

# *Cabrillo College*

## **Greenhouse Gas Emissions Inventory**



**Prepared by:**

**Cabrillo College Climate Initiative Task Force Members  
July, 2009**

*Cabrillo College*

6500 Soquel Drive  
Aptos, CA 95003  
(831) 479-6100

<http://www.cabrillo.edu/>

## Table of Contents

Background	Page 3
Demographics	Page 4
Methodology	Page 5
Major Sector Emissions	Page 6
Key Findings	Page 11
Accomplishments & Goals	Page 12
Acknowledgements	Page 13
Appendices	Page 15

## Background

In July, 2007, Cabrillo College President Brian King signed the Presidents Climate Commitment, with strong support from Cabrillo's Governing Board, joining higher education leaders nationwide in pledging to reduce their institutions' contribution to global warming over time.

The American College and University Presidents Climate Commitment (ACUPCC)<sup>1</sup> is a high-visibility effort to address global warming by garnering institutional commitments to neutralize greenhouse gas (GHG) emissions, and to promote research and education efforts of higher education to equip society to re-stabilize the earth's climate. This involves:

- *Establishing an institutional structure to oversee the development and implementation of the schools program to comply with the ACUPCC;*
- *Completing an emissions inventory within a year;*
- *Within two years, establish a climate neutrality action plan and set a target date and interim milestones for becoming climate neutral;*
- *Taking immediate steps to reduce greenhouse gas emissions by choosing from a list of tangible action options;*
- *Integrating sustainability into the curriculum and making it part of the educational experience; and*
- *Making climate action plan, inventory and progress reports publicly available.<sup>2</sup>*

Under the guidance and direction of university presidents, the Commitment is supported and implemented by the Association for the Advancement of Sustainability in Higher Education (AASHE), Second Nature, and ecoAmerica. Cabrillo College became a new member of AASHE in 2009.

To address the Climate Commitment, Dr. King formed Cabrillo's Climate Initiative Task Force (CITF) in February 2008, to oversee this process. Cabrillo's "Flex Week" workshops in February 2008, provided several opportunities to introduce the ACUPCC and Cabrillo's CITF to Cabrillo staff, faculty, students and community members. Twenty-three attendees signed up to be members of the newly created CITF, including 8 instructors, 5 administrators, 5 classified staff, 2 students, 2 counselors, and 2 community members (see Appendix A).

The CITF began by establishing a meeting schedule, creating a plan to integrate climate initiative objectives into Cabrillo's 2008-2011 Master Plan (see Appendix B), establishing

---

<sup>1</sup>[www.presidentsclimatecommitment.org](http://www.presidentsclimatecommitment.org)

<sup>2</sup>CITF documents are located at [www.wiserearth.org/group/cabrillosustainability](http://www.wiserearth.org/group/cabrillosustainability)

two tangible actions to begin work on immediately, as well as develop a plan to involve students in the gathering of data for an emissions inventory. Due to severe staffing and budget cuts, the Task Force committed to establishing action plans that provide maximum efficiency cuts in emissions while requiring the least possible staff time and college funds.

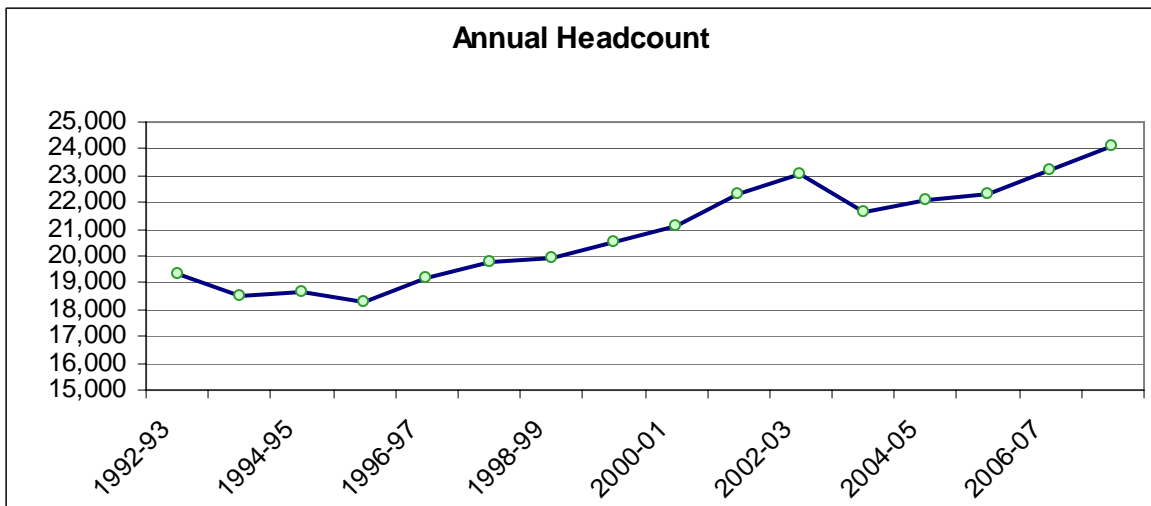
## Demographics

Cabrillo College is one of 110 public California community colleges. Situated on the Monterey Bay in the county of Santa Cruz, California, Cabrillo is located 65 miles south of San Francisco and 35 miles north of Monterey.

