

**2006 Greenhouse Gas Emissions Audit
at Humboldt State University**

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**Humboldt State University
College of Natural Resources and Sciences
1 Harpst Street, Arcata, California**

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1. Introduction

Global warming is an issue that is widely being discussed in the world today, and is of concern among Humboldt County residents and the students of Humboldt State University alike. We live in a geographically and politically unique area, which has stated sustainability as an important part of the future. Examples of local support include an Arcata Greenhouse Emissions Audit, use of alternative energy, a well developed recycling program, and community and school wide environmental activism groups. What we felt was missing was a campus wide Greenhouse Gas audit to more clearly identify our institution's emissions. We researched pre-existing emission calculators that many universities have used. We found these templates unfit for our needs. They lacked many of the factors we wanted to include. In order to create a more complete analysis we designed an HSU specific Excel Template for an annual HSU Greenhouse Gas Emissions Audit that can be used in the future. This will create a consistent and inclusive frame for comparison. Our hope is that this tool will not only identify our current greenhouse gas emissions, but ensure that the future emissions audits will be a consistent indicator of our University's participation in the global effort to decrease our negative impact on the environment.

1.1. Climate Change Science

1.1.1. Historic Trends

Over 600,000 years, the level of CO₂ has shifted from approximately 200ppm to 275ppm periodically (Fig. 1). This change is largely due to the heating and cooling of the Earth's surface. For example, right after each glacial period, the Earth's temperature rose, and more CO₂ was emitted from the oceans into the atmosphere, contributing to the drastic increase in CO₂ concentration. In contrast, when the Earth's temperature cools, the level of CO₂ emitted from the oceans decreases. Other cause in changing CO₂ concentration includes volcanic activities. However, since the industrial revolution started in the 19th century, humans had started adding more CO₂ into the atmosphere than it ever retained in the Earth's history. Among these, combustion of fossil fuels such as coal and oil had contributed the largest to the overall gas emissions, which has led to the CO₂ level of 382ppm, a level that have never been achieved before.

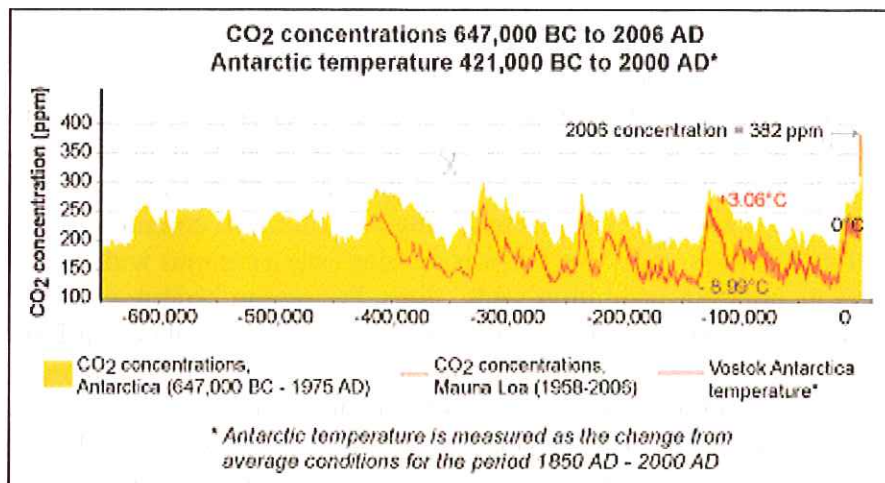


Figure 1. change in CO₂ concentrations over the past 600,000 years(<http://www.epa.gov>)

1.1.2. Greenhouse Gases and Greenhouse Effect

Greenhouse Gases

There are two main ways to describe the way that different gases affect the atmosphere. One is to describe the amount of time it takes the atmosphere to reach equilibrium following the increase of gas in the atmosphere. This is commonly known as the mean lifetime. Another way to describe gases is the **Global Warming Potential**. This is calculated by comparing the gas in question to the mass of Carbon dioxide. It is calculated during a specific time interval, and is based on a number of factors, including the “radiative efficiency (heat-absorbing ability) of each gas relative to that of carbon dioxide, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of carbon dioxide.”

(IPCC http://www.grida.no/climate/ipcc_tar/wg1/247.htm)

Carbon Dioxide (CO₂)

Since the age of industrialization, emission of carbon dioxide has increased by 35%. The U.S. emitted 16.3% more GHG in 2005 than it did in 1990, and is second to China in its overall emissions per year. It is the most present greenhouse gas produced by human activities, and is the most abundant as a result of combustion of fuel. Major sources of carbon dioxide include respiration, volcanism, land-use change, energy, industry, and biomass burning. In relation to our project CO₂ was measured in water and electricity use, solid waste, transportation and travel, and natural gas use.

How long does CO₂ stay in the atmosphere

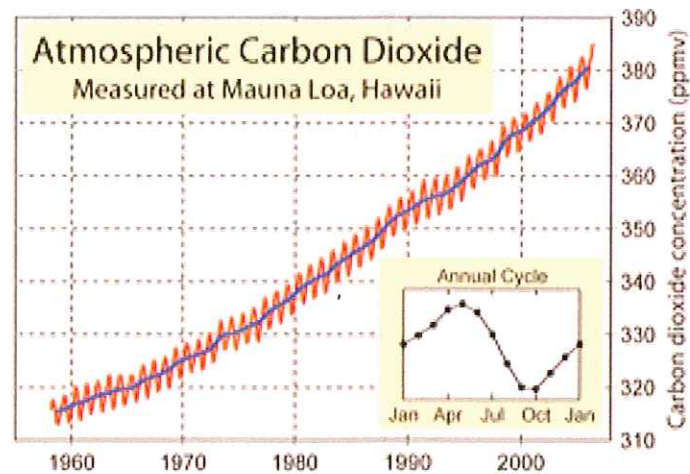


Fig. 2. (<http://cdiac.ornl.gov/trends/co2/sio-mlo.htm>)

Methane (CH₄)

GWP: 23

Methane is a greenhouse gas that stays in the atmosphere for 9-15 years. It is emitted from natural and human sources. "Human-influenced sources include landfills, natural gas and petroleum systems, agricultural activities, coal mining, stationary and mobile combustion, wastewater treatment, and certain industrial process." (EPA) It is about 21 times more potent than Carbon Dioxide (by weight) for its global warming potential. Once it is released, it is removed by various processes, known as "sinks". The most common process of removal is oxidation by OH, when methane reacts with OH to produce CH₃ in the atmosphere. In our project we measured methane release in landfills, and also transportation. Since 1740 methane concentrations have risen by 150%, but the rate of increase has slowed in last 30 years.

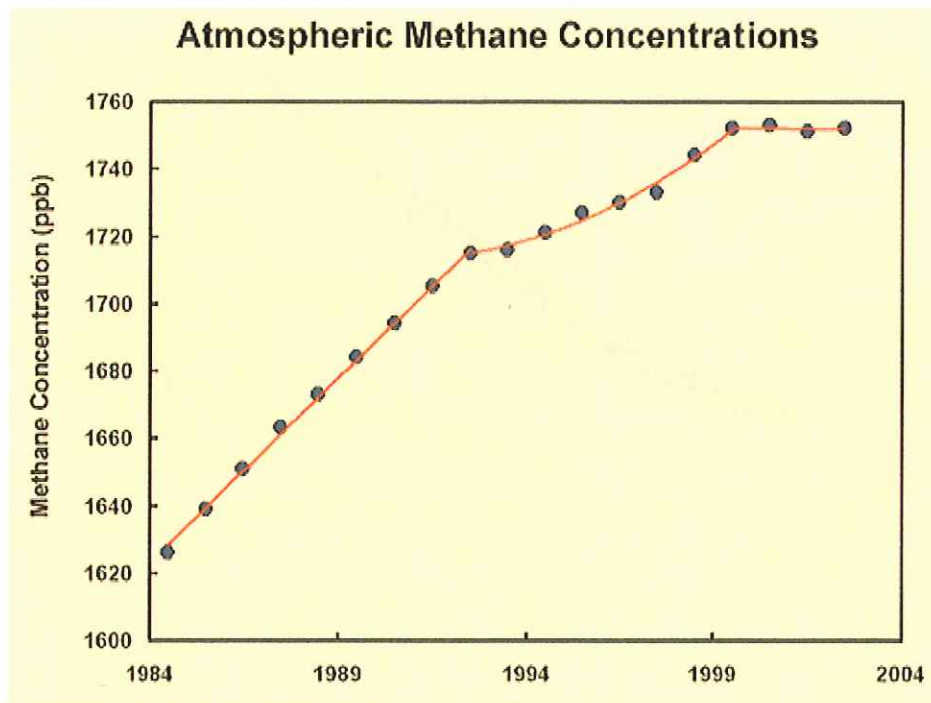


Fig. 3.(<http://www.epa.gov/methane/scientific.html>)

Nitrous Oxide (N₂O)

GWP: 296

Nitrous oxide stays in the atmosphere for approximately 120 years. “The primary sources of human-influenced emissions of nitrous oxide are agricultural soil management, animal manure management, sewage treatment, mobile and stationary fuel combustion, adipic acid production, and nitric acid production. Nitrous oxide is also emitted naturally from a wide variety of biological sources.”(EPA) It is mainly broken up by sunlight in the stratosphere. In the last 20 years, the percentage of Nitrous oxide has gone up .25% each year. It is expected to continue increasing rapidly in the next 100 years due in part to agriculture, which is the primary source human contributed nitrous dioxide emissions (http://www.eoearth.org/article/Greenhouse_gas). In our analysis we measured nitrous oxide in water and electricity usage, and transportation and travel.

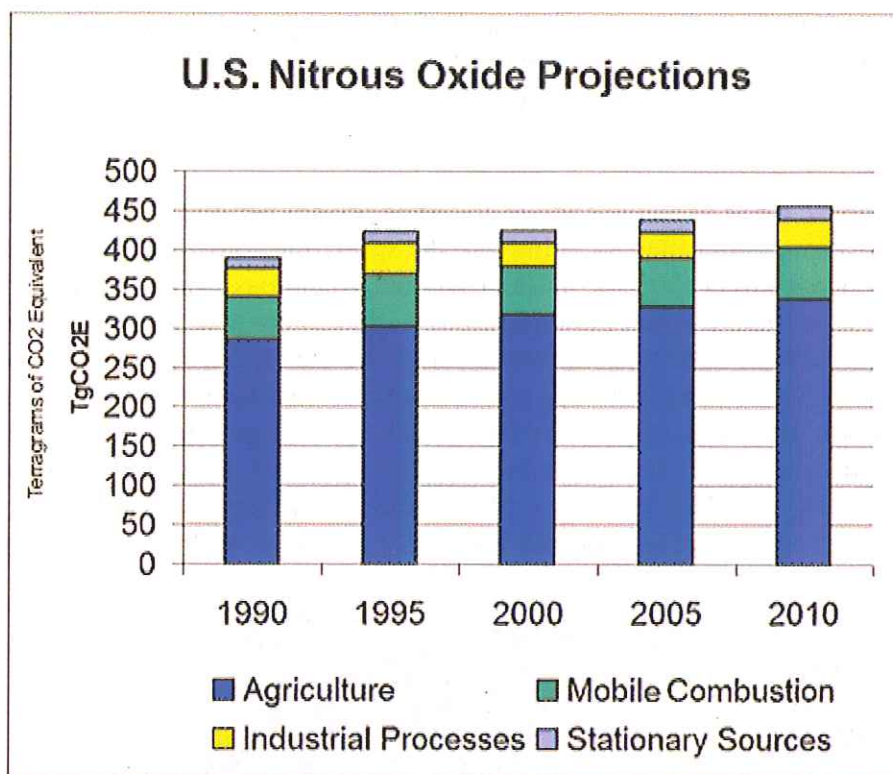


Fig. 4. (http://www.epa.gov/nitrousoxide/images/n20_projectionschart.gif)

Greenhouse gases not used in analysis

There are six main Greenhouse Gases recognized by the Kyoto Protocol, three which we chose not to include in the analysis. They are briefly described below.

HFCs (hydrofluorocarbons)

Hydrofluorocarbons are composed of carbon, hydrogen, and fluorine. They have a lower GWP than HCFC's, and do not have a known effect on the ozone layer. HFCs are commonly used as cleaning solvents in the electronic components, a blowing agent in the foamed plastics, refrigerant in air conditioning units and refrigerators, fire suppression agents in the fire protection, propellant in the metered dose inhalers (MDIs), and dry etching agent in the semiconductor manufacturing. (HFC's) There is not assumed to be large-scale use of HFC's on the Humboldt State University Campus, and the collecting of this data would be difficult to gather and analyze with precision.

PFCs (perfluorocarbons)

PFCs are made up of atoms of carbon, fluorine, and or sulfur. They are commonly used in eye surgery and ultrasounds. They are also used in refrigerators and fire extinguishers. The GWP of PFCs is 6,500 times greater than CO₂, and it is regulated by the Kyoto Protocol. (PFC's) It is currently not a large global warming issue, but if its use continues it could be a large problem in the future.

SF₆ (sulphur hexafluoride)

This gas is used for manufacturing and casting, medical purposes, in electrical processes, and for testing ventilation systems. It has a GWP 22,000 times greater than CO₂, but its current contribution to global warming is relatively low.

Greenhouse Effect

If the greenhouse gases explained above are emitted from various sources as described and stay in the atmosphere rather than escaping into the space, the consequence is a natural process called greenhouse effect (Fig. 5). With or without greenhouse gases, Earth's climate system is driven by solar radiation that radiates through atmosphere and onto Earth's surface. Not all the radiation reach the surface: some are absorbed by the clouds and reflected back into atmosphere, while others are absorbed by the surface and reflected back into the atmosphere. The amount of radiation absorbed and reflected by the surface varies depending on the types of surface; that is, on an icy surface where there is a high albedo effect, most of the solar radiation is reflected without being absorbed, whereas on forestlands where there is lower albedo effect, more radiation is absorbed into the surface and warms the ground as well as the atmosphere above it.

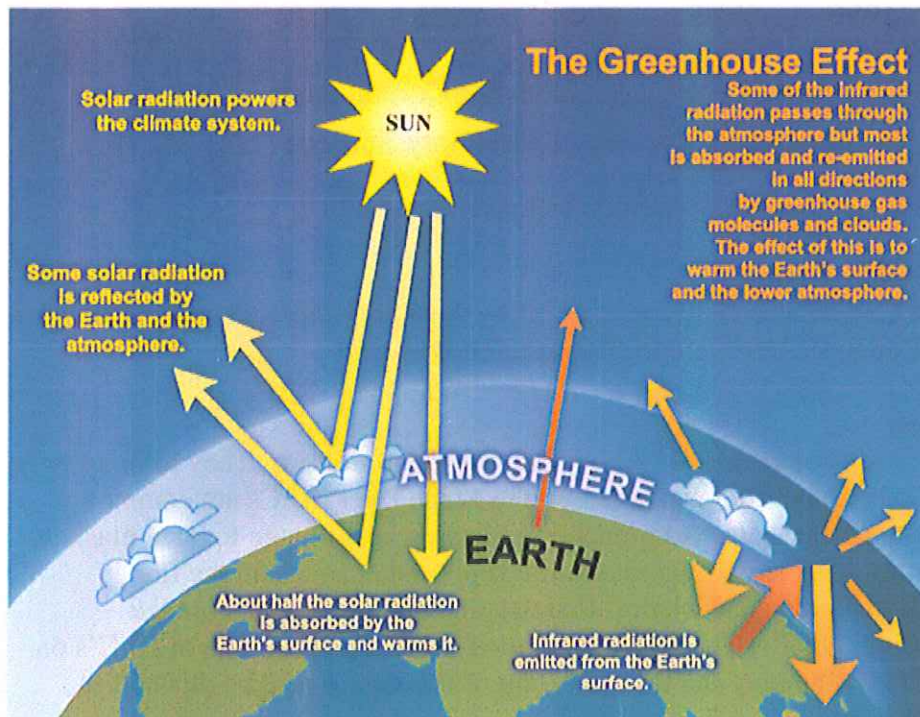


Fig. 5: Schematics of Greenhouse Effect (<http://www.global-greenhouse-warming.com>)

This natural cycle becomes disrupted when excessive amount of greenhouse gases form a layer and stay in the troposphere. With the presence of the layer, the infrared radiations reflected off the surface are absorbed and re-emitted by the greenhouse gases in all directions. As a consequence, heat is trapped in the atmosphere and warms the surface of the Earth as well as the lower atmosphere, causing the global warming.

