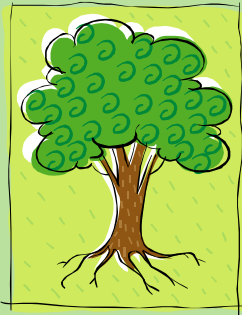


National Wildlife Federation®
CAMPUS
ecology®



National Wildlife Federation's *Campus Ecology* Program

Fall 2009-Spring 2010 Greener Campus Series

February 23, 2010 Webinar
Greener Transportation—
How are campuses greening their
transportation systems and tracking
their emissions?

Speakers

- **Kristy Jones** (moderator)– **National Wildlife Federation**, Manager, Campus Ecology
- **Maggie Souder**– **University of California San Diego**, Sustainability Coordinator
Kristin Hansen, Sustainability Analyst
Valerie Fanning, Compliance Officer
- **Adele Clements**– **Emory University**,
Director, Transportation Services
- **Cynthia Klein-Banai** – **University of Illinois Chicago**, Associate Chancellor for Sustainability

University of California San Diego

- **Maggie Souder,**
Campus Sustainability Coordinator
- **Kristin Hansen, Sustainability Analyst**
- **Valerie Fanning, Compliance Officer**



Sampling of UC San Diego Programs

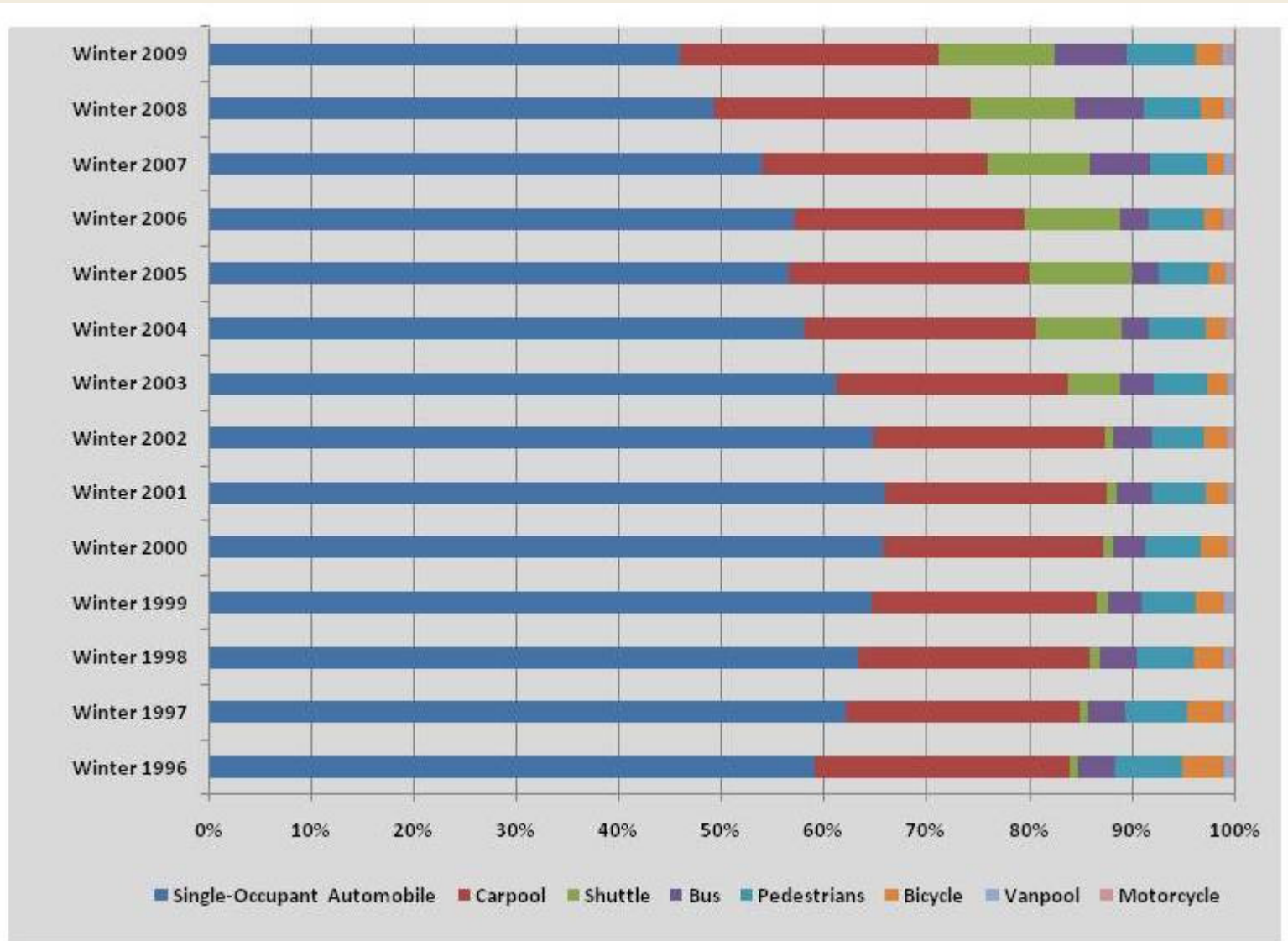
- **Free Bus Zone**
- **Vanpools and Carpools**
- **Transit and Coaster Program**
- **Pedal Club**
- **Campus Shuttles**
- **Triton Bikes Program**
- **Car-Sharing**