## Headcount

2007-2008 student headcount is as follows:

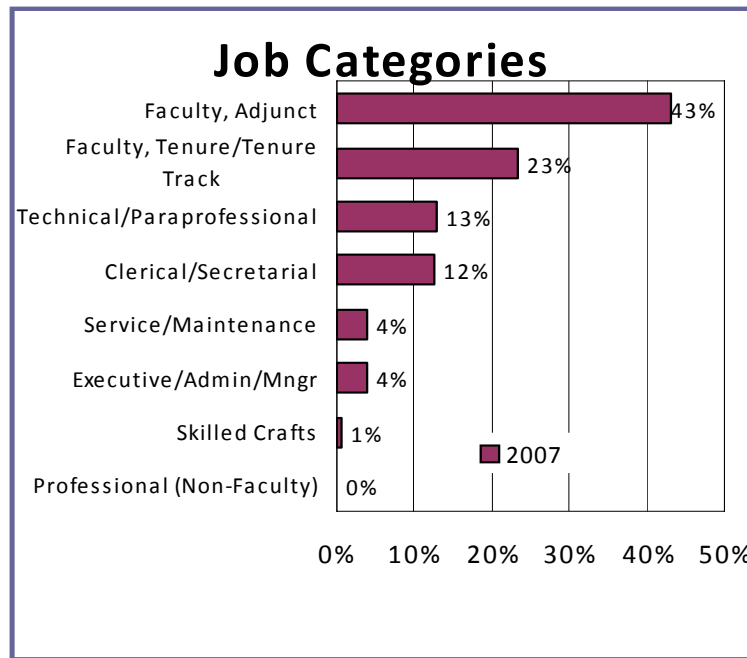
Academic Year	Summer	Fall	Winter	Spring
2007-08	6,118	16,069	2,228	16,384



## Staff Size

Staff and faculty totals for calendar year 2007 are as follows:

Job Categories	#
Skilled Crafts	6
Executive/Admin/Manager	35
Service/Maintenance	36
Clerical/Secretarial	116
Technical/Paraprofessional	120
Faculty, Tenure/Tenure Track	217
Faculty, Adjunct	403
<b>Total</b>	<b>933</b>



## Square Footage

Estimated Aptos campus square footage, excluding parking garages, is as follows:

2007-2008	2008-2009	2009-10, Projected
469,750 sq'	592,050* sq'	649,050** sq'

\* Includes new Arts Education Complex

\*\* Includes new Allied Health Center

## Methodology

In an effort to fulfill ACUPCC requirements, Cabrillo College has conducted a baseline greenhouse gas emissions inventory aimed at establishing a baseline “carbon footprint” to assist in preparation of a comprehensive emissions management and reduction plan.

This report identifies and quantifies the major sources of campus emissions, where data was available, focusing on the 2007-2008 academic year.

For its emissions inventory, Cabrillo College used the campus greenhouse gas inventory calculator tool developed by Clean Air Cool Planet (CACP). CACP is a non-profit science-based organization whose GHG inventory tools and methodology are the most commonly used standard for higher education. The completed CACP spreadsheet is available upon request, and quantifies all major sources of Cabrillo’s GHG emissions. This includes energy use, transportation and solid waste.

## Major Sector Emissions

### Transportation

Survey data confirms transportation's role as the major Cabrillo carbon contributor. Staff, faculty and student transportation data was determined through administration of surveys by Ecology Action's *Go Green Cabrillo* campaign<sup>3</sup> and Cabrillo's Transportation Management Committee, with data analysis conducted by Cabrillo's Planning and Research Office. College fleet emissions were determined by total diesel and gasoline fuel usage. College-sponsored travel data was not available at the time of this report and is excluded from transportation estimates.

### Student Transportation Emissions

A 2008 student transportation survey was conducted by Student Services in partnership with Ecology Action's "Go Green Cabrillo" program, confirming transportation's role as the major Cabrillo carbon offender. The previous student transportation survey was conducted in 2000. Student transportation survey data from 2008 was analyzed by Craig Hayward, Director of Planning, Research & Knowledge Systems at Cabrillo College. A summary of findings related to 2008 student transportation emissions follows:

- Number of solo car trips per week: Approximately 25,000
- Average number of miles driven (round trip): 16.50
- Number of miles driven per week: 412,500
- Average Miles Per Gallon: 22.5
- Total gallons used per week: 18,333
- Total lbs. of CO<sub>2</sub> emitted per week from student solo car trips: 165 metric tons.

For students, prize incentives are reported to be the number one motivator for students to use an alternative to solo driving. The "Go Green Cabrillo" campaign recently administered a follow-up student transportation and the data analysis will be of great interest to the Climate Initiative Task Force and presented in a subsequent emissions inventory. A comprehensive student transportation was conducted in 2000<sup>4</sup> and is available for subsequent years in data analyses of biannual campus-wide surveys.<sup>5</sup>

In 2008, it is estimated that student transportation emitted a total of 4,610 metric tons of CO<sub>2</sub>.<sup>6</sup>

<sup>3</sup><http://www.gogreencollege.org/Staff/ridespring.html>

<sup>4</sup>[http://pro.cabrillo.edu/pro/pro\\_reports/tran\\_report.pdf](http://pro.cabrillo.edu/pro/pro_reports/tran_report.pdf)

<sup>5</sup>[http://pro.cabrillo.edu/pro/pro\\_reports/F05ClimateReportDraft.pdf](http://pro.cabrillo.edu/pro/pro_reports/F05ClimateReportDraft.pdf)

<sup>6</sup> The average number of student solo trips per week was divided by the full-time equivalent student number created by the CACP spreadsheet (25,000/14,864) to arrive at the average number of trips per student per week (1.68). This number was then multiplied by the number of weeks per term (16.5 weeks) to arrive at the number of trips per term for an average student (27.752). This number was then multiplied by two to arrive at an annual number of trips (or the number of days for which trips occurred). This final number (55.5) was input into the CACP spreadsheet as the number of days per year for student commutes. Estimate for weekly student solo car trips estimates 19.8 lbs. of CO<sub>2</sub> per gallon.