Sources:CO

http://en.wikipedia.org/wiki/Greenhouse_gas

EPA

<http://www.epa.gov/climatechange/emissions/index.html#ggo>

Global Warming Potential

http://en.wikipedia.org/wiki/Global_warming_potential

Greenhouse Gas

http://www.eoearth.org/article/Greenhouse_gas

HFC's

http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V74-4G9R1H0-1&_user=521384&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000059563&_version=1&_urlVersion=0&_userid=521384&md5=5272d1c6ff56bcde7a67bcf8db855a1

PFC's

<http://en.wikipedia.org/wiki/Perfluorocarbon>

1.1.3. Effects of Climate Change

The effects of global warming are varied and difficult to specify. The current physical results of increasing global temperatures include rising sea levels, glacial melting, and altered seasons. In the future there is expected to be extreme weather changes, including an increase in tropical disease as a result of increasing temperatures. There is also expected to be an increase in rain, and loss of weather consistency. Due to the expected inconsistent weather there will be negative economic effects in addition to environmental change. Industries dependent on reliable seasons (such as farming) will be adversely affected. In addition, the costs of mitigation to repair the problems that result from climate change will be high. The repairs that will need to be made could include paying for flood damage, costs of relocation due to flooding, fighting increased forest fires, and repairing infrastructure that will degrade more quickly as a result of dramatic weather alterations.

In the future there could be problems related to acidification of the ocean, a result of increased carbon dioxide absorption. Acidification results in loss of coral and plankton, and can lower the reproduction rates of fish. There is also expected to be major terrestrial ecosystem changes, which is often seen first in the migration changes of birds. Some animals will be affected more by the climate change than others, especially ones that rely on cold weather. There include polar bears, penguins, and snowy owls. These animals use the cold weather to their advantage, and a shorter cold season could change their success.

1.1.4. Campus Climate Change

So far there has been little organized work done on campus in relation to climate change and Humboldt State University's connection to this issue. Many other universities have

conducted Greenhouse Gas audits in the past, and have used the resulting information to guide them in developing way to decrease their campus emissions. We feel that an accurate audit is the first step in recognizing the best ways to reduce our footprint. It is important to acknowledge that global warming may not only affect our University indirectly through environmental changes, but also through direct physical and economic ways. This could include flooding issues that directly affect infrastructure, as well as economic changes related to environmental changes that affect industry locally. The fishing, crab, and oyster industries could be affected by the increased ocean temperatures, which could jeopardize the incomes of people in Humboldt County. In addition, the cost for many goods and services needed on campus could increase, which would increase tuition for students. In conclusion, global warming is an issue that we should be concerned about for ecological and human health, as well as the sustainable future of our university.

1.2. Climate Policy

1.2.1. Kyoto Protocol

One of the major international agreements made to mitigate climate change, particularly global warming, is Kyoto Protocol, a treaty that was signed by 171 countries in the year 1997. Its goal is to reduce the emissions of six GHG's worldwide by the target year 2012, including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluorides. The treaty went into effect in February 2005 and assigned 37 countries who were responsible for 55% of the GHG emission in the year 1990 to the "binding targets" for GHG emissions. However, emission reductions assigned to each of the 37 countries vary from -8% to 10% of 1990 emission rate (Fig. 6). The emission reduction rates vary as such because of the each country's different level of contribution to the 1990 GHG emissions. Named Annex I, the 37 countries that are assigned emission reductions include developed countries such as EU-15, Japan, Australia, Russia, Canada, and the U.S., as shown in Fig. 6.

Annex I Parties	Emissions target (expressed in relation to emissions in the base year or period*)
Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, European Community, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland	-8%
United States of America**	-7%
Canada, Hungary, Japan, Poland	-6%
Croatia	-5%
New Zealand, Russian Federation, Ukraine	0
Norway	+1%
Australia**	+8%
Iceland	+10%

Fig. 6: Emission target for the Annex I nations assigned by Kyoto Protocol (IPCC: <http://www.ipcc.ch>)

The United States signed the Protocol in 1997 but expressed its position that it will not ratify the treaty. One of the reasons for the U.S.'s rejection is the fact that countries that have high GHG emissions such as China and India are not included in the treaty. The U.S. seeks a sense of fairness for mitigating this issue since it is not just the developed nations' responsibility but also everyone else's, including China and India who have been growing at remarkable paces both economically and demographically in the past several decades. Another reason comes from an economic concern. If the U.S. abides by the treaty, the nation would have to reduce GHG emissions by 7%, one of the highest reduction rates among Annex I, which means that the country would have to cut down on productions that generate high GHG emissions or to come up with energy efficient technologies to help reduce the emissions. This is a hard decision for the U.S. if we take into account their energy intensive lifestyles compared to other regions in the world (Fig. 7). However, in a smaller scale, there have been state and local regulations passed within the United States that commit to the mitigation effort to reduce impact on climate change. One example is the recent AB-32 passed here in California.

per
capita

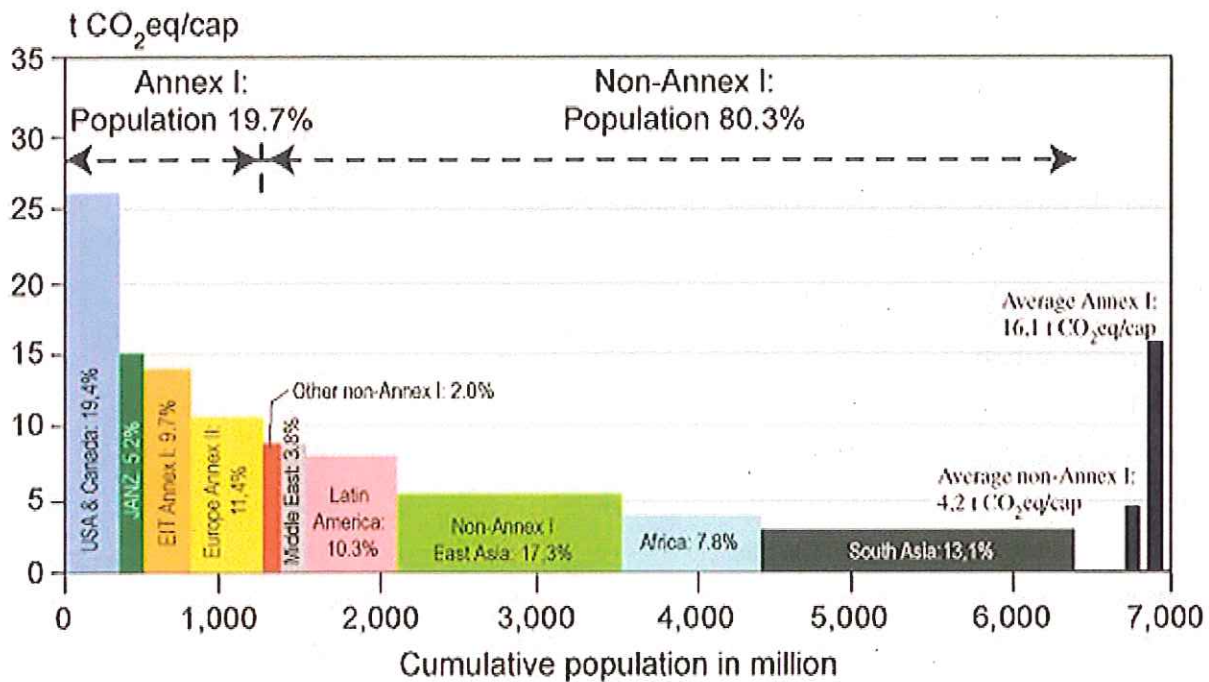


Fig. 7: Regional per capita GHG emissions in 2004 (IPCC: <http://www.ipcc.ch>)

1.2.2. AB-32 (Global Warming Solutions Act)

This act requires that the state of California reduces its global warming emissions to 1990 levels by the year 2020. This will be done by enacting a cap on global warming emissions, which will be accomplished by a phase out that will start in 2012. (AB32 Bill) The California Air Resources Board will be in charge of establishing a monitoring and reporting system. Some of the policies that will result in lower emissions include methane capture at landfills and cleaner standards for vehicles. (AB32 factsheet) Other ways that emissions could be lowered is by building more dense housing, increasing public transportation, and increasing use of alternative energy sources.

These changes are expected to not only lower the greenhouse gas emissions of California, but also create new jobs. The hope is that California, who produces the 12th most CO₂ in the world, can lead the nation and the world to adopt similar reduction plans. The Global Warming Solutions Act is likely to have an effect on the California State University System, and in this regard affect Humboldt State University. There are many places that we could lower our greenhouse gas emissions. Before we began to formulate plans for our reduction we need to know which areas of our system is most harmful, and which areas have less room for improvement.

The Greenhouse Gas Audit we have done will start the diagnosis process, and can serve as a tool to measure our emissions in the future. By having a consistent measuring tool people in the future can plug in the emission factors that vary by year, and have resulting figures that will

relate to 2006 and years in the future. It can also be used to connect with other universities, and be used to compare our emissions with other schools in California.

2. Weighing Alternatives

GHG inventory can be quite lengthy or brief depending on the level of detail and coverage of different emission sectors analyzed. It would require enormous amount of time and effort to create an inventory if one is to include every GHG emitted on campus. There would also be a situation where certain raw data are not readily available to be analyzed, as it was the case for the creation this particular inventory for certain gases and emission sectors. Therefore, prior to start creating the GHG inventory, it is necessary to closely evaluate and determine how detailed and to what extent the inventory should include considering time, data availability, and the focus of the inventory. Following is a set of alternatives considered according to different emission sources.

2.1 Solid Waste

2.1.1. Green Waste

We considered the feasibility of creating GHG inventory for green waste in addition to the regular solid waste generated on campus. Green waste is the food waste and garden waste including compost materials, grass cuttings, and weeds. These waste release methane and trail amounts of other gases due to the decomposition of organic material broken down by microorganisms. We decided on including this category to our GHG inventory since the data were readily available.

2.1.2. Recycling

We thought of the possibility of including the Greenhouse gas emissions resulting from the lifecycle process of recycling. This includes the transport to the processing plant, and the way that it is broken down to be used in the future. Some of these processes are energy intensive and result in emissions that are GHG's. After looking at the inconsistency of figures dependent on variables specific to different sites and finding this information unavailable, we decided to factor in only the emissions related to transport.

2.2. Transportation

Within transportation sector, public transit emission from student and faculty commutes to HSU was considered a source of high output uncertainties. Public transit such as HTA and A&MRT that run through HSU are not only used by campus populations but also by the entire community around the Arcata/ Eureka area. Since our inventory focuses on GHG emissions in

HSU, we would have to estimate the number of campus population who use public transit among the entire public transit users, which would involve high level of uncertainties. Our initial response was to not include this category. However, the "Parking and Mobility Study" conducted in 2004 included a statistics on modes of transportation by campus population which enabled us to get a fair estimate on the proportions of the campus population who use public transit.

2.3. Electricity

Electricity is one of the largest sources of GHG emissions on campus. Our concern was to what extent the inventory should include the emissions coming from electricity generation. We decided on including emissions associated with natural gas-fired cogeneration units, coal-fired power from APS, nuclear power, renewable, geothermal, and biomass from PG& E, which were every source of electricity included in the company's electricity grid mix. At the end, one controversial source remained—methane from hydroelectric lakes. Methane is released from hydroelectric lakes by microorganisms that decompose organic materials in the lakes. After a brief research on the topic, it has been revealed that the study is done extensively in tropical regions such as the Amazonia where microorganisms are expected to be more populous and active due to its warm and humid climate. It has also been shown that the amount of methane released varies greatly depending on size of the lakes, flow rate, and climate and yet methane release in this category can contribute a significant portion to the overall GHG emissions among all the others. Therefore, we have determined to include hydroelectric lakes as one of the emission sources and work on it as far as the time and data availability allow.

2.4. Campus Construction

At the beginning of the semester when we started thinking about the alternative solutions for the project, there were a number of ongoing constructions on campus. Our concern was that the campus construction is partially factored into the electricity of the campus and possibly varying sectors of the waste stream. However, the total construction input would vary widely from year to year, and thus it would be very difficult to make estimates on variables. Taking into account the future studies on campus GHG emissions which would use our inventory as a model, this category was omitted from the inventory.

2.5. Gases to Include

Given the time limitation to work on the project, we had to make a decision on which GHG's to include in our inventory. Besides carbon dioxide as the largest contributor to the overall emission, gases such as methane, nitrous oxide, volatile organic compounds, water vapor, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride were considered. Among these gases, we determined to add carbon dioxide, methane, and nitrous oxide into the equation, for the reasons being that methane is a major gas released from solid waste (Fig. 3) and that nitrous oxide has a very large global warming potential relative to that of carbon dioxide even though the gas is emitted in much smaller amount. In addition, the emissions from the remaining four gases would be very small, occupying only 2% of the total emission according to the report from

EIA (Fig. 8), and thus it would be reasonable to assume that the proportions of gases emitted shown in Fig. 8 hold true for Humboldt State and include the three largest gases in the campus inventory.