UC San Diego

Alternative Transportation

- **In FY 2008/09, UC San Diego's Shuttle and Transit programs transported approximately 4.8 million passenger trips**
- **Shuttle and transit service and ridership increases were largely responsible for a 20% reduction of solo occupant vehicle commuting from 66% in 2001 to 46% in 2009**

UCSD Commute Mode Split (1996 – 2009)



GHG Tracking Requirements

- **AB 32**
- **CCAR/TCR**
- **UCOP Policy on Sustainable Practices**
- **ACUPCC**

Transportation GHG Tracking

- **Stationary**
- **Fleet**
- **Air Travel**
- **Commuter**

2008 Transportation Programs GHG Savings Metric Tonnes CO₂ Equivalent

Mode	Total GHG Saved (<i>metric tonnes of CO₂ equivalent</i>)
Staff Carpool	7,765
Student Carpool	2,053
Staff Vanpool	1,112
Staff Transit Rider	2,399
Student Transit Rider	997
Staff Bicyclist	604
Student Bicyclist	355
Staff Shuttle Rider	493
Student Shuttle Rider	2,660
AVL System Upgrade	533
Total	18,972

**Adele Clements,
Director, Transportation Services**

Greener Transportation



EMORY
UNIVERSITY

**Parking , Transportation, &
Community Services**

History

- 1998 founding member of Clifton Corridor Transportation Management Association
 - Goal to reduce traffic congestion and improve air quality through transportation demand management programs
 - Staffed by Emory TPS
- 2006 Emory Commitment “No Net New Parking”
 - Established Park and Ride shuttle service – 350,000 annual riders in FY 2009 – 600 parking spaces
 - Removed vehicle traffic from center core of campus
- 2006 Established Biodiesel program
 - Recycle Emory University and affiliates cooking oil for use in B20 for shuttles based on an Emory student thesis

Biodiesel Program

- **Biodiesel Program**
 - **Vendor collects waste oil used in production of B20 biodiesel for shuttle fleet**
 - 24 diesel (27 Compressed Natural Gas)
 - **2008 installed 10,000 gallon above ground storage tank for B20**
 - **Use 130,000 gallons of B20 annually**

GHG Reductions

■ GHG Reductions

- Found it extremely difficult to calculate
- **FY 2009 - rough estimate for pollution avoided through shuttle commuter routes based on ridership and route mileage : 137,000 pounds**
- **Using 1 lb of pollution = 1 vehicle mile travelled**
 - U.S. Department of Energy: Technical Guidelines Voluntary Reporting of Greenhouse Gases (1605(b)) Program. (March 2006).
U.S. Environmental protection Agency: Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2007. (September 2007).

System Overview

- **Commute Option Participation (23,500 total employees)**
 - **1,600 employees in Transit program**
 - **700 employees carpool**
 - **127 employees vanpool**
 - **2,500 trips per day on commuter shuttles**
 - **160 bike/walkers**

Background

University of Illinois at Chicago
Cynthia Klein-Banai, Associate
Chancellor for Sustainability

UIC: Largest university in the Chicago area

- 25,000 students
- 15 colleges
- \$322 M in research expenditures
- 117 buildings
- 240 acres
- Historically a commuter campus but 3 new residence halls allow 15% of students to live on campus

Commuter Survey, Fall 2008

Objective

- Establish a baseline detailing how campus community members commute to UIC

Method

- Survey Monkey
- Massmail
- Faculty, staff, student?
- Questions about mode & distance travelled, by segments
- Questions about biking on and to campus and barriers to doing so