## Staff and Faculty Transportation Emissions

Dr. Hayward's May, 2008 staff/faculty transportation data analysis revealed the following:

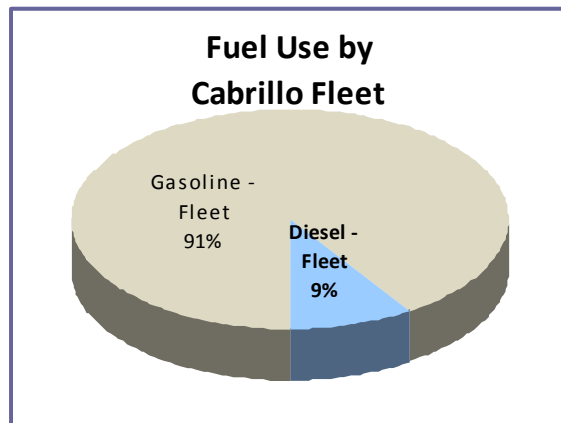
- Cabrillo College employees make approximately 2,900 solo automobile trips to Cabrillo in a typical week.
- Given the average commute distance and number of trips for each employee group, Cabrillo College employees are driving 64,550 miles per week to commute to work.

Survey results<sup>7</sup> confirm that carpooling is the most desirable alternative to driving alone for students as well as staff and faculty. Existing Cabrillo programs are being expanded and to better publicized, encourage and increase the use of carpooling, bikes and public transportation to meet Cabrillo's climate commitment to greatly reduce greenhouse gas emissions. In 2008, it is estimated that staff/faculty transportation emitted a total of 625 metric tons of CO<sub>2</sub>.

## Fleet Emissions

Cabrillo fleet emissions for 2008 are estimated as follows:

Fuel Type	Gallons	%	CO <sub>2</sub> (metric tons)
Gasoline - Fleet	14,684	90.7%	146
Diesel - Fleet	1,500	9.3%	16
<b>Total</b>	<b>16,184</b>	<b>100.0%</b>	<b>162</b>



In 2008, it is estimated that fuel use by the Cabrillo fleet emitted a total of 162 metric tons of CO<sub>2</sub>.

<sup>7</sup>[http://pro.cabrillo.edu/pro/pro\\_reports/CabrilloCollege2008TransportationSurvey.pdf](http://pro.cabrillo.edu/pro/pro_reports/CabrilloCollege2008TransportationSurvey.pdf)

## Energy Use

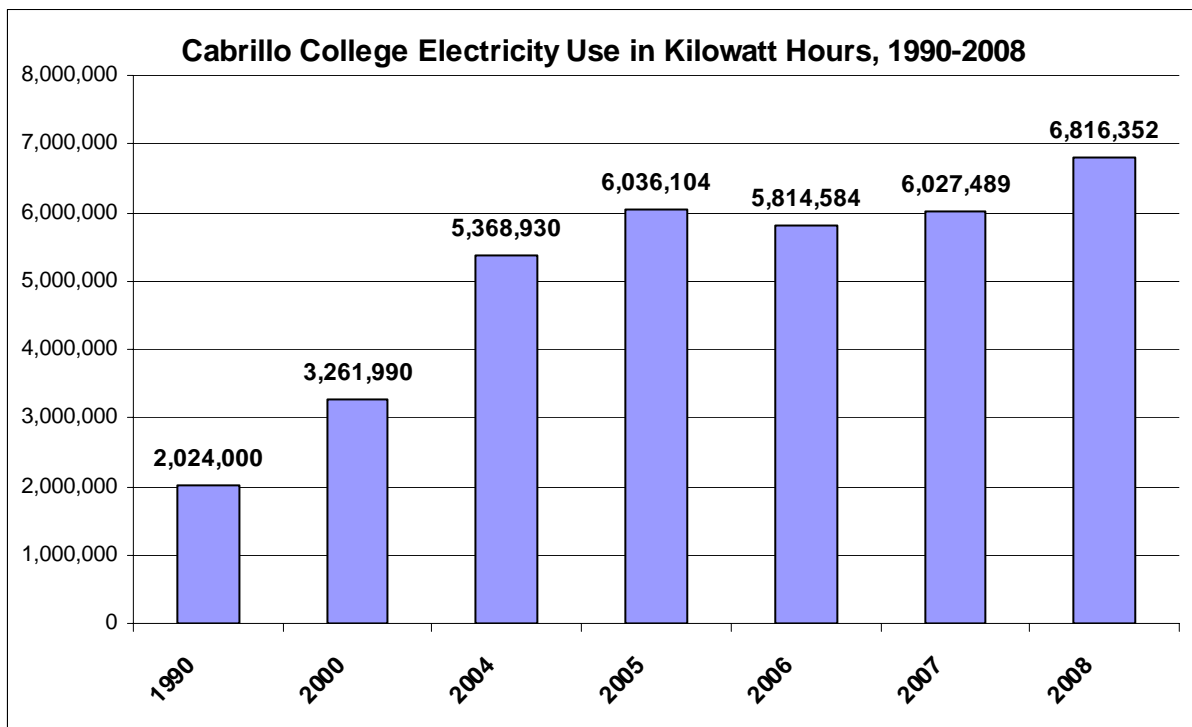
Next to transportation emissions, energy use is Cabrillo's second biggest carbon offender. There are great cost savings that will be realized with the implementation of a college-wide energy conservation program, a major goal of the Climate Initiative Task Force.

To quantify energy use, college records and invoices were reviewed by CITF members, staff, faculty and students, to gather electricity and natural gas data. Much of the data is not currently available in digital form.