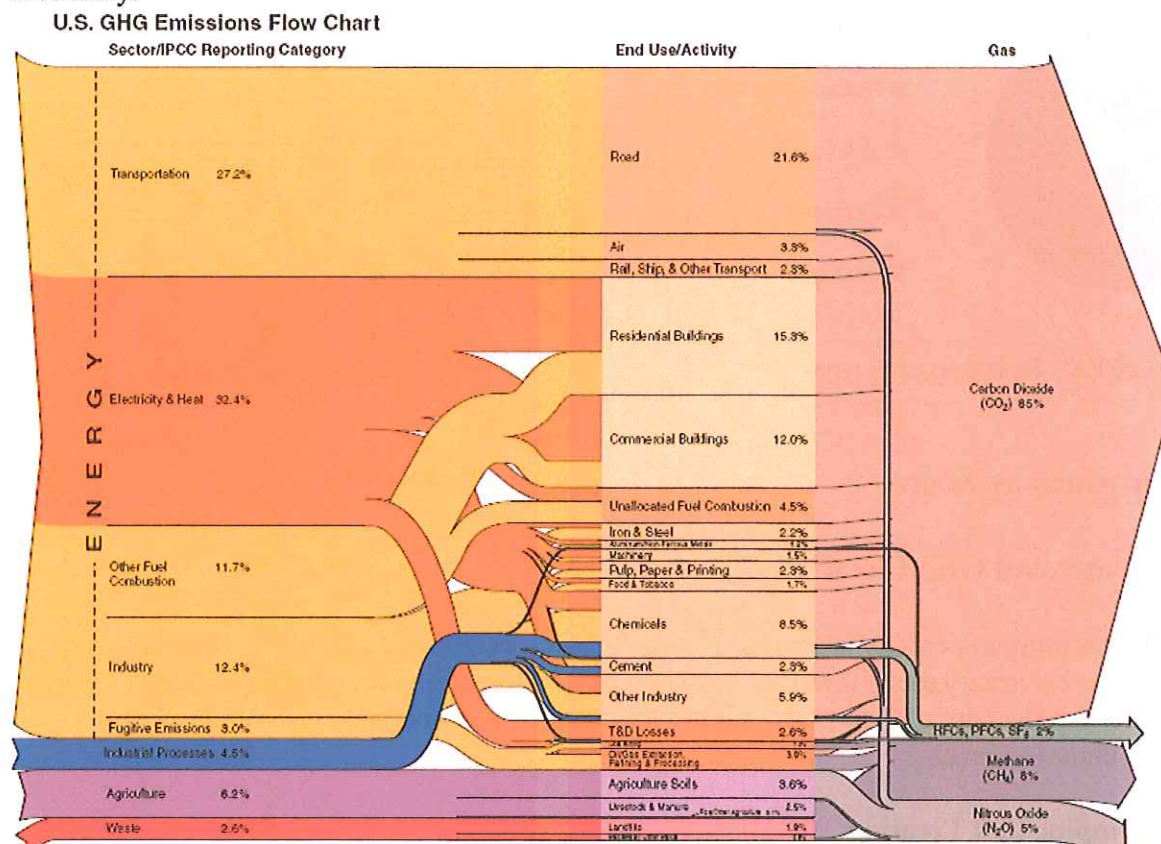


Fig. 8: U.S. Greenhouse Gas Emission Flow Chart (EIA U.S. Dept. of Energy: <http://eia.doe.gov>)

3. GHG Emissions in 2006

3.1. Total Emissions

Table 1: Total GHG emissions by source

	Grid Electricity and Water	Natural gas	Solid waste	Campus fleet	faculty travel	Student commute	Total emission (tonne)
CO ₂ (tonne) emission	N/A	3,137	29	65	302	2,715	6,247
CH ₄ (tonne) emission	N/A	0.066	4.758	0.012	0.065	0.865	6
N ₂ O (tonne) emission	N/A	0.127	0.0010	0.001	0.007	0.026	0
CO ₂ Equiv. (tonne) emission	2,665	3,137	138	65	305	2,742	9,053

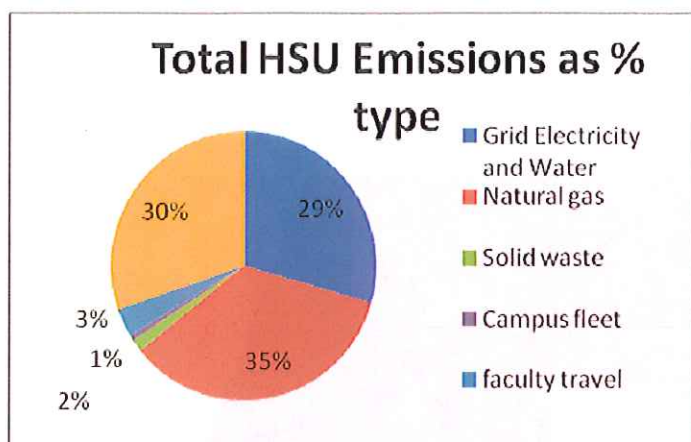


Fig. 9: Total HSU Emissions as % type

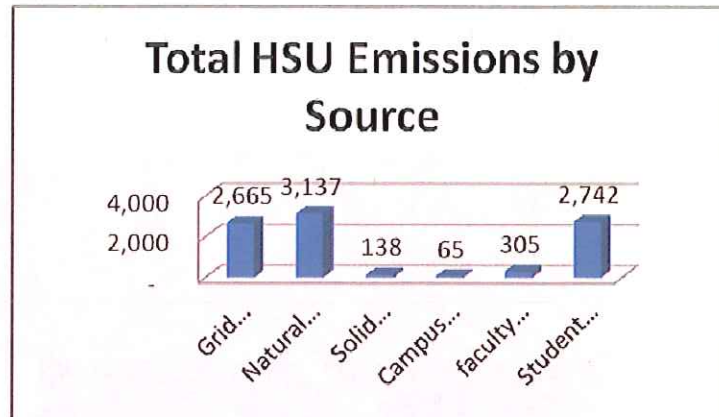


Fig. 10: Total HSU Emissions by Source

3.2. Emissions by Source

3.2.1. Water and Grid Electricity

Water pumping energy is obtained from the same PG&E grid as HSU's electricity. Therefore the electricity totals for HSU's portion of the Humboldt Bay Municipal Water District (HBMWD) and the City of Arcata's pumping needs are added to HSU's grid usage to find combined emission levels.

Water Pumping and Treating

The equation used reflects the energy usage of the two agencies who handle HSU's water. HBMWD pumps the water out of subterranean aquifers beneath the Mad River. They then distribute the water to the various water municipalities in the region, including the City of Arcata. The City of Arcata then pumps the water to a number of elevated holding tanks which gravity feed to HSU and the rest of Arcata. The equation used to find HSU's percentage of the overall water pumping within HBMWD and the City of Arcata is:

$$((\text{HSU's Water consumption in gal} / \text{Total HBMWD Water in gal}) * (\text{HBMWD Energy consumption in kWh})) + ((\text{HSU's Water consumption in gal} / \text{Total Arcata Water in gal}) * (\text{Arcata Energy to Pump Water in kWh}))$$

The water pumping figures were found using two very helpful sources:

1. Becky Menten – Energy Program Specialist with the City Of Arcata provided data related to the city's water pumping activities. Becky Menten's work phone number is (707) 825-2168.
2. Lui Ahmad – Operation Specialist with the Humboldt Bay Municipal Water District (HBMWD) provided data for the energy consumption and pumping activities of the HBMWD. Lui Ahmad's work phone number is (707) 822-2918.

Grid Electricity

- Grid Mix - The Grid mix is the percentage of each electric generation source that is being fed into the grid. The grid mix used in this worksheet is from the California Energy Commission and can be found at http://www.energy.ca.gov/electricity/electricity_resource_mix_pie_charts/index.html .

HSU contracts energy from APS who feeds their Nevada and New Mexico bases electricity into PG&E's grid. Because HSU receives the electricity via PG&E's grid mix and not APS's, the PG&E's grid mix was used for this worksheet. APS's grid mix can be found at <http://www.pinnaclewest.com/main/pnw/AboutUs/commitments/ehs/2006/impacts/generation/default.html> .

- Emissions – It is very hard to find precise emission rates data. The amount of various emissions can vary widely from generation plant to generation plant. For example, a coal fired power plant with emission scrubbers will emit a lot less than one without. Another example is that of methane emissions from hydroelectric reservoirs. A reservoir with a lot of plant growth around the lake, such as those in tropical regions, has much more anaerobic decomposition (the source of a reservoir's methane) taking place in the lake than say a desert lake like Lake Powell or Lake Mead on the Colorado River. Considerations used for the emission rates figures should include current technology, regional data, and data sources (biased or unbiased).

The emissions per unit of energy of each component (CO₂, NO_x, CH₄) were found on the Environmental Protection Agency's (EPA) website at <http://epa.gov/cleanenergy/emissions.htm> .

The total CO₂ equivalent emissions rates we found were more inclusive of all electricity generation sources. They were however in different units and the spreadsheet reflects the units of each source. The source of the info is found at : <http://www.iaea.org/Publications/Magazines/Bulletin/Bull422/article4.pdf>

- Campus Grid use – HSU's grid electricity data use was obtained at HSU Plant Operations.

3.2.2. Natural Gas by HSU Housing and Campus Cogeneration

Background

HSU supplies part of its electricity use through the Housing and Campus Cogeneration located near Forbes Complex and at the North Campus parking structure in front of the Jolly Giant Commons (the "J"). During the electricity generation process, the cogeneration units combust natural gas as a fuel source to convert it into electricity and heat. The power and heat generated from the Forbes Complex cogeneration is consumed at Forbes Complex and Van Matre Hall (Geology Department), and some of the heat is also consumed at Wildlife and Fisheries Building and Founders Hall.

The combustion of natural gas in the boilers emits greenhouse gases (GHG's) including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) along with other gases such as

carbon monoxide (CO), volatile organic compounds (VOC's), and nitrogen oxides (NO_x). However, if the typical well maintained boiler is used, more than 99% of the fuel carbon is converted into CO₂ during its combustion process. The remaining fuel carbon is then converted into CH₄, CO, and VOC's as a result of incomplete combustion. The amount of N₂O emitted depends on two factors; the combustion temperatures and amount of excess oxygen. Lower combustion temperature and higher amount of excess oxygen would cause more N₂O emissions. In this project, it is assumed that the cogeneration units here on HSU campus are properly tuned so that the majority of the fuel carbon combusted is converted into CO₂, and that the units have the average rate of N₂O emissions.

Data Collection

The only and the most important input data obtained for the preparation of GHG inventory in natural gas sector is the HSU energy use spreadsheet derived from the HSU Plant Operation (contact:707-826-4475). The spreadsheet contained the monthly and total purchase of natural gas by HSU in the year 2006 as well as the amount of natural gas used for Housing and Campus cogeneration. This project used the latter values as the amount of input energy. Parameters required for the calculation of GHG emissions include; 1).emission factors for each GHG gas, 2).net calorific value of natural gas, 3). Fraction of carbon oxidized, 4).global warming potential of non-CO₂ gases, and 5).carbon intensity of natural gas. Emission factors for each GHG gas, net calorific value of natural gas, and fraction of carbon oxidized were obtained from *IPCC Guidelines for National Greenhouse Gas Inventories Workbook* found at IPCC webpage, and the global warming potentials of non-CO₂ gases were obtained from EPA's *U.S. Inventory of Greenhouse Gas Emissions and Sinks* found at EPA webpage. Finally, the carbon intensity of natural gas was obtained from the calculation made in *Environment and Technology* class offered at Humboldt State University.

Sources:

- *IPCC Guidelines for National Greenhouse Gas Inventories Workbook*: <<http://www.ipcc-nggip.iges.or.jp/public/gl/invs5.htm>>.
- *U.S. Inventory of Greenhouse Gas Emissions and Sinks*: <<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>>.
- *Environment and Technology, HSU*: ENGR308 powerpoint lecture by Dr. Arne Jacobson

Calculations

The overall set of calculations made to obtain the total GHG emission is outlined below. All the values and equations used were entered and saved on Microsoft Excel so that the entire process is repeatable in the future research use.

- Convert the unit of natural gas consumption from therms into terajoules (TJ).

- Calculate the amount of carbon emitted in the unit of metric tons by using the values of natural gas consumption (TJ), carbon emission factor (tC/ TJ), and fraction of carbon oxidized.
- Convert the amount of carbon emitted into the amount of carbon dioxide emitted (tones of CO₂).
- Calculate the amount of methane emitted by using the natural gas consumption (TJ) and the methane emission factor (kg/TJ).
- Convert the amount of methane emitted into metric tons of CO₂ equivalent by using the GWP value for methane.
- Repeat the last two steps to obtain the GHG emission from nitrous oxide.
- Add emissions from CO₂, CH₄, and N₂O to get the total GHG emission.

Note: Refer to the excel spreadsheet provided for complete calculations.

Key Results

The calculations show that three gases contribute to the total GHG emissions associated with incomplete combustion of natural gas at Housing and Campus cogenerations in 2006. Carbon dioxide is emitted 3,137 tonnes, methane is emitted 1.52 tonnes CO₂eq., and nitrous oxide is emitted 37.5 tonnes CO₂eq. The total GHG emission adds up to be 3,176 tonnes CO₂eq. As mentioned in the background, carbon dioxide is responsible for the most part of the total emission due to the fact that more than 99% of fuel carbon is oxidized. Methane contributes the least to the overall emissions.

Improvements

There could have been a possibility for more accurate estimate of the final GHG emission value if some of the assumptions made were replaced with actual numbers. For example, there are different types of natural gas-fired boilers used depending on the scale of the project and its primary purposes of production. Different technologies have different values of emission factors. Therefore, if we were able to obtain the details on what type of technology HSU uses, possibly by interviewing the Plant Operation, then we should have obtained more accurate final values. In addition, we should keep in mind that there is more than one way to calculate GHG emissions. Certain set of parameters were not used in the calculations made above, but it would be worth obtaining the results with different approaches to see if the final values agree, which would serve as a tool to decrease uncertainties.

3.2.3. Solid Waste

Background

Waste Diversion is often thought of as a great way to reduce the disposal of resources, and slow the filling of our landfills. It does do both of these things, but it is not an entirely efficient process, and the emissions of greenhouse gases can add up. Many materials that are recycled are taken on trucks outside of the county, because we lack local processing plants for them. In addition, solid waste releases methane which has a high Global Warming Potential (GWP). The analysis of Humboldt State University's greenhouse gas emissions in relation to its diverted and Un-diverted waste will help to more clearly show the impact of non-local waste transport and treatment.

Data Collection

Waste Tonnage amounts

I used the California Integrated Waste Management Board website for finding the tonnage amounts of diverted and un-diverted waste. This website has all State agencies waste diversion information on a searchable database for the public to see. It has the diverted waste separated by type, and has a brief explanation of the overall recycling practices of Humboldt State University.

Locations of Waste/Recycling Transport

I found the places that un-diverted waste is transported by speaking with Mike Seeber, from Arcata Recycling. I also communicated with Humboldt Waste Management, Arcata Scrap yard, and Eureka Recycling to find the locations for the diverted waste. I also networked among other students doing similar work to double check the locations I was finding. In addition, I contacted Tim Moxon (Plant Operations) and T.C. Comet (Sustainability Coordinator).

Average truck capacity

I used 23 tons as the average capacity, because according to Humboldt Waste Management trucks transporting solid waste to landfills have a 22-24 ton capacity. There is variance among different materials being transported due to different density and weight, which I chose not to factor into these calculations.

Average miles per gallon

On the EPA website it says that the average miles per gallon for diesel fueled trucks is 2.8 miles per gallon. I used this figure to ensure that my calculations were conservative, and I'm assuming that some trucks may be below or over this number.

Un-diverted Waste

After finding out from Arcata Garbage Company that 75% of undiverted waste goes to Redding and 25% goes to Medford, I set up the spreadsheet to account for the break-up of the overall tonnage. This breakdown is likely to change in the future, but is a constant in the spreadsheet for ease of calculations.

Plastics

This was a difficult calculation to make due to many changing factors. The tonnage for recycling plastic is relatively low (1.55 tons per year) in comparison to the ocean shipping method. The average loaded container weighs 10-12 tons, and there are about 5,000 of these

containers on a ship. 1.55 tons accounts for 1/32258 percent of the container ship load. Considering the complexity of shipping variance I have chosen to not calculate the fuel used for transport of plastic by shipping, and only by truck transport.

Locally processed materials

Glass and compostable materials are kept in Arcata, so I did not calculate a distance for them. Concrete is also kept and used locally due to the difficulty of transport.

Greenhouse Gas figures

I used the Intergovernmental Panel on Climate Change National Greenhouse Gas Inventories Program (IPPC-NGGIP) to make my calculations regarding greenhouse gases. There are other resources that have emissions information, but as a group we found this one to be the most accurate and inclusive.

Sources:

California Integrated Waste Management Board
<http://www.ciwmb.ca.gov/stateagency/soard/default.asp>

Arcata Recycling 1059 West Hawthorne Street Eureka, CA 95501 (707)268-8680	Humboldt Waste Management Authority 1380 9th St Arcata, CA 95521 (707) 822-4321
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Arcata Scrap yard 192 South G St. Arcata, CA 95521 (707) 822-4881	Eureka Recycling 1059 W. Hawthorne Eureka, CA 95501
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Ship Container Data
<http://www.globalsecurity.org/military/systems/ship/container-types.htm>

Intergovernmental Panel on Climate Change
<http://www.ipcc-nggip.iges.or.jp/>

Calculations

Fuel per trip

This was calculated by dividing the travel distance by 2.8 miles per gallon, and then converted to liters by multiplying by 2.79.