Funding

- Partially through the National Wildlife Federation Campus Ecology Fellowship

Commuter Survey

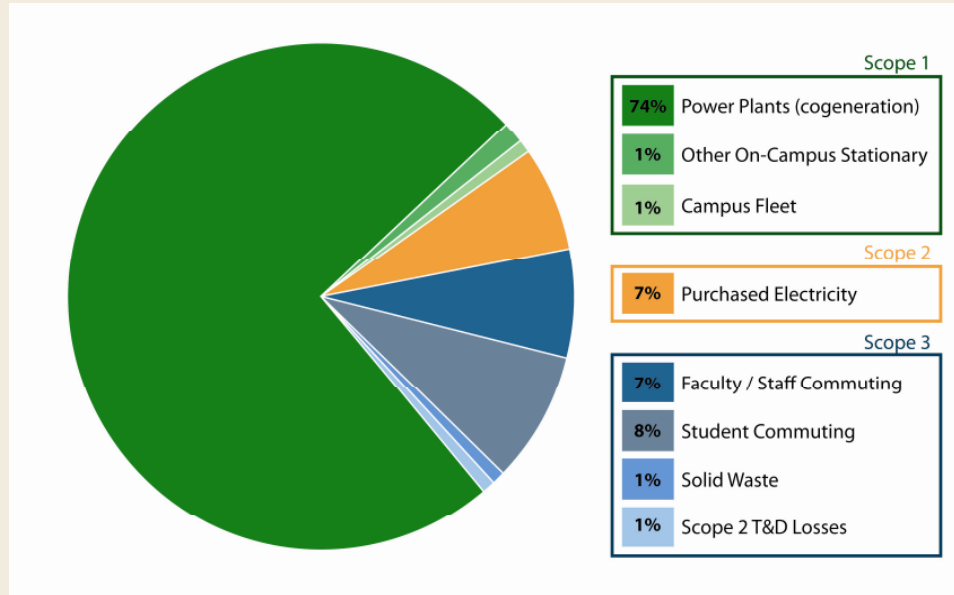
Average trip distance was 8.5 miles for 207 students using light rail for the first leg of their trip, 8.6 miles for 230 students using light rail for the second leg of their trip, and 3.6 miles for 62 students using light rail for the third leg of their trip, the overall average trip distance was

$$[(207)(8.5)+(230)(8.6)+(62)(3.6)]/(207+230+62) = 7.9\text{mile}$$

Summary of Mode Choice

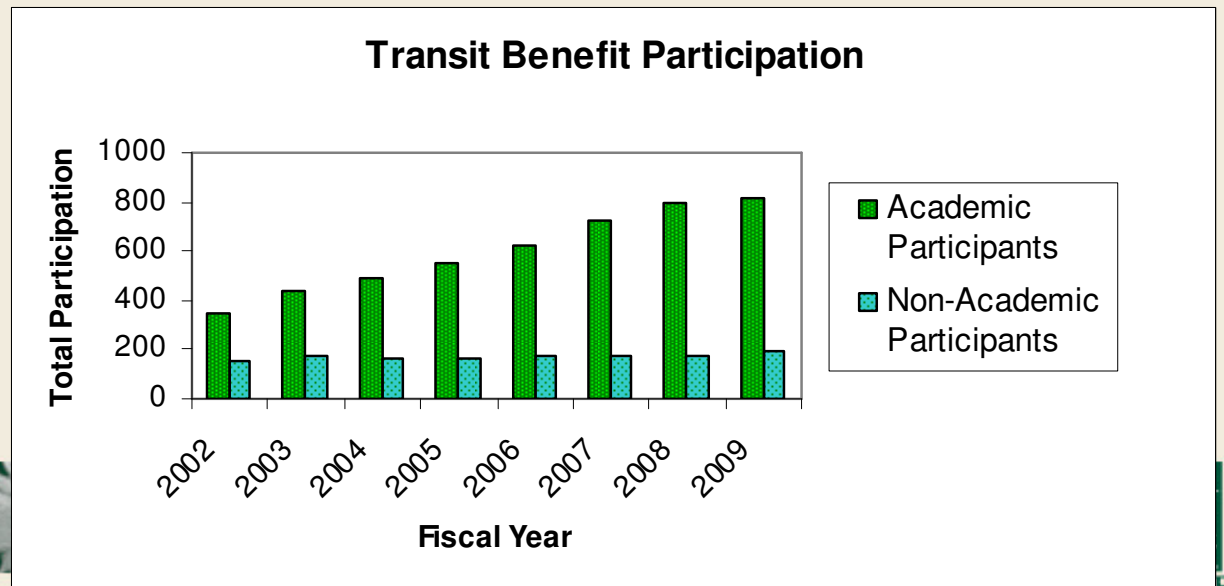
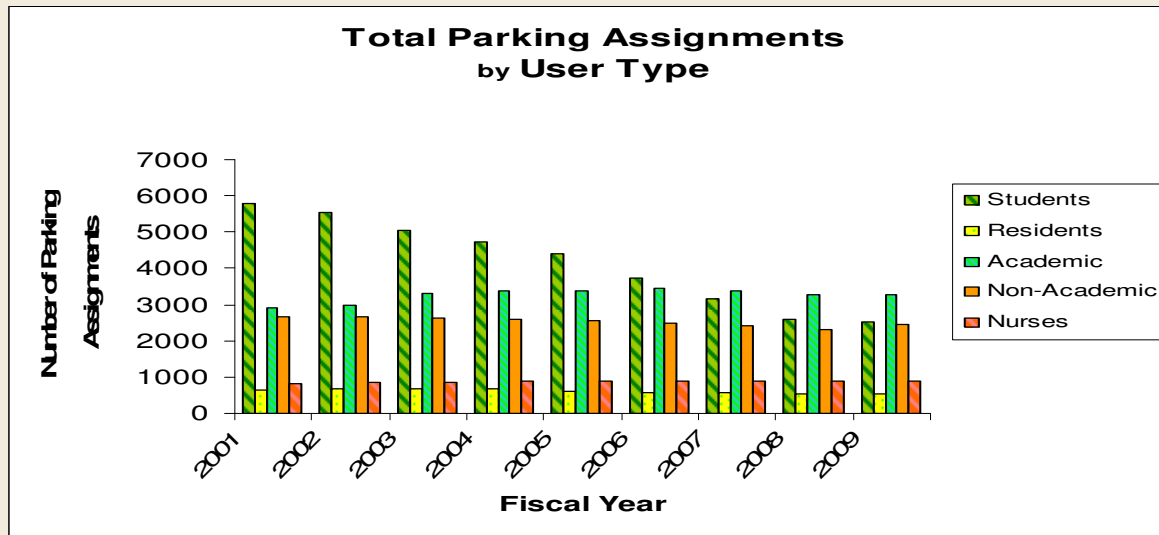
UIC Role	Population	% Driving	% Carpool	% Light rail	% Commuter rail	% Bus
Students	22,625	32.4	5	44.3	24	47.0
Staff	8,941	53.2	9.7	24.1	30.8	26.0
Faculty	2,574	43.2	7.4	25.2	26.1	28.0