Cabrillo's primary energy source is purchased electricity from Pacific Gas & Electric (PG&E) and natural gas from Department of General Services (DGS). Pacific Gas & Electric (PG&E) has an innovative online data source, InterAct,<sup>8</sup> which allows Cabrillo to see how it is using energy, compare current usage to historic patterns, as well as export data for reporting purposes. Total kilo-watt/hours of electricity were used to determine the total GHG emissions resulting from Cabrillo's use of electricity. Natural gas usage in therms was determined based on Business Office invoices.

Coordinated by the Maintenance and Operations Department, a comprehensive Energy Conservation Plan was produced during this period and is expected to be reviewed by Cabrillo's Governing Board in the summer of 2009. Student interns conducted a comprehensive energy audit of the upper campus in early 2009 containing valuable energy savings recommendations. Report available upon request.

## Electricity

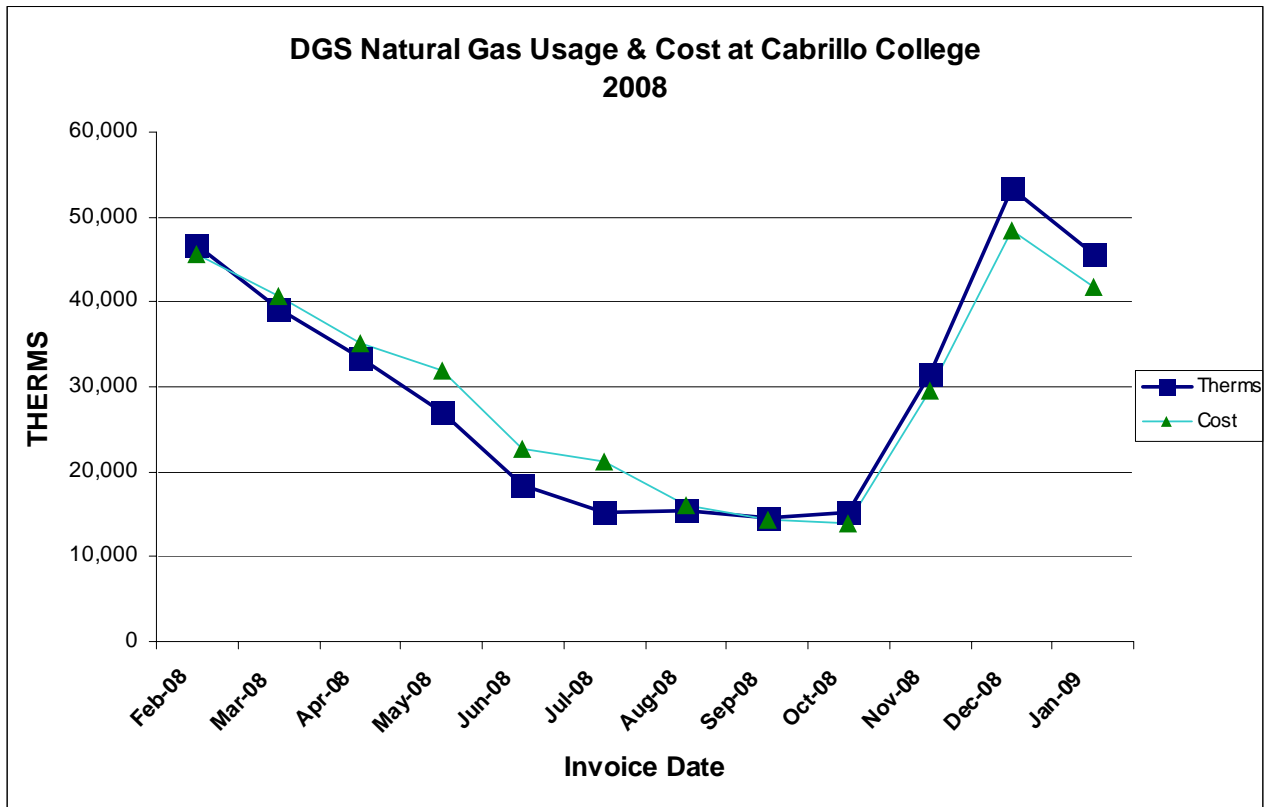


<sup>8</sup><https://inter-act.pge.com/pge>

Cabrillo consumed 2,024,000 kWh in 1990. Cabrillo's electricity use more than doubled from 2000-2008, from 3,261,990 in 2000 to 6,816,352 kWh in 2008. In 2008, it is estimated that Cabrillo's use of electricity produced 2,052 metric tons of CO<sub>2</sub>.

## Natural Gas

Cabrillo College purchases natural gas from the Department of General Services (DGS) Natural Gas Services for heating. In calendar year 2008 alone, Cabrillo consumed 355,600 therms of natural gas, at a cost of \$361,543, producing 1,883 metric tons of carbon dioxide. The spike in winter months, particularly December, suggests several recommendations for Cabrillo's comprehensive energy conservation plan.