Trips per year

This was calculated by dividing the overall tonnage of different types of waste and dividing them by 23 tons, to find out the number of truckloads. I was assuming that the trucks were filled to capacity, meaning that my resulting numbers are conservative.

Methane equation for solid waste

(Variables are different for food matter and are highly dependent on the decaying matter, so methane calculations were only calculated for un-diverted solid waste)

Methane emissions

1.0362 gigagrams	Msw(t)	total msw generated
1	Msw(f)	fraction of msw disposed to solid waste disposal site
1	mcf	methane correction factor
0.18	doc	degradable organic carbon
0.21	Doc(f)	fraction doc dissimilated
None	f	fraction of ch4 in landfill gas
0	r	recovered ch4
0	ox	oxidation factor

Equation: $(mswt \times mswf \times mcf \times doc \times docf \times f \times a6/12-r)(1-ox)$

Solid Waste Transportation CalculationsCarbon Dioxide

The equation that was used for carbon dioxide came from the IPPC. I used the diesel carbon emission factor and multiplied it by the TJ of diesel and multiplied this number by 1.102 to convert the number to tons of carbon. To change the number into carbon dioxide from carbon I multiplied by 44/12. The result was tons of carbon dioxide.

Methane

To find these figures I used the emission factor (20 kg/TJ). This was multiplied by the energy in diesel fuel (0.000138 kg/joules) multiplied by the amount of fuel used in one year. All of this was divided by 1000 to convert back to kilograms. This resulted in the final number.

Carbon Monoxide

To find these figures I used the emission factor (800 kg/TJ). This was multiplied by the energy in diesel fuel (0.000138kg/joules) multiplied by the amount of fuel used in one year. This was all divided by 1000 to convert back to kilograms.

Nitrous oxide

To find these figures I used the emission factor (0.6 kg/TJ). This was multiplied by the energy in diesel fuel (0.000138kg/joules) multiplied by the amount of fuel used in one year. This was all divided by 1000 to convert back to kilograms.

Results

The results of the emissions were not surprising to me. The low fuel efficiency of the

diesel trucks and long distances travelled resulted in especially large CO₂ emissions. I was surprised to learn of the methane released at landfills, and its high percentage in relation to the weight of the solid waste.

Improvements

It is difficult to make recommendations for improvements in the greenhouse gas emissions in relation to Humboldt State University, because so much of the infrastructure is controlled by the county, state, and even the nation and world. One way to reduce the amount of long distance truck travel would be to do more processing of compostable materials on campus or within a short distance of Arcata. In addition to this, the reuse of cardboard would greatly reduce the use of fuel, as it is the material that is being transported in the largest amount. Other than large scale changes in the products we consume, local processing is the most feasible way to reduce the greenhouse gases related to waste. In addition, the placement of a solid waste dump in our own community may make people less likely to throw away items that could be diverted.

3.2.4. Transportation

3.2.4.1. Campus Fleet

Background:

Humboldt state university owns 105 vehicles including trucks, buses, and passenger vehicles. In this Green House Gas Inventory, the campus vehicle use indicates vehicle usages neither off or on campus. The off-campus vehicles use for class activities, such as field trips, and maintenance vehicle uses for off campus facilities, which are specifically Trinidad marine lab. On-campus vehicles use for a small on-campus construction and maintenance, and campus safety for university police.

Methodology:

Carbon dioxide

The main idea of this Green House Gas Inventory is based on intergovernmental panel on climate change (IPCC). There are five steps for campus fleet GHG inventory.

Step 1: Estimating sectoral fuel consumption.

The purpose of the first step is to find out the amount of energy usage by campus vehicle uses. In order to estimate fuel consumption for all campus vehicle use, statewide voyager credit card data from HSU account payable office.

Statewide voyage credit card: All HSU campus vehicle fuels are paid through statewide voyager credit cards and the data contain all details: type and amount of fuel, location of fuel filled station, date, license plate number, and name of departments usage.

After summarizing the credit card data, we converted gallons of fuel to energy. According to the Bio energy Feedstock information network (BFIN), the energy factor is 120,000BTU from one gallon of gasoline, and 130,500BTU from one gallon of diesel

Step 2: Converting to a common energy unit (TJ).

As a second step of mythology, units are converted to appropriate units, TJ, in order to make more understandable and easier for readers. From the Step 1, the energy factor data were pulled from BFIN. The unit of energy factor is British thermal unit (BTU) per a gallon of fuel. In united state and other nation, BTU is common energy unit, but IPCC and other organizations do not prefer to use the energy unit. In United State, Joule tends to be often used, and IPCC is not the exception and use the energy unit. For the denominator, we decided to use gallon because BFIN used it as well as many other organization.

Step 3: Multiplying by carbon emission factors

For the third step, the goal is finding out how much carbon is emitted from overall energy. According to the IPCC, the emission factor of carbon is 18.1 (short tons of carbon /TJ) for gasoline and 20.2 (short tons of carbon/ TJ) for diesel. Before starting calculation of carbon emission, the units should be appropriate. The units of emission factor are short tons per terajoules (ton/TJ). In United State and other nations, the metric ton (tone) is more often used than short ton, and Environmental protection agency (EPA) uses metric ton for their official statement. For the denominator, we decided use terajoul like both IPCC and other organization use. After all unit conversions, carbon emission is calculated. The calculation is as simple as that emission factor multiply by energy use for campus vehicle. For a detail of calculation see the excel sheet.

Step 4: Correcting for carbon unoxidised

The purpose of step 4 is to find the amount of carbon emission from combustion of gasoline and diesel fuel. Unoxidised carbon is simply uncombustion fuel. The meaning of 0.99 fractions of carbon oxidized means that 99 percents of fuel will be completely combusted and complete combustion emit carbon dioxide and water. The least of one percent will be uncombusted substances, which are hydrocarbon, methane, or other green house gas. By the calculation, the fraction of carbon oxidized is multiplied by carbon emission factor. For the detail calculation see the excel sheet.

Step 5: Converting to CO2 emission

The last step for methodology is conversion of emission amount of carbon to carbon dioxide. Carbon emission factor data from the first step shows the amount of carbon emission from one terajoule of energy from combustion of gasoline or diesel fuel. However, officially carbon is part of green house gas, but it is not green house gas or global warming potential. The calculation is simple that carbon emission factor multiplying by ratio of molecular weight of carbon dioxide (44g) and carbon (12g). For the detail calculation, see the excel sheet for campus vehicle use.

CH₄ and N₂O

For the other green house gas emission calculation, the frame work of estimation was used from IPCC mythology, and the overall process of this same as CO₂ calculation method.

Step 1: Estimation fuel consumption per sector in energy units.

The purpose of this step is conversion of fuel consumption to energy unit of TJ. The most of processes of this step is already calculated from CO₂ estimation process.

Step 2: Estimation emission factor for each fuel per sector.

The second step is similar to previous one, but the different number of emission factor is used. According to IPCC, the emission factors are 5kg for CH₄, 0.6kg for N₂O, 600kg for NO_x, and 8000kg for CO per TJ of energy from fuel combustion. From these emission factors, the units need to be metric tons per TJ; the calculation is same as CO₂ emission calculation.

Step 3: Estimation the emission for each gas.

The purpose of this step is to find out amount of emission from each non CO₂ gases. The calculation is amount of energy from fuel multiply by each gas emission factors.

Global potential gas

Global warming potential (GWP) is the measure of how much a given mass of gases contribute to global warming effects. IPCC states that comparison of non carbon dioxide and global warming potential gases in projection of 100 years period. The results are: methane has 23 times; nitrous oxide has 296 times higher potential of global warming effect comparing to carbon dioxide. We utilize this result, and find out total amount of carbon equivalent amount of GWP emission.

Result and finding:

- **Emission from Off- campus vehicle use**
 - ✓ 55.77metric tons of carbon dioxide
 - ✓ 0.009metric tons of methane
 - ✓ 0.0005metric tons of nitrous oxide
 - ✓ Total GWP gas of 56.13 metric tons
- **Emission from on-campus vehicle use**
 - ✓ 9.16 metric tons of carbon dioxide
 - ✓ 0.0029 metric tons of methane
 - ✓ 0.00009 metric tons of nitrous oxide
 - ✓ Total GWP is 9.25 metric tons

Improvements:

By doing this GHG inventory, our group face some difficulty for collection of data. The fuel efficiency is the weakest part of this part of inventory. We have data for campus vehicle, which shows number of HSU's vehicle, manufacture year, vehicle type and so on. However, it is so difficult to finding out fuel efficiency for each vehicle. Moreover, the campus vehicle data is also not as appropriate as finding out specific vehicle model, and also some of campus cars are already customized for other usages, such as automated cart and garbage truck.

Reference sources

Global warming potential chart from *Energy information administration*
<http://www.eia.doe.gov/oiaf/1605/gwp.html>

Energy factor for fossil fuel from *Bioenergy feedstock information network*
http://bioenergy.ornl.gov/papers/misc/energy_conv.html

Green house inventory methodology from *Intergovernmental panel on climate change*
<http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1wb1.pdf>

Campus fleet data from Humboldt state university *accounting payable office (Student service building 311)*.

3.2.4.2. Faculty Air/ Vehicle Travel

Background

According to the HSU web site, there were 518 faculty members in Humboldt state university in 2006. Faculty members are including academicians, professors, and educators. Faculty travels refer to a travel that related to their jobs, and the all finances are paid by the university. Examples of faculty travels are academic conferences, and business meetings. For faculty travel, we categorize into two different methods, which are air fares and vehicles uses; either personal or rental.

Methodology:

Air fair

The idea and method for this inventory is based on Intergovernmental panel on climate change (IPCC).

Step 1: State assumption and collect data.

As the first step is all necessary data are collected and statement of assumption is determined in order to make calculation easier and appropriate.

Data:

A collection of air fare data is taken from the accounting payable office, where holds past 4 years of all faculties travel data.

Assumption:

✓ **Total distance assumption**

A first air fare data is taken from account payable office, where holds all faculty travel destinations, purposes, and expenses over the faculty travels. However, we do not have right to access to the information due to privacy reason; therefore, we can only gather information of faculties who have last name started A-D. The total number of faculty travels and distances are estimated from all travel record files we got. Between letters A through D, the folders are as thick as 28inches, and entire faculty travel folders' thickness are 92.5 inches. From these data, the total travel distance was multiply by approximately 3.3 (92.5/28inches).

✓ **Fuel efficiency of air plain**

In order to estimate amount of fuel consumption, the average fuel efficiency data is required. However, the average fuel efficiency of air plane is not easy to find.

According to international air transportation association (IATA), the average efficiency of A380 and B787 are 3 liters per 100passanger km (0.496 gallon/ 100 pass miles)

✓ **Type of air plane for international and domestic flights.**

Since there are more than one air plane type and size, the GHG emission rate is different. As a matter of this fact, we assume that there are three types of air planes: B737, DC-10, and B747, used by HSU faculty air fare travels.

- ✓ B737 is used for domestic flight, travel distance less than 1000miles, and has maximum passenger load of 110.
- ✓ DC-10 is used for a closer international flight, distance between 1001 and 5000 miles, and maximum passenger load of 380.
- ✓ B747 is used for farther international flight, distance between 5001 and farthest, and maximum passenger load of 467.

❖ **Assume that all air plane seats were occupied.**

Step 2: Estimation the fuel consumption for LTO cycles by Aircraft type.

The purpose of second step is estimation of fuel consumption from Landing/ taking-off cycle (LTO cycle). LTO is all activities by the airport and includes below the altitude of 3000 feet (1000m) take place, specifically, taxi-in and out, take-off, climb-out, and approach landing. According to IPCC, there are data, which shows amount of fuel used during LTO cycle for various air planes.

- ✓ B737 consumes 870kg of jet fuel per LTO (0.870tonne/LTO or 325.21gal/LTO).
- ✓ DC-10 consumes 2360kg of jet fuel per LTO (2.36tonne/LTO or 882.17gal/LTO).
- ✓ B747 consumes 3210kg of jet fuel per LTO (3.21tonne/LTO or 1199.90gal/LTO).

From this previous data, the amount of LTO jet fuel consumption should be divided by number of passengers in the air plane because there are many other passengers also boarding in the same air plane.

Step 3: estimation the fuel consumption for cruise activities by aircraft type.

The purpose of third step is simply determination of how much jet fuel is used for cruises during flight. Cruise defined as all activities that take place at altitudes above 3000 feet (1000m). No upper limit of altitude is given. Cruise, in the inventory methodology, includes climb to cruise altitude, cruise, and descent from cruise altitudes. The rate of jet fuel consumption rate is from assumption step 1, which assumption is Average fuel efficiency of air plane as 3 liters per 100 passenger km (1.27gal/ 100 pass miles). The calculation is simple as average fuel efficiency multiply by amount of air distance. However, the number, from previous calculation, is not actual amount of jet fuel consumption. The number should be divided by number of passengers in the air plane.

Step 4: Estimate the emission for each gas.

The purpose of final step is estimate amount of carbon dioxide and other global warming potential gases from both LTO cycle and cruising

LTO cycle:

In order to determine the global warming potential emission, the estimation is done by using the emission factor data from IPCC. By the calculation, the fraction of carbon oxidized is multiplied by carbon emission factor. For the detail calculation see the excel sheet. Each air plane has different emission factor; therefore, the calculation done by separately. The basic calculation is rate of emission factor multiply by number of flight.

Cruise:

IPCC also presents emission factor for cruise. The estimation is similar to previous LTO cycle calculation. The emission factor multiplies by amount of cruise distance. For cruise emission estimation, the emission factors are different between international flights and domestic; therefore, the calculation should be done by separately.

Vehicle

The vehicle uses for faculty travels are mainly rental cars. The methodology for this part, we used frame work from IPCC. This methodology is almost same as GHG inventory for campus vehicle use; therefore, for detail of calculation and estimation method, see the inventory methodology.

Assumption:

- ✓ All vehicles used in faculty travels are unleaded fuel based vehicle and normal passenger vehicle, which means not truck or other bigger cars because most of the rental vehicles are unleaded fuel base and mid size sedan.
- ✓ The data from accounting payable office is not complete form of information. Therefore, we done same estimation method in Air fare assumption.

Data:

- ✓ The faculty travel vehicle use data is taken from accounting payable office
- ✓ Average efficiency of passenger car data is taken from environmental protection agency (EPA).

Result and finding

- **Air fare emission**
 - ✓ 205.1tonne of carbon dioxide was emitted
 - ✓ 0.034tonne of methane was emitted
 - ✓ 0.006tonne of nitrous oxide was emitted
 - ✓ Total GWP is 207.66
- **Vehicle use**
 - ✓ 96.75tonne of carbon dioxide was emitted
 - ✓ 0.031tonne of methane was emitted
 - ✓ 0.0009tonne of nitrous oxide was emitted
 - ✓ Total GWP is 97.84

Improvements:

This part of inventory is mostly our assumption and estimation. The data collection is not completed. We could not collect some of faculty travel data because we are not allowed to look at some personal document on faculty travel document. We only have last named started A-D. If we could get entire data, this part of inventory became accurate.

