundry facility

- As of December 2016
  - ***no capital expenditure***
  - ***over 1M gallons saved***
  - ***$3,634.00 saved as of Dec 2016***

- Split savings with Water City (actual savings 2x)
- Cost avoidance – saving compliance fines
- Energy saved by not moving as much water

Technology Implementation: Energy

- Two boiler system replacements
- Building automation system installation
- Lighting retrofit/replacement
- Insulation of all door and window surrounds
- Replacement of 3 bain marie systems

Sounds expensive right?

- Return on investment is under 3 years!!!