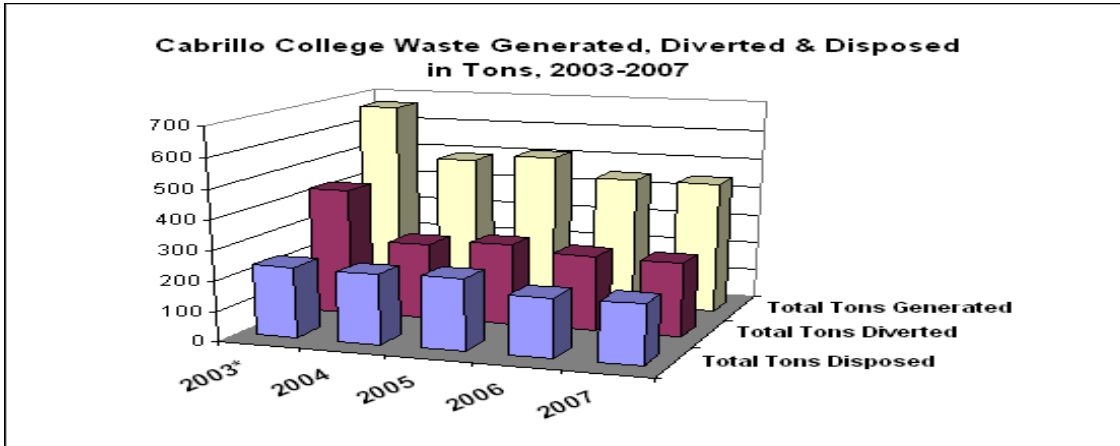


## Solid Waste

Solid waste data is included in this emissions inventory and represents a relatively small, but important, source of GHG emissions. Cabrillo's diversion of solid waste has been greatly enhanced by new and innovative programs coordinated by Tom Rusconi in partnership with staff, students and community non-profit organizations.

Originally started by the student body, Cabrillo boasts an active and innovative recycling program, now a division of Maintenance & Operations. This program provides detailed, itemized reports to the California Integrated Waste Management Board (CIWMB) each year, which greatly aided quantification of solid waste data for this inventory.

The CIWMB recently changed to an 18-month reporting period (no longer 12 months) and because those 18 months have yet to conclude, 2008 figures are not yet available. Figures for 2008 are estimated, not actual.



Waste Outcome	2003	2004	2005	2006	2007
Total Diverted	429.1	259.1	274.0	253.8	250.1
Total Disposed	238.0	233.1	239.0	195.7	198.5
Total Generated	668.0	492.2	513.0	449.6	448.6
Diversion Percentage	64.2%*	52.6%	53.5%	56.5%	55.7%

\*Diversion of concrete/asphalt/rubble in 2003, not present in more recent years, skews 2003 diversion %.

While recycling has become mainstream at Cabrillo, we can work to dramatically curb the amount of waste produced and disposed of by staff, faculty and students, while increasing diversion rates.

Although solid waste does not represent a significant source of GHG emissions at Cabrillo, the campus is determined to steadily improve the percentage of waste diverted from the landfill. This will require the expansion of existing recycling programs on campus, including the composting and eWaste programs, and implementing an aggressive campaign to better publicize and educate about the existence of these programs.

In 2008, it is estimated that solid waste disposal emitted a total of 29 metric tons of CO<sub>2</sub>.

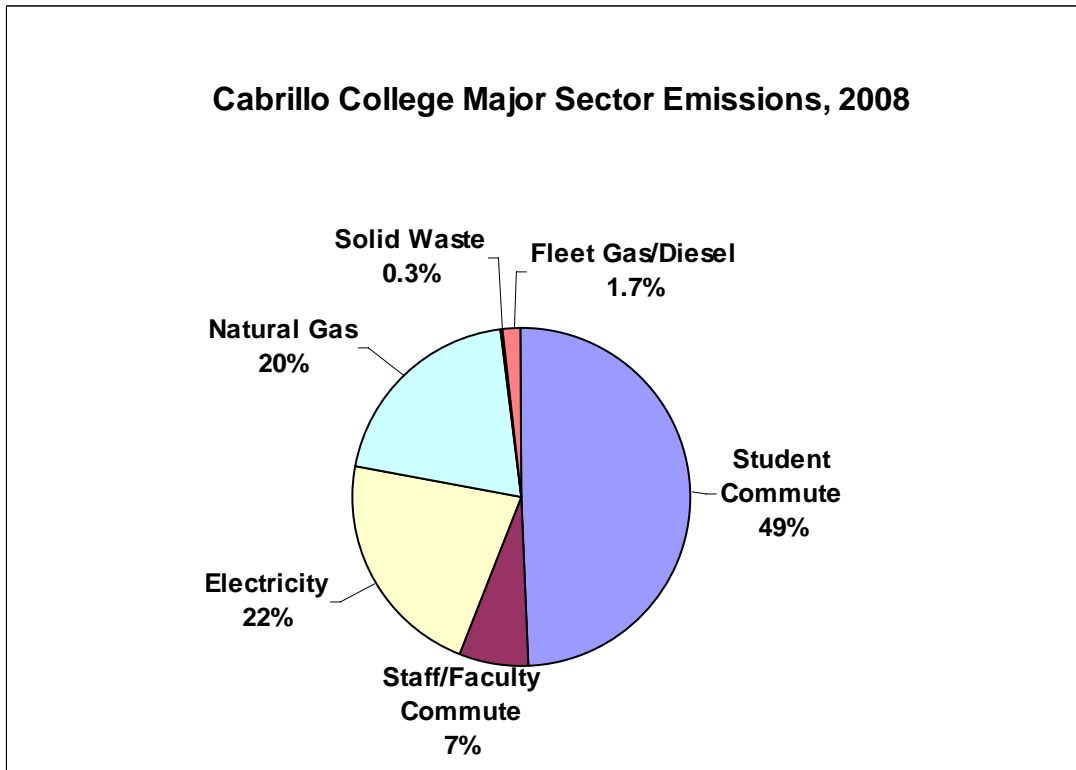
## Key Findings

Cabrillo College emitted an estimated 9,361 metric tons of greenhouse gas emissions in 2008. The major sources of Cabrillo's emissions are estimated as follows:

### Major Sector Emissions in Metric Tons eCO<sub>2</sub>, 2008<sup>1</sup>

Source	MTCDE	%
Student Commute	4,610	49.2%
Electricity*	2,052	21.9%
Natural Gas	1,883	20.1%
Staff/Faculty Commute	625	6.7%
Fleet Gasoline/Diesel	162	1.7%
Solid Waste, estimated	29	0.3%
<b>Total</b>	<b>9,361</b>	<b>100.0%</b>