Reference sources:

Green house gas inventory frame work from *Intergovernmental panel on climate change*

http://www.ipcc-nggip.iges.or.jp/public/gp/bgp/2_5_Aircraft.pdf

And <http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1wb1.pdf>

Vehicle Average fuel efficiency data from *Environmental protection agency*

<http://www.epa.gov/otaq/cert/mpg/fetrends/420r07008.pdf>

Energy factor data from *Bioenergy feedstock information network*

http://bioenergy.ornl.gov/papers/misc/energy_conv.html

Air plane fuel efficiency data from *the international air transportation association*

http://www.iata.org/whatwedo/environment/fuel_efficiency.htm

Global warming potential chart from *Energy information administration*

<http://www.eia.doe.gov/oiaf/1605/gwp.html>

3.2.4.3. Student and Faculty Commute

Background

When considering the sources of GHG emissions, transportation is a major emitter of gases such as carbon dioxide, VOC's, nitrous oxide, methane, carbon monoxide, and a few trail gases. In this section, GHG emissions associated with student and faculty commute to and from HSU during a school year of 2002 and 2006 are evaluated. Modes of transportation for commute include; driving alone, carpooling, motorcycle/ scooter, public transit, bicycle, skateboard/ rollerblade, and on foot. Among these, automobiles and public transit are the two largest sources of GHG emissions. The combustion of fuel sources such as gasoline and diesel gas generates carbon dioxide as a byproduct. Since internal combustion of automobile engines has a relatively low efficiency of around 30 %, the end product of fuel combustion is not limited to carbon dioxide. It generates methane, nitrous oxide, carbon monoxide, and VOC's in various amounts depending on vehicle emission control technologies. In this inventory, emissions of carbon dioxide, methane, and nitrous oxide are included since these are the three biggest GHG's emitted in this sector.

Data Collection

Data required to construct the GHG inventory included; 1) a survey or statistics of some sort about commute distance and modes of transportation for campus population, 2) total campus population including students, faculty, and staff in 2002 and 2006, 3) average number of school days in the years 2002 and 2006, 4) average fuel efficiencies of gasoline and diesel gas, 5)

energy content (MJ/gallon) of fuel gas, 6) emission factors for each GHG, 7) fraction of carbon oxidized, and 8) global warming potential for each GHG. All the data were collected through online resources made available at HSU webpage and a few authoritative sources (See sources below). The exact numbers for the faculty and staff populations both in 2002 and 2006 were available through Human Resources Department in HSU but could not be obtained since it required to fill out an official form for requesting such data, which I assumed would have taken some time to be processed.

Sources:

- 1). HSU Parking and Commuter Services. "Parking and Mobility Study—Humboldt State University". <http://studentaffairs.humboldt.edu/parking/>
- 2). HSU Analytic Studies. "Enrollment History—Humboldt State University". http://www.humboldt.edu/~anstud/reports/Overall_Stats.pdf
- 3). HSU Academic Calendar, 2006. <http://www.humboldt.edu/~aavp/acalendar.htm>
- 4). EPA—Average Fuel Efficiency. <http://www.epa.gov/qtad/cert/mpg/fetrends/420r07008.pdf>
- 5~7). IPCC Guidelines, Workbook. <http://www.ipcc-nggip.iges.or.jp/public/gl/invs5.htm>
- 8). The U.S. Inventory of Greenhouse Gas Emissions and Sinks—Reference Tables and Conversions. <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

Calculations

Major steps of calculations as well as assumptions made are summarized below. For more information, refer to Student_Faculty_Commute Excel spreadsheet where all the equations used are saved in corresponding cells.

- Estimate the percentages of car commute and public transit commute within campus populations in 2004. The percentages were estimated based on the figures found in the "Parking and Mobility Study" of 2004.
- Estimate the number of people who commute by car and public transit in the total populations in 2002 and 2006. This was estimated based on the percentages obtained in the previous step as well as the total populations on campus in 2002 and 2006 which was found in Analytic Studies webpage.
- Use the parameters including miles driven per day, fuel efficiencies, energy content of fuel, emission factors, the number of school days, and the fraction of carbon oxidized to calculate the amount of carbon dioxide emitted in tonnes (See Student_Faculty Commute Excel sheet for details).
- Use the parameters including total miles commuted per day, miles fuel efficiencies, energy content of fuel, emission factors, the number of school days per year, and global warming potential to calculate the amount of methane and nitrous oxide emitted in tonnes of carbon dioxide equivalence (See Student_Faculty Commute Excel sheet for details).

Assumptions:

1. In order to estimate any figures for the year 2002 and 2006, I assumed that the number of parking permit sold is positively correlated with the % of car commute and that % of public transit commute stays the same, considering the fact that % change in car commute leads to % change in walk/bicycle commute rather than %change in public transit commute for people who live relatively close to campus. (Walk and bicycle commute are the second largest mode of commute by HSU population in 2004). Therefore, there would be an under- or overestimate for the figures related to public transit commute.
2. In finding the % car commute and public transit commute in total campus population, I extrapolated the numbers obtained by the survey population of year 2004 into the total campus population, which would involve some uncertainties.
3. In finding the number of people for each category of commute distance in 2002 and 2006, I extrapolated the % of people in each commute distance in the survey population into the total population on campus.
4. Total population of faculty and staff in the years 2002 and 2006 are held constant as that of 2004 (i.e. 1278) due to the failure in obtaining the data in time for creating the inventory. Total population of students in 2002 and 2006 were available through HSU website.
5. The number of HSU commuter per public transit (bus) at a given instance was estimated based on a random observation at the library circle where the bus loads/unloads passengers. The uncertainty associated with the estimate can be very high.
6. Passenger-miles per gallon for public transit was estimated based on the assumption of the number of passengers on each ride.
7. I assumed that the mode of transportation for each commuter stays the same for the entire year. This of course would not be the case for many commuters on campus (e.g.number of commuters by car and bus may both increase on rainy days), and the uncertainty associated with it can be high.
8. The passenger mile/gallon for public transit is a pure estimate of the number of passengers at a given instant.

Key Results

GHG emissions associated with student and faculty commute on campus is 1,913 tonnes CO₂eq from automobiles and 26.1 tonnes CO₂eq from public transit in the year 2002, and 1,095 tonnes CO₂eq from automobile and 35 tonnes CO₂ eq from public transit in the year 2006. For both automobiles and public transit, more than 90% of the total emissions come from carbon dioxide. Methane and nitrous oxide play a small part, yet they can vary depending on the vehicles that have different emission control technologies.

Improvements

The calculation explained above is not the only way to find GHG emissions. In other words, if other parameters such as net calorific value (NCV) and density of fuels were used to calculate the total emissions instead of energy content, it could have given a different final value although any methods should give the same value theoretically. It is also possible to get more accurate results by getting the actual data for the ones that are based on assumptions. The total population of faculty and staff, for instance, could have been obtained from Human Resources Department on campus if we had more time.

4. Monitoring and Evaluation

Considering the nature of our project, there will not be any monitoring opportunities in our short time left at Humboldt State University. Keeping this in mind, we have considered the people we think could use the information in the future, how they could use it, and where it will be readily available for them.

Who could use it?

Future students doing greenhouse gas audits of the University could use our information, as well as the University and the city of Arcata.

How could they use it?

It could be used to compare years 2002 and 2006 to later years, to see trends in greenhouse gasses and determine whether the university is reducing its emissions. In addition, the excel template includes equations that make it possible to plug in new figures so that the audits in the future would be consistent with the one that we performed, making the analysis consistent.

Where will it be?

We plan on giving a hard copy and disk copy of our audit to TallChief Comet, the current Sustainability Coordinator. In addition, we will give a copy to the City of Arcata. In addition to this we are considering making our audit available online so that anyone can find it doing an internet search.

5. Conclusion

As the world heats up, universities around the country are making an effort to curb their contributions to the global warming problem facing our future. The first step to managing greenhouse gas emissions is identifying the emission sources. Many universities are creating greenhouse gas audits. As an environmentally conscious campus, HSU needs a consistent tool to measure its annual contribution of greenhouse gasses. This attached Excel worksheet is a tool that will allow HSU to monitor the effects of campus changes throughout the years and hopefully aid decision makers in reducing HSU's greenhouse gas footprint.

6. References

AB 32 factsheet

<http://www.law.stanford.edu/program/centers/enrlp/pdf/AB-32-fact-sheet.pdf>

AB32 Bill

http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=ab_32&sess=CUR&house=B&author=nunez

Atmospheric carbon dioxide record from Mauna Loa. CDIAC.

<http://cdiac.ornl.gov/trends/co2/sio-mlo.htm>

Becky Menten – Energy Program Specialist with the City Of Arcata provided data related to the city's water pumping activities. Becky Menten's work phone number is (707) 825-2168.

EIA U.S. Dept. of Energy: <http://eia.doe.gov>

EPA. http://www.epa.gov/nitrousoxide/images/n20_projectionschart.gif

EPA. <http://www.epa.gov/methane/scientific.html>

Global Warming Climate Change Greenhouse Effect

<http://www.global-greenhouse-warming.com>

Lui Ahmad – Operation Specialist with the Humboldt Bay Municipal Water District (HBMWD) provided data for the energy consumption and pumping activities of the HBMWD. Lui Ahmad's work phone number is (707) 822-2918.

Summary for Policy Makers. Contribution of Working Group III to the Fourth Assessment Report of the IPCC, 2007. IPCC. <http://www.greenfacts.org/en/climate-change-ar4/figtableboxes/figure-3-3a.htm>

United Nations Framework Convention on Climate Change (UNFCCC). Kyoto Protocol. http://unfccc.int/kyoto_protocol/background/items/3145.php

Appendices

HSU Energy Use (main campus + housing), 2006
 Data Source: HSU Plant Operations

Electricity

Month	Electricity Purchased from APS/PG&E (kWh)	Electricity Payment to APS for Generation Cost (\$)	Electricity Payment to PG&E for Transmission Cost (\$)	Electricity Purchased from Housing Cogeneration kWh	Electricity Payment for Housing CoGen Electricity (\$)	Total Electricity Generation by Housing and Campus Cogeneration Units (kWh)
January	698,712	\$54,474.46	\$40,962.78	82,252	\$10,275.84	249,661
February	1,085,672	\$97,029.23	\$55,716.27	54,478	\$8,346.28	no information available
March	1,142,293	\$97,479.89	\$55,213.23	52,116	\$7,756.11	255,329
April	1,096,602	\$74,346.46	\$49,918.41	26,660	\$3,424.79	461,500
May	1,046,411	\$64,006.56	\$50,290.67	20	\$0.00	258,876
June	753,396	\$71,540.92	\$39,262.21	29,799	\$5,193.97	305,758
July	608,941	\$52,133.95	\$44,290.01	14,981	\$2,140.16	368,730
August	568,822	\$51,149.47	\$42,708.61	12,492	\$1,914.77	534,823
September	710,227	\$105,786.28	\$44,751.81	17,518	\$2,309.87	769,692
October	665,591	\$59,052.39	\$34,521.30	18,563	\$2,789.13	863,352
November	733,187	\$57,004.86	\$35,024.21	27,436	\$3,015.17	381,636
December	1,104,295	\$119,498.97	\$39,469.58	42,379	\$3,503.39	468,945
Total	10,214,149					

new information in green

Natural Gas

Month	Total Natural Gas Purchased (therms)	Total Payments for Natural Gas (PG&E) (\$)	Natural Gas Used by Housing and Campus Cogeneration Units (therms)	Propane Purchased (gallons, stp)	Payment for Propane Purchase (\$)
January	119,357	\$111,463.01	26,316	0	\$0.00
February	125,630	\$114,952.00	27,841	0	\$0.00
March	142,229	\$123,826.50	27,683	0	\$0.00
April	137,296	\$109,666.78	58,338	0	\$0.00
May	64,097	information availat	30,202	0	\$0.00
June	92,030	\$73,949.25	37,065	0	\$0.00
July	76,592	\$52,426.71	40,273	822	\$1,222.16
August	99,302	\$73,675.20	54,425	0	\$0.00
September	122,056	\$93,116.19	80,414	0	\$0.00
October	135,141	\$92,130.72	70,905	0	\$0.00
November	132,040	\$97,083.22	36,827	0	\$0.00
December	126,893	\$105,388.94	32,148	585	\$958.40

Energy Tracking for WWTP

all shown
in blue are
associated

Account/Location	Description	kWh	Cost
Jacoby Creek #13	Water Tank	0	\$ 96.45
1840 Bayside rd.	Lift station	12302	\$ 1,744.00
Plunkett rd	Water tank	0	\$ 96.23
Panorama	Pump	55	\$ 150.73
Redwood Park Tank #	Water Tank	85580	\$ 12,039.32
California Ave tank #3	Water Tank	21001	\$ 2,850.77
Butchers slough	Pump	0	\$ 143.05
West end of 29th	Lift station	915	\$ 259.13
Felix ave& Martha Ct	Irrigation		0
Heindon and Janes	Pump	255417	\$ 33,121.93
Granite Ave	Water Tank	36105	\$ 4,811.38
Industrial Park	Lift station	20761	\$ 2,807.72
Diamond dr	Water Tank	3	\$ 97.02
alliance rd	Pump	7680	\$ 1,192.30
1400 LK wood	Lift station	183	\$ 123.41
Curtis ave	Booster	7758	\$ 1,259.23
E 16th st	Pump	117604	\$ 16,273.72
300 Bayside rd	Lift station	655	\$ 246.87
100 G st	Pump	16077	\$ 2,191.31
Old arcata rd	Lift station	1095	\$ 300.91
Anderson lane	Lift station	703	\$ 244.43
Virginia Way	Pump	0	\$ 143.75
Margaret lane	Pump	48178	\$ 6,284.25
Crestwood	Water Tank	12	\$ 98.42
Fickle Hill	Level Indicator	438	\$ 162.29
Jacoby Creek #11	Water Tank	2888	\$ 620.75
Baywood	Tank Sensor	63	\$ 106.16
Jacoby Creek	Pump	36303	\$ 5,793.42
Fairview drive	Booster	4382	\$ 688.53
S G St.	Treatment Plant	1055100	\$ 123,046.94
Samoa blvd.	Lift station	101920	\$ 13,369.38
	Sum		\$ 623467

Annual Breakdown (2006)

		percent of total	percent of total
Total electricity use, City of Arcata	2623090		
Treatment plant use	1055100	40%	\$326,471.36
Total WWTP electricity use	1217391	46%	\$123,046.94
Total water electricity	1833178	70%	\$145,526.40
			\$230,363.80

704 tons CO2 62 Goodyear Blimps



CA HUMBOLDT STATE UNIV INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER

869013045

CLOSING DATE

01-24-2006



CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION/LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008 <i>Wild life</i>	01-19 12:49 <i>1990 Ford Pickup</i>	IN	2782 CENTRAL AVE MCKINLEYVILLE CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700008	00941611	1	UNLD	8.42	21.57	1.54
700114 <i>Marine Lab</i>	01-18 16:40 <i>Gas</i>	CH	101 MAIN ST TRINIDAD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700114	2812378	8	UNLD	3.70	9.74	0.68
700129	12-28 04:38	SH	1401 G STREET ARCATA CA	0013284	8	UB57	13.01	31.75	2.38
700129	12-29 04:53	CH	1605 GIUNTOLI LN ARCATA CA	3508477	8	UNLD	11.20	27.10	2.05
700129	12-31 06:18	SH	1401 G STREET ARCATA CA	0020602	8	UB57	7.16	17.75	1.31
700129	01-02 09:30	IN	5000 WEST END ROAD ARCATA CA	00443662	1	UNLD	8.25	20.04	1.51
700129	01-04 06:37	CH	1605 GIUNTOLI LN ARCATA CA	3510806	8	UNLD	3.84	9.50	0.70
700129	01-05 06:46	SH	1401 G STREET ARCATA CA	0027565	8	UB57	3.34	8.36	0.61
700129	01-06 06:37	SH	1401 G STREET ARCATA CA	0029314	8	UNLD	4.98	12.75	0.91
700129	01-07 05:06	CH	1605 GIUNTOLI LN ARCATA CA	3511759	8	UNLD	3.08	7.90	0.56
700129	01-10 06:23	SH	1401 G STREET ARCATA CA	0035204	8	UB57	4.07	10.67	0.74
700129	01-12 11:00	CH	1605 GIUNTOLI LN ARCATA CA	3512903	8	UNLD	4.90	12.75	0.90
700129	01-16 07:49	SH	1401 G STREET ARCATA CA	0041004	8	UNLD	2.76	7.19	0.51
700129	01-17 05:49	SH	1605 GIUNTOLI LN ARCATA CA	3515322	8	UNLD	12.11	31.25	2.22
700129	01-19 02:38	SH	1401 G STREET ARCATA CA	0051763	8	UB57	2.76	7.19	0.51
700129	01-20 05:07	SH	1401 G STREET ARCATA CA	0057547	8	UB57	5.17	13.77	0.95
700129	01-23 05:29	SH	1401 G STREET ARCATA CA	0060368	8	UB57	3.21	8.55	0.59
700129		SH	1401 G STREET ARCATA CA	0068288	8	UB57	6.00	16.21	1.10
UPP			TOTAL FOR CARD 700129				95.84	242.73	17.55
700131	01-10 07:40	SS	4050 BROADWAY EUREKA CA	074041	8	UNLD	7.59	19.73	1.39
700131	01-13 17:09	SH	1401 G STREET ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700131	0044248	8	UB57	13.04	33.90	2.39
			GRAND TOTAL				20.63	53.63	3.78
							128.59	327.67	23.55