Greenhouse Gas Emissions FY08



		eCO ₂ (1,000 Metric Tonnes)				
		2004	2005	2006	2007	2008
Scope 1	Campus Fleet	2	2	2	2	1
	Faculty / Staff Commuting	19	19	19	21	22
Scope 3	Student Commuting	23	20	19	19	21
	Total	44	41	40	42	44

Other Data



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- **Cynthia Klein-Banai – University of Illinois Chicago**
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Upcoming Webinars:

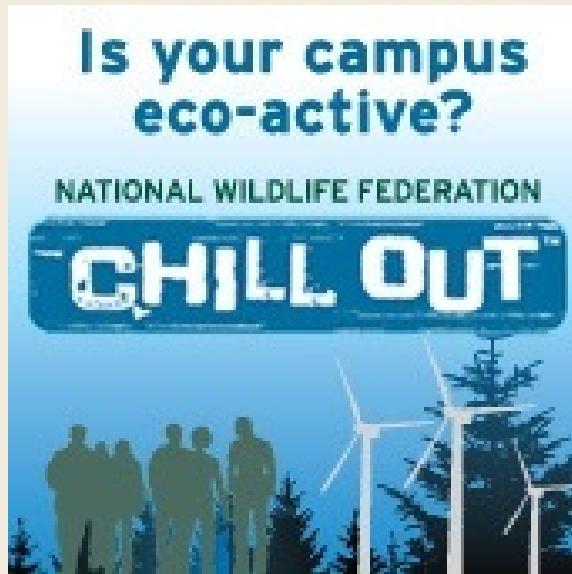
March 4: Sustainability and Urban Campuses –

How are city campuses greening their grounds and operations?

March 25: Student Leadership and Careers –

What opportunities are available in the conservation field and what skills are needed?

Register at: www.CampusEcology.org



Chill Out: Campus Solutions to Global Warming

Register for Earth Day Webcast!

Chill Out is the nation's premier competition recognizing colleges and universities for their efforts to reduce global warming pollution. Winners will be announced in the following categories:
green jobs, students in action, innovative design, campus actions and more.



Go to: www.campuschillout.org



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Promotes climate leadership and sustainability among colleges and universities by providing resources and technical support, creating networking opportunities and organizing education events.



National Wildlife Federation

**Inspiring Americans to protect
wildlife for our children's future.**