\*Based on CACP Carbon Calculator calculations, with custom energy mix:  
<http://www.pge.com/myhome/edusafety/systemworks/electric/energymix/>



## **Green House Gases (GHG)**

According to the ACUPCC Implementation Guide the Greenhouse Gas Emissions Inventory is to be a comprehensive inventory of emissions of the six greenhouse gases defined by the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>). Our assessment at Cabrillo will focus mostly on Carbon Dioxide as the other gasses are generated in far smaller quantities by campus operations. Cabrillo's assessment of baseline emissions is using the Clean Air Cool Planet Campus Carbon Calculator which follows the Greenhouse Gas Protocol (GHG Protocol) of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). The equivalent Carbon Dioxide (e CO<sub>2</sub>) values below include CH<sub>4</sub> and N<sub>2</sub>O generated by campus activities.

The Greenhouse gas protocol defines three scopes for assessment:

- Scope 1 Emissions from sources owned or directly controlled by the college. At Cabrillo this includes campus use of natural gas, purchased diesel and gasoline fuel.
- Scope 2 Indirect emissions from the generation of energy purchased by the college. Electricity Cabrillo purchased from Pacific Gas and Electric was used to calculate these emissions.
- Scope 3 Indirect emissions that are a consequence of our choices and activities on campus but are generated from sources not owned or controlled by Cabrillo College. We have assessed these indirect emissions at Cabrillo: staff, faculty and student commute transportation, and waste. We have not assessed college funded air travel.

## **De Minimis Emissions**

Emissions composing less than 5% of total emissions that would take more effort to calculate than they are worth may be considered as "de minimis" according to Jennifer Andrews of Clean Air Cool Planet. Refrigerants and fertilizers used at Cabrillo will be considered "de minimus". Since solid waste comprises 0.1% of total GHG emissions it is reasonable to assume that refrigerants and fertilizers make up less than 1% of Cabrillo emissions.

## **Accomplishments and Goals**

Cabrillo College is well on its way to achieving important benchmarks related to the AUCPCC goals, and contributing to a national effort to reduce greenhouse emissions through operational changes to the physical campus, as well as behavioral and intellectual changes through student and staff involvement and curricula.

This process has made it clear there are many exciting and innovative projects on campus. Many more are planned, all aimed at sustainability and the reduction of GHG emissions. These include the following:

- Modernization of building energy management systems
- Installation of motion sensors and energy efficient lighting
- Installation of LED exit signs
- Planned Compact Fluorescent Lights (CFL) give-away programs
- Electric fleet vehicles
- Alternative transportation education/incentive programs
- Sheriff's Bike Patrol
- RideSpring pilot staff/faculty alternative transportation incentive program
- Xeriscape water conservation landscaping
- Aggressive eWaste recycling program
- Sustainable innovations by the Culinary Arts program and Taher Campus Dining Services including food composting program, 100% compostable utensils and to-go plates, local organic produce, vegan options
- Horticulture Department's organic hydroponic food program & partnership with Taher Campus Dining Services
- Student Bike Co-op
- New LEED certified building planned for Watsonville
- New curricula and college-wide outcomes aimed at sustainability
- New online class, census and grade rosters for faculty, and online Business Office forms
- Annual Earth Week & Bike to School Week activities
- "Just Turn It Off" energy conservation campaign.<sup>9</sup>

Cabrillo has taken on the climate change challenge to reduce greenhouse gas emissions to the 1990 level, and is committed to ultimately reaching climate neutrality. This commitment remains strong, despite unprecedented growth and construction, and unprecedented State budget cuts. Cabrillo continues to increase its commitment to programs, curriculum, research and Master Plan goals and action plans all designed to reduce our contribution to climate change. These efforts will be successful thanks to a strong partnership among administration, faculty, students and staff.

## **Acknowledgements**

First and foremost, great thanks go to Dr. Brian King for signing the President's Climate Commitment, establishing the Climate Initiative Task Force, and offering leadership and encouragement to reduce climate change. Enormous thanks also go to Cabrillo's Governing Board for its leadership in this area, and its unwavering wisdom, support and dedication to Cabrillo College.

<sup>9</sup> <http://www.cabrillo.edu/~kgroppi/turnitoff/>

<sup>10</sup> <https://www.ridespring.com/cabrillo/index.php?func=home>

Faculty and students involved in Career Work Experience Education (CWEE) and Energy Academy projects, CITF members, and dozens of Cabrillo staff persons are to thank for the data provided in this report. Partnerships among faculty, students, administration and staff greatly strengthened Cabrillo's ability to conduct an emissions inventory. Highly technical, and creative, faculty-led student projects provided important GHG reduction strategies. Cabrillo has an abundance of environmental visionaries among its students, staff, faculty and community. Each was critical to the completion of this emissions inventory.

CITF Co-chairs Nicole Crane and Judy Cassada wish to acknowledge the generosity of time, knowledge, skills and talent offered by busy College staff, including CITF member Joe Nugent, Director of Maintenance and Operations and his assistant Debbie Pozzi; Instructors Karen Groppi and Michelle Merrill; Craig Hayward, in the Planning & Research Office; Recycling Center Coordinator Tom Rusconi; Jamie Jaramillo & Sandy Johnson with Taher Campus Dining Services; Pat Borden, Assistant to the President; Sandi Moore and Sesario Escoto in Student Services, Business Office staff Becky Sulay, Nita Manglicmot, Judy McAlpin, Lori Amato and now-retired Kathy Carter. Special thanks to RideSpring founder and community member Paul McGrath for donating his ingenious alternative transportation program, and an enormous amount of his time, piloting RideSpring at Cabrillo.