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=KEYED SALE WITH AUTHORIZATION 3=INTERNAL TRANSACTION 4=ELECTRONIC SALE WITHOUT AUTHORIZATION
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CA HUMBOLDT STATE UNIV
INVOICE REPORT



CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER 86901-3045

CLOSING DATE 02-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008	02-18 09:54	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00710518	1	UNLD	8.21	21.69	1.50
700008	02-18 16:59	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00819757	1	UNLD	7.26	19.16	1.33
WMLife			CA HUMBOLDT STATE UNIV				15.47	40.85	2.83
			TOTAL FOR CARD 700008						
700064	02-03 15:08	IN	5000 WEST END ROAD ARCATA CA	00104388	1	UNLD	11.00	29.36	2.01
			CA HUMBOLDT STATE UNIV				11.00	29.36	2.01
			TOTAL FOR CARD 700064						
700065	02-15 15:28	IN	5000 WEST END ROAD ARCATA CA	00818107	1	UNLD	23.08	60.93	4.22
			CA HUMBOLDT STATE UNIV				23.08	60.93	4.22
			TOTAL FOR CARD 700065						
700077	02-08 14:10	CH	101 MAIN ST TRINIDAD CA	2816572	8	UNLD	16.10	45.56	2.95
Marine Lab			CA HUMBOLDT STATE UNIV				16.10	45.56	2.95
			TOTAL FOR CARD 700077						
700085	02-13 15:19	IN	5000 WEST END ROAD ARCATA CA	00893329	1	UNLD	29.62	78.77	5.42
			CA HUMBOLDT STATE UNIV				29.62	78.77	5.42
			TOTAL FOR CARD 700085						
700090	02-04 15:58	IN	5000 WEST END ROAD ARCATA CA	00155085	1	DISL	20.42	60.04	4.96
Pool Vehicle			CA HUMBOLDT STATE UNIV				20.42	60.04	4.96
			TOTAL FOR CARD 700090						
700092	02-10 17:06	IN	5000 WEST END ROAD ARCATA CA	00823942	1	DISL	24.03	69.21	5.84
Pool Vehicle			CA HUMBOLDT STATE UNIV				24.03	69.21	5.84
			TOTAL FOR CARD 700092						
700114	02-08 14:05	CH	101 MAIN ST TRINIDAD CA	28165689	8	UNLD	4.00	11.33	0.73
Marine Lab			CA HUMBOLDT STATE UNIV				4.00	11.33	0.73
			TOTAL FOR CARD 700114						
700117	01-25 08:34	IN	5000 WEST END ROAD ARCATA CA	00191815	1	DISL	20.04	57.32	4.87
700117	02-15 18:23	IN	5000 WEST END ROAD ARCATA CA	00240789	1	DISL	23.35	67.25	5.67
700117	02-19 14:08	IN	576 T STREET EUREKA CA	00970437	1	DISL	35.86	102.19	8.71
700117	02-21 17:47	IN	5000 WEST END ROAD ARCATA CA	00162661	1	DISL	27.21	78.34	6.61
Pool Vehicle			CA HUMBOLDT STATE UNIV				106.46	305.10	25.86
			TOTAL FOR CARD 700117						
700120	02-01 17:56	IN	5000 WEST END ROAD ARCATA CA	00686909	1	DISL	29.24	85.94	7.11
700120	02-17 21:17	IN	576 T STREET EUREKA CA	00091785	1	DISL	17.56	50.03	4.27
700120	02-22 11:20	IN	5000 WEST END ROAD ARCATA CA	00192854	1	DISL	28.74	82.77	6.98
Pool Vehicle			CA HUMBOLDT STATE UNIV				75.54	218.74	18.36
			TOTAL FOR CARD 700120						
700121	02-19 16:10	IN	5000 WEST END ROAD ARCATA CA	00428780	1	DISL	28.60	82.34	6.95
Pool Vehicle			CA HUMBOLDT STATE UNIV				28.60	82.34	6.95
			TOTAL FOR CARD 700121						

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CLOSING DATE 02-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700126	01-28 20:05	IN	5000 WEST END ROAD ARCATA CA	00245706	1	UNLD	21.89	57.33	4.01
700126	02-08 17:03	IN	5000 WEST END ROAD ARCATA CA	000442657	1	UNLD	12.70	33.79	2.32
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700126				34.59	91.12	6.33
700128	02-05 14:11	IN	5000 WEST END ROAD ARCATA CA	00489533	1	DISL	20.45	60.13	4.97
700128	02-15 00:01	IN	5000 WEST END ROAD ARCATA CA	00686554	1	DISL	24.52	70.60	5.96
700128	02-18 18:00	SS	1579 S MAIN ST WILLITS CA	1800046	1	DISL	29.24	83.00	7.11
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700128				74.21	213.73	18.04
700129	01-27 22:52	IN	5000 WEST END ROAD ARCATA CA	00285240	1	UNLD	4.99	13.07	0.91
700129	01-28 21:36	IN	5000 WEST END ROAD ARCATA CA	00353840	1	UNLD	4.58	12.00	0.84
700129	01-30 06:32	SH	1401 G STREET ARCATA CA	0088500	8	UB57	6.23	16.82	1.14
700129	01-31 11:16	SH	1401 G STREET ARCATA CA	0092031	8	UB57	5.40	14.90	0.99
700129	02-03 23:54	IN	5000 WEST END ROAD ARCATA CA	00711952	1	UNLD	5.99	16.00	1.10
700129	02-05 22:13	SH	1401 G STREET ARCATA CA	0108811	8	UB57	9.83	27.51	1.80
700129	02-07 04:24	SH	1401 G STREET ARCATA CA	0111658	8	UB57	3.80	10.65	0.70
700129	02-09 16:59	CH	1605 GIUNTOLI LN ARCATA CA	3525467	8	UNLD	7.91	22.00	1.45
700129	02-11 06:57	SH	1401 G STREET ARCATA CA	0124263	8	UB57	6.98	19.42	1.27
700129	02-12 07:14	SH	1401 G STREET ARCATA CA	0128995	8	UB57	3.82	10.70	0.70
700129	02-13 08:10	SH	1401 G STREET ARCATA CA	0129569	8	UB57	4.53	12.70	0.83
700129	02-16 03:17	SH	1401 G STREET ARCATA CA	0139055	8	UNLD	5.72	16.02	1.05
700129	02-17 17:33	CH	1605 GIUNTOLI LN ARCATA CA	3528917	8	UNLD	5.75	16.00	1.05
700129	02-20 06:48	SH	1401 G STREET ARCATA CA	0151266	8	UB57	12.08	33.83	2.21
700129	02-20 15:34	SH	1401 G STREET ARCATA CA	0152983	8	UB57	2.65	7.42	0.48
700129	02-21 16:32	SH	1401 G STREET ARCATA CA	0155820	8	UB57	5.26	14.73	0.96
700129	02-23 05:43	SH	1401 G STREET ARCATA CA	0159996	8	UB57	5.86	16.42	1.07
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700129				101.33	280.19	18.55
			GRAND TOTAL				564.45	1,587.27	123.05



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ACCOUNT NUMBER 86901-3045

CLOSING DATE 03-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION/LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008	02-23 22:37	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00266144	1	UNLD	10.56	27.89	1.93
700008	03-07 19:18	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00597265	1	UNLD	9.13	24.30	1.67
700008	03-08 17:52	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00785879	1	UNLD	7.87	20.95	1.44
700008	03-10 15:46	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00395918	1	UNLD	8.75	23.29	1.60
700008	03-11 18:29	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00055208	1	UNLD	7.98	21.22	1.46
700008	03-16 15:58	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00137143	1	UNLD	7.81	21.18	1.43
Wildlife	Ford (1003) pickup		CA HUMBOLDT STATE UNIV				52.10	138.83	9.53
700089	03-04 17:57	IN	5000 WEST END ROAD ARCATA CA	00121522	1	DISL	30.48	89.00	7.41
Pool	Vendor bus		CA HUMBOLDT STATE UNIV				30.48	89.00	7.41
700090	02-27 14:14	IN	5000 WEST END ROAD ARCATA CA	00295714	1	DISL	16.64	48.10	4.04
700090	03-21 18:00	IN	5000 WEST END ROAD ARCATA CA	00435566	1	DISL	17.84	52.10	4.34
Pool	bus		CA HUMBOLDT STATE UNIV				34.48	100.20	8.38
700092	02-26 17:26	SH	1401 G STREET ARCATA CA	0170548	8	DISL	6.22	18.55	1.51
700092	02-26 17:29	SH	1401 G STREET ARCATA CA	0170571	8	DISL	25.11	74.80	6.10
Pool	bus		CA HUMBOLDT STATE UNIV				31.33	93.35	7.61
700117	03-03 07:52	SH	1401 G STREET ARCATA CA	0183400	8	DISL	14.84	44.21	3.61
700117	03-13 15:03	IN	5000 WEST END ROAD ARCATA CA	00053297	1	DISL	19.85	57.97	4.82
Pool	bus		CA HUMBOLDT STATE UNIV				34.69	102.18	8.43
700120	03-03 14:54	IN	5000 WEST END ROAD ARCATA CA	00898632	1	DISL	21.30	61.56	5.18
700120	03-17 14:14	IN	5000 WEST END ROAD ARCATA CA	00897556	1	DISL	30.70	89.64	7.46
Pool	bus		CA HUMBOLDT STATE UNIV				52.00	151.20	12.64
700121	03-02 13:12	SH	985 HARVARD ST ROSEBURG OR	0719922	8	DISL	28.85	75.00	7.01
700121	03-02 13:14	SH	985 HARVARD ST ROSEBURG OR	0719948	8	DISL	8.27	21.50	2.01
700121	03-02 15:54	PL	4220 BROOKLAKE RD BROOKS OR	00459402	8	DISL	20.60	54.00	5.01
700121	03-04 15:42	CH	650 REDWOOD HWY GRANTS PASS OR	8138223	1	DISL	22.11	61.00	5.37
700121	03-04 16:58	PI	800 JOHN LONG RD OAKLAND OR	00475450	8	DISL	34.20	93.25	8.31
700121	03-09 14:03	IN	2442 IMOLA AVE. NAPA CA	00031627	1	DISL	45.23	133.41	10.99
700121	03-12 11:14	SS	3145 S BASCOM AVE CAMPBELL CA	111436	8	DISL	17.12	47.92	4.16
700121	03-12 22:21	IN	5000 WEST END ROAD ARCATA CA	00215658	1	DISL	45.95	134.13	11.17
Pool	bus		CA HUMBOLDT STATE UNIV				222.33	620.21	54.03
700126	02-24 17:43	SH	5060 REDWOOD DR ROHNERT PARK CA	0495028	8	UNLD	23.63	54.10	4.32
700126	02-25 21:16	SH	1401 G STREET ARCATA CA	0168427	8	UB57	18.25	51.09	3.84
700126	03-03 11:44	SS	112 SO REDWOOD HWY CAVE JUNCTION OR	1144403	8	UNLD	13.77	33.04	2.52
700126	03-05 15:47	SS	1955 NE SIXTH ST GRANTS PASS OR	154746	8	UNLD	21.86	52.44	4.00
700126	03-05 19:53	SS	724 G STREET ARCATA CA	195311	8	UNLD	9.55	26.53	1.75
700126	03-10 18:58	CH	505 4TH STREET WILLIAMS CA	9533112	8	UNLD	17.01	45.92	3.11
700126	03-14 15:35	CH	505 4TH STREET WILLIAMS CA	9534356	8	UNLD	22.39	60.44	4.10
700126	03-16 02:24	SS	4050 BROADWAY EUREKA CA	022445	8	UNLD	24.70	71.60	4.52
Pool	GM 15 Pass Van								

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CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700128	02-23 17:36	IN	CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700128	00934589	1	DISL	151.16	395.16	27.66
Pool	bus		5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700128				41.85	120.51	10.17
700129	02-25 06:57	SH	1401 G STREET ARCATA CA	0166157	8	UB57	10.84	30.36	1.98
700129	02-26 06:59	SH	1401 G STREET ARCATA CA	0168633	8	UB57	5.59	15.66	1.02
700129	02-27 18:53	SH	1401 G STREET ARCATA CA	0173237	8	UB57	3.76	10.54	0.69
700129	02-28 02:24	SH	1401 G STREET ARCATA CA	0173831	8	UB57	2.99	8.38	0.55
700129	03-01 06:49	SH	1401 G STREET ARCATA CA	0176743	8	UB57	4.22	11.75	0.77
700129	03-05 01:05	SH	1401 G STREET ARCATA CA	0189449	8	UB57	5.01	13.93	0.92
700129	03-06 06:13	SH	1401 G STREET ARCATA CA	0191809	8	UB57	4.24	11.79	0.78
700129	03-07 06:23	SH	1401 G STREET ARCATA CA	0194761	8	UB57	6.19	17.22	1.13
700129	03-08 06:31	SH	1401 G STREET ARCATA CA	0198010	8	UB57	3.85	10.72	0.70
700129	03-09 02:28	CH	1605 GIUNTOLI LN ARCATA CA	3536739	8	UNLD	5.34	14.86	0.98
700129	03-11 06:44	SH	1401 G STREET ARCATA CA	0208249	8	UB57	8.07	22.43	1.48
700129	03-12 08:55	SH	1401 G STREET ARCATA CA	0210773	8	UB57	3.67	10.22	0.67
700129	03-13 04:19	SH	1401 G STREET ARCATA CA	0212506	8	UB57	3.14	8.74	0.57
700129	03-15 18:25	SH	1401 G STREET ARCATA CA	0218123	8	UB57	5.72	16.60	1.05
700129	03-17 03:23	IN	576 T STREET EUREKA CA	00818030	1	UNLD	3.97	10.80	0.73
700129	03-17 18:24	SH	1401 G STREET ARCATA CA	0222869	8	UB57	3.44	10.00	0.63
700129	03-18 13:47	SH	1401 G STREET ARCATA CA	0224584	8	UB57	4.14	12.01	0.76
700129	03-19 13:27	SH	1401 G STREET ARCATA CA	0226613	8	UB57	3.45	10.00	0.63
700129	03-20 18:42	SH	1401 G STREET ARCATA CA	0230185	8	UB57	4.37	12.50	0.80
700129	03-21 23:47	IN	576 T STREET EUREKA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700129	00932531	1	UNLD	4.46	12.31	0.82
UPD	Govern		GRAND TOTAL				96.46	270.82	17.66
							746.88	2,081.46	163.52

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CA HUMBOLDT STATE UNIV
INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER 86901-3045

CLOSING DATE 04-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION/LOCATION/DESCRIPTION	TRANSID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008	03-27 11:54	SS	1021 MURRAY RD MCKINLEYVILLE CA	115418	8	UNLD	9.29	26.94	1.70
700008	03-27 16:46	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00177497	1	UNLD	6.79	19.03	1.24
700008	03-29 18:24	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00478335	1	UNLD	7.43	20.97	1.36
700008	03-31 19:10	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00801982	1	UNLD	8.32	23.73	1.52
700008	04-01 18:51	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00447815	1	UNLD	8.26	23.56	1.51
700008	04-04 17:31	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00543651	1	UNLD	8.14	23.44	1.49
700008	04-09 19:09	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00747186	1	UNLD	7.93	23.15	1.45
Wild life	Ford (1992) Pickup		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700008				56.76	160.82	10.27
700022	04-19 18:27	IN	130 CREEKSIDE DR CANYONVILLE OR	00981182	1	DISL	5.71	16.67	1.39
Roving Crew	Ford (1997) SUV		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700022				5.71	16.67	1.39
700064	03-27 10:43	IN	5000 WEST END ROAD ARCATA CA	00621390	1	UNLD	14.33	40.11	2.62
700064	03-30 12:37	CH	650 REDWOOD HWY GRANTS PASS OR	8150880	8	UNLD	15.00	39.01	2.75
700064	03-30 15:47	CH	61430 HWY 140 BLY OR	8124742	1	UNLD	12.83	34.00	2.35
700064	03-31 13:45	EZ	22276 FIELDS DR FIELDS OR	2376332	6	UNLD	21.00	60.00	3.12
700064	04-01 14:16	CH	715 NORTH 4TH STREET LAKEVIEW OR	7643149	8	UNLD	17.05	45.00	3.12
700064	04-01 18:45	CH	650 REDWOOD HWY GRANTS PASS OR	8152093	8	UNLD	13.94	36.25	2.55
700064	04-11 15:57	IN	5000 WEST END ROAD ARCATA CA	00163667	1	UNLD	14.31	41.79	2.62
700064	04-23 11:42	CH	315 HWY 101 S CRESCENT CITY CA	5233554	8	UNLD	13.92	45.50	2.55
Geo	Ford Crew Cab 4X4 (1997)		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700064				122.38	341.66	18.56
700065	03-29 13:42	IN	5000 WEST END ROAD ARCATA CA	00432331	1	UNLD	7.00	19.76	1.28
700065	03-30 12:34	CH	650 REDWOOD HWY GRANTS PASS OR	8150878	8	UNLD	16.35	42.50	2.99
700065	03-30 16:43	CH	715 NORTH 4TH STREET LAKEVIEW OR	7642762	8	UNLD	16.29	43.01	2.98
700065	03-31 13:46	EZ	22276 FIELDS DR FIELDS OR	2376331	6	UNLD	17.50	50.00	3.26
700065	04-01 14:15	CH	715 NORTH 4TH STREET LAKEVIEW OR	7643148	8	UNLD	17.84	47.09	3.26
700065	04-01 18:44	CH	650 REDWOOD HWY GRANTS PASS OR	8152092	8	UNLD	14.86	38.64	2.72
700065	04-17 15:27	IN	5000 WEST END ROAD ARCATA CA	00454124	1	UNLD	16.13	48.70	2.95
Geo	Chev (2001) Suburban 4X4		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700065				105.97	289.20	16.18
700077	04-07 09:01	CH	101 MAIN ST TRINIDAD CA	2828426	8	UNLD	24.76	75.00	4.53
Marie Lab			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700077				24.76	75.00	4.53
700089	04-15 08:27	IN	5000 WEST END ROAD ARCATA CA	00517141	1	DISL	19.49	58.87	4.74
Pool	Bus		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700089				19.49	58.87	4.74
700090	03-23 17:11	IN	5000 WEST END ROAD ARCATA CA	00281102	1	DISL	13.44	39.26	3.27
700090	03-23 17:44	IN	5000 WEST END ROAD ARCATA CA	00590187	1	DISL	1.90	5.55	0.46
700090	04-08 17:07	IN	5000 WEST END ROAD ARCATA CA	00648702	1	DISL	22.17	66.50	5.99
Pool	Bus		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700090				37.51	111.31	9.12
700092	04-19 17:12	IN	5000 WEST END ROAD ARCATA CA	00844231	1	DISL	28.47	88.54	6.92
700092	04-22 00:21	PI	30035 COUNTY RD 8 DUNNIGAN CA	00941732	1	DISL	23.20	72.04	5.64
700092	04-23 14:50	SH	1579 S MAIN STREET WILLITS CA	0103978	1	DISL	29.40	97.00	7.14
Pool	Bus		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700092				81.07	257.58	19.70

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CA HUMBOLDT STATE UNIV
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CA HUMBOLDT STATE UNIV
INVOICE REPORT

ACCOUNT NUMBER

86901-3045

CLOSING DATE

04-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION/LOCATION/DESCRIPTION	TRANSID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700114	04-07 08:54	CH	101 MAIN ST TRINIDAD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700114	2828424	8	UNLD	81.07	257.58	19.70
700117	03-25 14:25	IN	5000 WEST END ROAD ARCATA CA	00261967	1	DISL	18.62	54.38	4.52
700117	04-04 17:17	IN	5000 WEST END ROAD ARCATA CA	00844119	1	DISL	29.71	88.51	7.22
700117	04-14 12:38	IN	5000 WEST END ROAD ARCATA CA	00671901	1	DISL	19.79	59.76	4.81
700117	04-16 13:35	SH	1579 S MAIN STREET WILLITS CA	0089581	1	DISL	39.04	101.07	8.03
700117	04-17 18:28	IN	5000 WEST END ROAD ARCATA CA	00375017	1	DISL	25.01	76.26	6.08
700117	04-19 15:26	IN	5000 WEST END ROAD ARCATA CA	00641513	1	DISL	16.66	51.30	4.05
700120	04-09 18:12	IN	5000 WEST END ROAD ARCATA CA	00776649	1	DISL	21.64	64.90	5.26
700120	04-17 20:35	IN	5000 WEST END ROAD ARCATA CA	00767914	1	DISL	23.49	71.65	5.71
700120	04-20 15:24	IN	5000 WEST END ROAD ARCATA CA	00862046	1	DISL	21.48	66.81	5.22
700121	03-31 07:13	SH	2495 ASHLAND ST ASHLAND OR	0654277	8	UNLD	25.00	75.00	4.58
700121	04-01 18:05	IN	5000 WEST END ROAD ARCATA CA	00658096	1	UNLD	17.97	53.90	3.29
700121	04-03 14:28	IN	5000 WEST END ROAD ARCATA CA	00866132	1	DISL	21.64	64.47	5.26
700121	04-08 17:41	IN	5000 WEST END ROAD ARCATA CA	00184491	1	DISL	16.29	48.53	3.96
700121	04-19 11:00	IN	5000 WEST END ROAD ARCATA CA	00505718	1	DISL	28.12	84.36	6.83
700121	04-19 11:00	IN	5000 WEST END ROAD ARCATA CA	00859411	1	DISL	26.69	82.18	6.49
700126	04-09 16:55	CH	1605 GIUNTOLO LN ARCATA CA	3549951	8	UNLD	19.44	58.31	3.56
700126	04-22 17:43	CH	44801 HWY 101 LATONVILLE CA	3713274	8	UNLD	18.52	59.64	3.39
700128	04-05 17:08	IN	5000 WEST END ROAD ARCATA CA	00920949	1	DISL	30.68	91.40	7.46
700128	04-16 22:09	CH	16258 HI WAY 101 SOUTH HARBOR OR	6629600	8	DISL	26.60	75.00	6.46
700128	04-17 19:43	CH	2500 HIGHWAY 66 ASHLAND OR	0764735	8	DISL	26.05	75.00	6.33
700128	04-17 19:46	CH	2500 HIGHWAY 66 ASHLAND OR	0764737	8	DISL	8.26	23.81	2.01
700128	04-17 19:52	CH	2500 HIGHWAY 66 ASHLAND OR	0764740	1	UNLD	19.75	54.50	3.61
700128	04-18 10:13	CH	2500 HIGHWAY 66 ASHLAND OR	0764949	1	UNLD	22.50	63.00	4.12
700129	04-08 02:38	SH	1401 G STREET ARCATA CA	0239491	8	UB57	6.78	19.38	1.24
700129	03-26 07:02	SH	1401 G STREET ARCATA CA	0245530	8	UB57	9.31	26.63	1.70
700129	03-30 02:20	SH	1401 G STREET ARCATA CA	0257162	8	UB57	5.22	15.14	0.96
700129	04-01 15:23	CH	1605 GIUNTOLO LN ARCATA CA	3546668	8	UNLD	6.85	20.00	1.25
700129	04-02 05:56	SH	1401 G STREET ARCATA CA	0266684	8	UB57	3.98	11.76	0.73
700129	04-03 08:30	SH	1401 G STREET ARCATA CA	0269365	8	UB57	7.18	21.23	1.31
700129	04-03 18:44	SH	1401 G STREET ARCATA CA	0271619	8	UB57	1.71	5.06	0.31
700129	04-08 02:38	SH	1401 G STREET ARCATA CA	0285502	8	UB57	6.02	18.07	1.10
			TOTAL FOR CARD 700128				133.84	382.71	29.99
			TOTAL FOR CARD 700125				37.96	117.95	6.95
			TOTAL FOR CARD 700121				135.71	408.44	30.41
			TOTAL FOR CARD 700120				66.61	203.36	16.19
			TOTAL FOR CARD 700117				142.83	431.28	34.71
			TOTAL FOR CARD 700114				24.76	75.00	4.53

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PAGE 2 OF 3

CA HUMBOLDT STATE UNIV



CA HUMBOLDT STATE UNIV
INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER 869013045

CLOSING DATE 04-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION/LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700129	04-09 08:14	SH	1401 G STREET ARCATA CA	0288332	8	UB57	4.32	12.96	0.79
700129	04-10 06:05	SH	1401 G STREET ARCATA CA	0290982	8	UB57	4.61	13.84	0.84
700129	04-11 06:08	IN	576 T STREET EUREKA CA	00022822	1	UNLD	4.29	12.55	0.79
700129	04-12 00:59	CH	1605 GIUNTOLO LN ARCATA CA	3550856	8	UNLD	5.47	16.63	1.00
700129	04-14 06:42	SH	1401 G STREET ARCATA CA	0304113	8	UB57	6.25	19.39	1.14
700129	04-15 12:35	SH	1401 G STREET ARCATA CA	0308387	8	UB57	7.72	23.94	1.41
700129	04-16 06:56	SH	1401 G STREET ARCATA CA	0310474	8	UB57	6.12	18.99	1.12
700129	04-17 06:36	SH	1401 G STREET ARCATA CA	0312892	8	UB57	4.95	15.36	0.91
700129	04-18 13:25	SH	1401 G STREET ARCATA CA	0317939	8	UB57	7.30	23.37	1.34
700129	04-19 11:08	SH	1401 G STREET ARCATA CA	0320069	8	UB57	4.46	14.56	0.82
700129	04-20 22:39	IN	5000 WEST END ROAD ARCATA CA	00137007	1	UNLD	5.83	18.68	1.07
700129	04-23 08:34	SH	1401 G STREET ARCATA CA	0332247	8	UB57	5.79	19.11	1.06
VPP	<i>Crown (2013) Victoria</i>		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700129				114.16	346.65	20.89
700131	04-14 14:49	CH	781 S MAIN ST WILLITS CA	7157987	8	UNLD	13.44	40.04	2.46
700131	04-16 13:28	CH	781 S MAIN ST WILLITS CA	7158606	8	UNLD	13.02	38.81	2.38
700131	04-17 08:28	SH	1401 G STREET ARCATA CA	0313007	8	UB57	11.99	37.18	2.19
700131	04-21 16:32	SS	1 SUTTER ST RED BLUFF CA	163225	8	UNLD	16.44	50.96	3.01
700131	04-22 17:36	CH	39108 HIGHWAY 299 WILLOW CREEK CA	5419889	8	UNLD	12.96	43.42	2.37
Pool	<i>chev (2015) DV FX4</i>		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700131				67.85	210.41	12.41
			GRAND TOTAL				1,176.77	3,487.41	240.57

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CA HUMBOLDT STATE UNIV INVOICE REPORT



MYACOR
HUMBOLDT STATE UNIV
GAIL FINNEY
JARP ST ST
TA CA 95521-8222

ACCOUNT NUMBER **36901-3045**

CLOSING DATE **05-24-2006**

ORD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION/LOCATION/DESCRIPTION	TRANSID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008	04-23 18:29	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00972375	1	UNLD	8.33	26.90	1.52
700008	04-26 16:22	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00412826	1	UNLD	8.13	26.28	1.49
700008	05-07 14:53	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00004228	1	UNLD	7.06	24.17	1.29
700008	05-12 13:30	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00913763	1	UNLD	8.04	27.57	1.47
700008	05-15 12:17	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00657389	1	UNLD	7.63	26.35	1.40
700008	05-18 15:26	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00255947	1	UNLD	7.37	25.42	1.35
			CA HUMBOLDT STATE UNIV				46.56	156.69	8.52
			TOTAL FOR CARD 700008						
700022	04-30 14:36	CH	505 4TH STREET WILLIAMS CA	9551024	8	DISL	22.73	75.00	5.52
			CA HUMBOLDT STATE UNIV				22.73	75.00	5.52
			TOTAL FOR CARD 700022						
700064	04-26 14:02	IN	5000 WEST END ROAD ARCATA CA	00371024	1	UNLD	9.03	29.17	1.65
700064	04-30 11:40	CH	781 S MAIN ST WILLITS CA	7163597	8	UNLD	18.74	61.09	3.43
700064	05-05 10:32	IN	5000 WEST END ROAD ARCATA CA	00658619	1	UNLD	13.42	45.91	2.46
700064	05-15 13:32	CH	1605 GIUNTOLI LN ARCATA CA	3565776	1	STAX	1.00	3.32	0.00
700064	05-15 14:16	IN	5000 WEST END ROAD ARCATA CA	00607795	1	UNLD	14.31	49.36	2.62
700064	05-17 13:32	SS	7007 SHINGLEN LN HWY 44 SHINGLETOWN CA	133255	8	UNLD	19.80	67.29	3.62
700064	05-17 21:18	PI	465 PILOT RD FERNLEY NV	00220448	1	SUPR	16.40	54.30	3.00
700064	05-18 10:52	CH	20 NORTH MAIN ST EUREKA NV	9918130	8	UNLD	16.72	58.67	3.06
700064	05-20 10:38	CH	20 NORTH MAIN ST EUREKA NV	9918326	8	UNLD	12.82	45.01	2.35
700064	05-20 13:00	SI	1790 IDAHO ST ELKO NV	00010104	8	UNLD	5.80	17.04	1.06
700064	05-20 17:09	CH	20 NORTH MAIN ST EUREKA NV	9918363	8	UNLD	11.11	39.00	2.03
700064	05-23 11:59	SH	1100 AUTUMN ST ELY NV	0222976	8	UNLD	23.75	74.80	4.35
			CA HUMBOLDT STATE UNIV				181.90	590.75	29.83
			TOTAL FOR CARD 700064						
700065	04-30 11:40	CH	781 S MAIN ST WILLITS CA	7163595	8	UNLD	23.01	75.00	4.21
700065	05-03 11:21	IN	5000 WEST END ROAD ARCATA CA	00337569	1	UNLD	13.25	44.39	2.42
700065	05-17 13:31	SS	7007 SHINGLEN LN HWY 44 SHINGLETOWN CA	133115	8	UNLD	22.29	75.78	4.08
700065	05-17 21:09	PI	465 PILOT RD FERNLEY NV	00220398	8	SUPR	13.60	45.10	2.49
700065	05-17 21:15	PI	465 PILOT RD FERNLEY NV	00220437	1	DISL	19.10	59.15	4.64
700065	05-18 11:25	CH	20 NORTH MAIN ST EUREKA NV	9918136	8	UNLD	17.67	62.03	3.23
700065	05-20 12:21	CH	1490 EAST AULTMAN STREET ELY NV	6109070	8	UNL+	0.90	2.91	0.16
700065	05-20 16:05	SH	1100 AUTUMN ST ELY NV	0218792	8	UNL+	12.02	38.71	2.20
			CA HUMBOLDT STATE UNIV				121.84	403.07	23.43
			TOTAL FOR CARD 700065						
700077	04-27 09:14	CH	101 MAIN ST TRINIDAD CA	2832823	8	UNLD	22.13	75.00	4.05
700077	05-12 09:37	CH	101 MAIN ST TRINIDAD CA	2836035	8	UNLD	21.25	75.00	3.89
			CA HUMBOLDT STATE UNIV				43.38	150.00	7.94
			TOTAL FOR CARD 700077						
700085	05-17 13:32	SS	7007 SHINGLEN LN HWY 44 SHINGLETOWN CA	133218	8	UNLD	24.57	83.53	4.50
700085	05-17 21:11	PI	465 PILOT RD FERNLEY NV	00220412	8	SUPR	12.40	41.22	2.27
700085	05-17 21:13	PI	465 PILOT RD FERNLEY NV	00220424	8	SUPR	6.80	22.49	1.24
700085	05-18 10:47	CH	20 NORTH MAIN ST EUREKA NV	9918127	8	UNLD	15.57	54.66	2.85
700085	05-18 11:03	CH	20 NORTH MAIN ST EUREKA NV	9918133	8	DISL	22.39	75.00	5.44
700085	05-20 10:37	CH	20 NORTH MAIN ST EUREKA NV	9918325	8	DISL	20.00	66.98	4.86
700085	05-20 13:57	SI	1790 IDAHO ST ELKO NV	00184682	1	DISL	9.00	29.59	2.19