The establishment of this preliminary data, including CACP spreadsheet tracking, will help enormously with future Cabrillo College emissions inventories.

## **Appendices**

Appendix A. Climate Initiative Task Force Members

page 16

Appendix B. 2008-2011 College Master Plan Strategies  
Related to Cabrillo's Climate Commitment

pages 17 - 21

## **Appendix A. Cabrillo College Climate Initiative Task Force (CITF) Members, 2008**

Shannon Abernathy, Student  
Dorothea Arnold, Student Senator  
Kaycee Beames, Student Senate President  
Whitney Bell, Cabrillo College Sustainable Agrifood System Fellow  
John Carothers, Biology Instructor  
Judy Cassada, Institutional Research Specialist; Co-chair, CITF  
Nicole Crane, Biology Instructor; Co-chair, CITF  
Beverly DesChaux, Community Member  
Nicole Dunn, Interim Assistant Director, Admissions & Records  
Molly Dragavon, Student  
Phillip Edwards, Student  
Karen Groppi, Engineering Instructor  
Craig Hayward, Director of Planning, Research & Knowledge Systems  
David Heinlein, Student  
Carol Hoffman, Biology Instructor  
Julia Holl, Student  
Masina Hunnicutt, Interim Director, Admissions & Records  
Joe Jordan, Construction & Energy Management Instructor  
Ryan Kaplan, Student Legislative Representative; Co-Founder, Bike Co-op  
Brian King, President, Cabrillo College; Founder, CITF  
Brian Legakis, Art History Instructor  
Lisa McAndrews, Horticulture Instructor  
Bonnie McPike, Transportation Specialist, Ecology Action's Go Green Cabrillo Campaign  
Michelle Merrill, Anthropology Instructor  
Joe Nugent, Director of Maintenance & Operations  
Albi Romero, Chemistry Instructor  
Peter Shaw, Horticulture Instructor, Program Chair  
Shelly Skye, Counselor  
Debra Spencer, Learning Disability Academic Specialist  
Alyssa Steiner, Health Science Instructor  
Tasha Sturm, Microbiology/Physiology Lab Tech  
Becky Taylor, Student Assistant  
Madeline Vidibor, Student Senate Representative, Sustainability Committee  
Elissa Wagner, English Instructor  
John Welch, Physics Lab Instructional Assistant (LIA)  
Colleen White, Student  
Adam Zellhoefer, Student

## **Appendix B. 2008-2011 College Master Plan Strategies Related to Cabrillo's Climate Commitment**

### ***Goal B: Enhance excellence in the classroom and student support services.***

#### **Objective B4: Promote awareness of the interdisciplinary nature of emerging trends, such as global sustainability, social justice and community service.**

##### Targets

Four new interdisciplinary courses with sustainability, social justice and/or community services themes will be created by 2011.

Track number of flex week sessions related to sustainability

Track number of participants at flex sessions related to sustainability

Increase the number of students in service learning by 10% by 2010-2011

Increase awareness of sustainability issues (as measured by the Campus Climate Survey) by 10%.

Strategy B4a. Develop interdisciplinary curricula for at least four courses with global sustainability, community service, and/or social justice themes.

Responsible Persons: Vice President, Instruction

Project Leader: Michelle Merrill

Team: Climate Task Force Working Group on Awareness and Curriculum (Michelle Merrill, Elissa Wagner, Joe Jordan and other interested students, staff or faculty)

##### Strategy B4a Update:

Progress is being made in the development of interdisciplinary curricula, with two new curriculum proposals completed and accepted in February 2009: ES50 (Local Sustainability Research and Solutions - this includes a substantial service-learning component) and HS24 (Environmental Health) are now approved. A curriculum proposal to expand an existing special topics course Anthr19G (Surviving the Future: the (Re)Emergence of Sustainable Cultures) up to two units was also completed and accepted in February 2009.

In summer 2008, Karen Groppi, Michelle Merrill and Elissa Wagner took a special course in Environmental Leadership at DeAnza College, enabling us to secure detailed information about the interdisciplinary Environmental Studies program offered there with the cooperation of their program chair, Julie Philips. We plan to prepare and submit proposals for at least one of the six core courses recommended by their program chair each semester, beginning with ES 2 (Humans, the Environment and Sustainability) in Fall 2009.

Progress in developing and offering courses with global sustainability, social justice and community service themes is vital to Cabrillo College students. Many of our students are interested in transferring into interdisciplinary Environmental Studies, Sustainability or similar majors, which are becoming increasingly common in the University of California and California State University systems and at public and private colleges nationwide. It is also valuable for our community to provide education from an interdisciplinary perspective that enables all students to better address the complexity of emerging trends that face our community. Education that promotes community service strengthens our entire community, and enhances the perception of Cabrillo College in many sectors of the community.

Resource requirements:

The major resource needed to implement this strategy is faculty time, including continuing education, research and curriculum proposal work. Thus far, the majority of this time has been the voluntary efforts of adjunct faculty (with some support from a Faculty Grant for Student Success received in Fall 2007 to develop ES50). This strategy also requires time from faculty and administrators involved in the Curriculum Committee to review and make recommendations on curriculum proposals.

#	Action Items: B4a Timeline 2009-10	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Complete curriculum proposal and acceptance of curriculum for Cabrillo equivalent of DeAnza's ES 2 (Humans, the Environment and Sustainability)			X									
2	Complete curriculum proposal and acceptance of curriculum for another interdisciplinary Environmental Studies course							X					

**Strategy B4b. Offer one or more flex week activities to help instructors incorporate interdisciplinary themes of global sustainability, social justice and community service into existing classes.**

**Responsible Persons: Vice President, Instruction**

**Project Leaders: TLC Director**

**Team: Staff Development Committee**

Strategy Update:

The flex calendar, scheduled before the start of each full term, reflects a balance of activities and workshops in support of faculty professional development and curriculum development. Workshops include topics on teaching sustainability, focusing on our diverse student population and cultural, historic considerations in teaching the non-traditional student. There are between 4 to 6 workshops each flex week that focus on these themes. The Staff Development Committee approves each proposal included in the calendar.

B4b Resource requirements:

Flex presenters are typically Cabrillo faculty. Occasionally, guest speakers are invited and an honorarium/stipend is required. Staff Development funding has been used in the past for guest speakers, but this Chancellor's Office funding has been discontinued.

#	Action Items: B4b Timeline 2009-10	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Workshops for Fall Flex Week		X										
2	Workshops for Spring Flex Week							X					

**GOAL D: Enhance college effectiveness through measurement and evaluation of key areas such as shared governance, departmental effectiveness and student learning.**

**Objective D4. Incorporate environmental awareness and sustainability into policies and procedures.**

Targets

2% reduction in kWh/square foot per year  
Track occurrence of the words “sustainability”, “conservation”, and “environmental awareness” in budget policies and administrative regulations

Strategy D4a. Develop and implement Sustainable Energy Policy incorporating best practices for sustainability in appropriate policies and procedures.

Responsible Person: Assistant Superintendent/Vice President, Business Services

Project leader(s): Director of Maintenance and Operations

Team: Climate Initiative Task Force

Strategy Update:

This strategy will be coordinated in conjunction with Strategy D3a and E5a, with the guidance and assistance of the Climate Initiative Task Force (CITF). Board Policies and Procedures have traditionally been revised as needed by each component. 2009, a systematic review of policies and procedures will continue to be submitted, incorporating sustainable policies and procedure where appropriate.

Resource requirements:

Staff time is the major resource requirement for this project.

#	Action Items: D4a Timeline 2009-10	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Coordinate in conjunction with D3a with the assistance of the Climate Initiative Task Force (CITF): Ongoing component review of Board policies and admin regs.		X	X	X	X	X	X	X	X	X	X	X
2	First and second readings to Board for review and action.		X	X	X	X	X	X	X	X	X	X	X
3	Upload appropriate AR & BPs to website.		X	X	X	X	X	X	X	X	X	X	X

**GOAL E: Enhance Cabrillo’s resource development and connections with the community.**

**Objective E5. Develop and implement a comprehensive energy conservation program.**

Targets

Deliverable – Energy Conservation Plan.  
2% reduction in kWh/square foot per year.

**Strategy E5a. Disseminate and promote energy conservation through an awareness campaign, contests, and marketing.**

Responsible Person: Assistant Superintendent/Vice President, Business Services

Project Leader: Director of Maintenance & Operations

Team: Climate Initiative Task Force

Strategy Update:

Multiple energy efficiency projects implemented during calendar year 2008 resulted in monetary savings to the College in excess of \$46,000. Additional projects and savings are anticipated throughout the remainder of the Master Plan period.

Deliverable produced May 8, 2008: “Cabrillo Community College District Sustainable Energy Plan Draft for Review”. This document will be presented to the Gov. Board for a 1st reading at its June, 2009 meeting; a 2nd reading to take place at Board’s subsequent meeting.

Since inception of the Climate Initiative Task Force (CITF) in February, 2008, the Director of M&O has provided ongoing representation, input and guidance on the CITF.

M&O Director facilitated and supervised STEEP/Energy Academy interns conducting an energy audit of the upper campus of Cabrillo College in January/February, 2009. The project produced a report entitled “Cabrillo College Upper Campus Electrical Assessment” outlining a myriad of excellent energy-saving recommendations, each requiring varying investments of time and money, all guaranteed to reduce energy cost and consumption.

M&O Director increased staff/faculty awareness of energy use and need to reduce consumption via emails to all staff and faculty. The “Just Turn It Off” campaign on Earth Day reduced consumption of electricity for the hour designated. Additional campaigns are planned for the fall and spring semesters in 2009-2010.

Resource requirements:

An ongoing funding source is needed to order to meet the goal of a 2% reduction in kWh per sq. ft. per year. Funding will be offset by anticipated savings in electricity and natural gas bills.

#	Action Items: E5a Timeline 2008-09	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Plan/implement multiple energy-saving measures campus-wide.	X	X	X	X	X	X	X	X	X	X		
2	Produce Energy Conservation Plan & present to June meeting of Gov. Board.	X	X	X	X	X	X	X	X	X	X		
3	Oversee STEEP Intern Energy Audit.							X	X				
4	Representation, input and leadership on Climate Initiative Task Force (CITF).			X	X	X	X		X	X	X		
5	Develop strategies with CITF for energy conservation campaigns.			X	X	X	X		X	X	X	X	
6	Design, market & implement Earth Day/Week “Just Turn It Off” campaign directed at staff/faculty/students.										X	X	

#	Action Items: E5a Timeline 2009-10	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Continue to plan and implement energy-saving measures campus-wide.	X	X	X	X	X	X	X	X	X	X	X	X
2	Present Gov. Board with Energy Conservation Plan 2nd Reading Info. Item		X										
3	Identify ongoing funding sources to implement energy/cost saving measures identified in Plan and Audit.			X									
4	Continue representation, input and leadership on Climate Initiative Task Force (CITF).			X	X	X	X		X	X	X	X	
5	Develop strategies with CITF for energy conservation campaigns.												
6	Design, market & implement regularly scheduled "Just Turn It Off" & other awareness campaigns directed at staff/students.			X	X	X	X		X	X	X	X	