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			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700085				110.73	373.47	23.35	350.12
700089	04-26 16:39	IN	5000 WEST END ROAD ARCATA CA	00417613	1	DISL	19.01	60.08	4.62	55.46
700089	04-29 17:49	IN	5000 WEST END ROAD ARCATA CA	00193557	1	DISL	19.99	63.75	4.86	58.89
			TOTAL FOR CARD 700089				39.00	123.83	9.48	114.35
700090	04-29 07:08	IN	5000 WEST END ROAD ARCATA CA	00450940	1	DISL	12.92	41.23	3.14	38.09
700090	04-29 18:14	SS	1023 CHETCO AVE BROOKINGS OR	181409	8	DISL	20.17	62.52	4.90	57.62
700090	04-29 22:25	IN	5000 WEST END ROAD ARCATA CA	00762791	1	DISL	12.90	41.14	3.18	37.96
700090	05-04 07:52	IN	5000 WEST END ROAD ARCATA CA	00255747	1	DISL	22.58	74.52	5.49	69.03
			TOTAL FOR CARD 700090				68.57	219.41	16.66	202.75
700092	04-26 17:12	IN	5000 WEST END ROAD ARCATA CA	00449608	1	DISL	33.72	106.55	8.19	98.36
			TOTAL FOR CARD 700092				33.72	106.55	8.19	98.36
700117	04-28 18:07	IN	5000 WEST END ROAD ARCATA CA	00944459	1	DISL	24.16	77.05	5.87	71.18
			TOTAL FOR CARD 700117				24.16	77.05	5.87	71.18
700120	04-23 16:33	IN	5000 WEST END ROAD ARCATA CA	00588910	1	DISL	20.86	65.90	5.07	60.83
700120	04-29 15:19	IN	5000 WEST END ROAD ARCATA CA	00817815	1	DISL	10.67	34.03	2.59	31.44
			TOTAL FOR CARD 700120				31.53	99.93	7.66	92.27
700121	04-23 18:17	IN	5000 WEST END ROAD ARCATA CA	00608908	1	DISL	31.51	99.57	7.66	91.91
700121	04-29 14:16	IN	5000 WEST END ROAD ARCATA CA	00105291	1	DISL	20.54	65.53	4.99	60.54
			TOTAL FOR CARD 700121				52.05	165.10	12.65	152.45
700126	04-26 09:53	IN	5000 WEST END ROAD ARCATA CA	00203023	1	UNLD	9.36	30.23	1.71	28.52
700126	04-30 18:31	IN	5000 WEST END ROAD ARCATA CA	00889514	1	UNLD	19.57	64.00	3.58	60.42
			TOTAL FOR CARD 700126				28.93	94.23	5.29	88.94
700127	04-25 14:54	IN	5000 WEST END ROAD ARCATA CA	000893951	1	UNLD	32.89	106.23	6.02	100.21
700127	04-30 11:40	CH	781 S MAIN ST WILLITS CA	7163599	1	UNLD	21.71	70.78	3.97	66.81
700127	05-10 15:42	IN	576 T STREET EUREKA CA	00416763	8	UNLD	15.13	51.73	2.77	48.96
700127	05-17 13:36	SS	7007 SHINGLEN LN HWY 44 SHINGLETOWN CA	133645	8	UNLD	16.12	54.79	2.95	51.84
700127	05-17 13:56	SS	7007 SHINGLEN LN HWY 44 SHINGLETOWN CA	135648	8	DISL	23.85	81.06	5.80	75.26
700127	05-17 21:10	PI	465 PILOT RD FERNLEY NV	00220405	8	SUPR	14.00	46.33	2.56	43.77
700127	05-18 10:51	CH	20 NORTH MAIN ST EUREKA NV	9918128	8	UNLD	16.61	58.28	3.04	55.24
700127	05-18 11:16	CH	CA HUMBOLDT STATE UNIV	9918135	8	UNLD	21.37	75.00	3.91	71.09
			TOTAL FOR CARD 700127				161.68	544.20	31.02	513.18
700128	04-24 17:13	IN	5000 WEST END ROAD ARCATA CA	00082601	1	DISL	19.05	60.18	4.63	55.55
700128	04-29 07:40	IN	5000 WEST END ROAD ARCATA CA	00103989	1	DISL	9.37	29.91	2.28	27.63
700128	04-30 13:10	SS	816 MAIN ST WEAVERVILLE CA	131034	8	DISL	32.05	105.72	7.79	97.93
			TOTAL FOR CARD 700128				60.47	195.81	14.70	181.11

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=...
 5=KEYED SALE WITHOUT AUTHORIZATION 6=INTE...
 D=SALE WITH AUTHORIZATION 4=ELECTRONIC SALE WITHOUT AUTHORIZATION
 TRANS ACTION 9=ELECTRONIC SALE AT PUMP 9=MANUAL SALE
 PAGE 2 OF 3

CA HUMBOLDT STATE UNIV INVOICE REPORT

HUMBOLDT STATE UNIV
N GAIL FINNEY
HARPST ST
ATA CA 95521-8222

ACCOUNT NUMBER 86901-3045

CLOSING DATE 05-24-2006

EMPTED CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANSID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700128				60.47	195.81	14.70
700129	04-25 17:12	SH	1401 G STREET ARCATA CA	0339887	8	UB57	6.06	20.00	1.11
700129	04-28 09:15	SH	1401 G STREET ARCATA CA	0348052	8	UB57	5.02	17.07	0.92
700129	04-29 18:52	SH	1401 G STREET ARCATA CA	0353227	8	UB57	5.96	20.26	1.09
700129	05-01 17:17	SH	1401 G STREET ARCATA CA	0358788	8	UB57	5.79	19.71	1.06
700129	05-02 18:58	SH	1401 G STREET ARCATA CA	0362285	8	UB57	4.54	15.73	0.83
700129	05-03 18:46	SH	1401 G STREET ARCATA CA	0365452	8	UB57	2.65	9.28	0.48
700129	05-05 02:09	SH	1401 G STREET ARCATA CA	0369132	8	UB57	5.76	20.17	1.05
700129	05-05 17:56	SH	1401 G STREET ARCATA CA	0371666	8	UB57	4.23	14.83	0.77
700129	05-07 06:36	SH	1401 G STREET ARCATA CA	0375311	8	UB57	9.09	31.82	1.66
700129	05-09 08:00	SH	1401 G STREET ARCATA CA	0381236	8	UB57	6.39	22.37	1.17
700129	05-12 02:35	SH	1401 G STREET ARCATA CA	0390591	8	UNLD	8.66	30.30	1.58
700129	05-12 08:08	CH	44801 HWY 101 LAYTONVILLE CA	3718638	8	UNLD	7.20	24.62	1.32
700129	05-12 15:53	NI	1250 S MAIN ST WILLITS CA	155316	8	UNLD	13.81	45.99	2.53
700129	05-13 13:58	SH	1401 G STREET ARCATA CA	0395830	8	UB57	11.50	40.83	2.10
700129	05-15 02:50	SH	1401 G STREET ARCATA CA	0400861	8	UB57	6.37	22.31	1.17
700129	05-15 17:44	SH	1401 G STREET ARCATA CA	0403030	8	UB57	4.49	16.01	0.82
700129	05-16 14:28	SH	1401 G STREET ARCATA CA	0405076	8	UB57	4.49	16.00	0.82
700129	05-17 18:04	SH	1401 G STREET ARCATA CA	0408237	8	UB57	4.49	16.00	0.82
700129	05-19 03:01	SH	1401 G STREET ARCATA CA	0411355	8	UB57	5.33	18.99	0.98
700129	05-20 02:49	SH	1401 G STREET ARCATA CA	0413864	8	UB57	6.32	22.50	1.16
700129	05-21 02:31	SH	1401 G STREET ARCATA CA	0416354	8	UB57	3.48	12.41	0.64
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700129				131.63	457.20	24.08
700131	05-15 14:53	SH	1401 G STREET ARCATA CA	0402461	8	UB57	2.25	8.01	0.41
700131	05-17 15:06	SH	1401 G STREET ARCATA CA	0407593	8	UB57	10.32	36.75	1.89
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700131				12.57	44.76	2.30
			GRAND TOTAL				1,171.45	3,877.05	236.29

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=KEYED SALE WITH AUTHORIZATION 4=ELECTRONIC SALE WITHOUT AUTHORIZATION
5=KEYED SALE WITHOUT AUTHORIZATION 6=INTERNAL TRANSACTION 8=ELECTRONIC SALE AT PUMP 9=MANUAL SALE

CA HUMBOLDT STATE UNIV
INVOICE RECEIPT

ACCOUNT NUMBER 86901-3045

CLOSING DATE 06-24-2006

HUMBOLDT STATE UNIV
MAIL FINNEY
RRPST ST
ARCATA CA 95521-8222

DATE	TRANS DATE/TIME	VEN ID	DESCRIPTION	TRANS ID	MSG ID	PROF ED	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
008	06-01 10:41	IN	2762 CENTRAL AVE MCKINLEYVILLE CA	00726671	1	UNLD	7.39	25.12	1.35
008	06-16 11:50	IN	2762 CENTRAL AVE MCKINLEYVILLE CA	00248790	1	UNLD	9.17	31.20	1.68
008	06-16 18:36	IN	2762 CENTRAL AVE MCKINLEYVILLE CA	00372464	1	UNLD	6.46	21.96	1.16
			TOTAL FOR CARD 700008				23.02	78.28	4.21
064	05-26 11:26	CH	1693 GREAT BASIN BLVD ELY NV	3941863	6	UNLD	10.53	33.19	1.93
064	05-31 16:37	CH	1693 GREAT BASIN BLVD ELY NV	3943226	6	UNLD	8.23	25.94	1.51
064	05-31 16:40	CH	1693 GREAT BASIN BLVD ELY NV	3943228	6	UNLD	8.24	25.95	1.51
064	06-02 12:12	CH	1693 GREAT BASIN BLVD ELY NV	3943555	6	UNLD	7.49	23.59	1.37
064	06-07 10:50	CH	1693 GREAT BASIN BLVD ELY NV	3944561	6	UNLD	14.83	46.72	2.71
064	06-08 14:24	CH	1693 GREAT BASIN BLVD ELY NV	3944994	6	UNLD	12.65	39.85	2.31
064	06-09 14:10	CH	1693 GREAT BASIN BLVD ELY NV	3945400	6	UNLD	7.56	23.83	1.38
064	06-14 16:54	CH	20 NORTH MAIN ST EUREKA NV	9921994	6	UNLD	10.80	35.31	1.98
064	06-14 16:57	CH	20 NORTH MAIN ST EUREKA NV	9921996	6	UNLD	14.25	46.59	2.61
064	06-15 17:19	CH	20 NORTH MAIN ST EUREKA NV	9922186	6	UNLD	9.80	32.06	1.79
064	06-15 17:36	CH	20 NORTH MAIN ST EUREKA NV	9922193	6	SUPR	11.62	40.34	2.13
064	06-16 13:55	CH	20 NORTH MAIN ST EUREKA NV	9922363	6	UNLD	7.58	24.80	1.39
064	06-16 22:04	SH	1100 AUTUMN ST ELY NV	0261263	6	UNLD	16.01	50.42	2.93
			TOTAL FOR CARD 700054				139.53	448.59	25.55
065	05-24 16:10	CH	20 NORTH MAIN ST EUREKA NV	9918761	6	UNLD	27.91	96.55	5.11
065	05-26 15:17	SH	1100 AUTUMN ST ELY NV	0228060	6	UNLD	6.61	20.82	1.21
065	05-30 16:15	SH	1100 AUTUMN ST ELY NV	0234906	6	UNLD	10.54	33.19	1.93
065	06-02 18:31	CH	20 NORTH MAIN ST EUREKA NV	9920094	6	UNLD	16.34	56.53	2.99
065	06-07 10:32	CH	1693 GREAT BASIN BLVD ELY NV	3944856	6	UNLD	16.19	50.98	2.96
065	06-08 14:20	CH	1693 GREAT BASIN BLVD ELY NV	3944992	6	UNLD	11.31	35.63	2.07
065	06-09 14:41	CH	1100 AUTUMN ST ELY NV	0249359	6	UNLD	7.86	24.18	1.41
065	06-14 16:46	CH	20 NORTH MAIN ST EUREKA NV	9921993	6	UNLD	15.00	49.05	2.75
065	06-15 17:12	CH	20 NORTH MAIN ST EUREKA NV	9922184	6	UNLD	1.46	4.78	0.27
065	06-16 13:04	SH	1100 AUTUMN ST ELY NV	0260695	6	UNLD	14.54	45.81	2.66
065	06-23 13:49	SH	1100 AUTUMN ST ELY NV	0271346	6	UNLD	19.44	61.23	3.56
			TOTAL FOR CARD 700055				147.92	478.76	25.92
067	06-22 12:15	CH	101 MAIN ST TRINIDAD CA	2847195	6	UNLD	23.60	80.92	4.32
			TOTAL FOR CARD 700077				23.60	80.92	4.32
068	05-24 16:11	CH	20 NORTH MAIN ST EUREKA NV	9918762	6	UNLD	28.91	100.00	5.29
068	05-24 16:12	CH	20 NORTH MAIN ST EUREKA NV	9918763	6	UNLD	1.90	6.24	0.33
068	06-08 14:26	CH	1693 GREAT BASIN BLVD ELY NV	3944996	6	UNLD	19.14	60.30	3.50
068	06-14 16:40	CH	20 NORTH MAIN ST EUREKA NV	9921991	6	UNLD	14.81	48.41	2.71
068	06-15 17:15	CH	20 NORTH MAIN ST EUREKA NV	9922185	6	UNLD	10.69	35.61	1.99
			TOTAL FOR CARD 700085				75.55	250.56	13.82
069	06-01 17:08	IN	5010 WEST END ROAD ARCATA CA	00530209	1	DISL	10.05	33.42	2.44
			TOTAL FOR CARD 700090				10.05	33.42	2.44

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION; 2=REVISED SALES WITH AUTHORIZATION; 3=REVERSED SALES WITH AUTHORIZATION; 4=ELECTRONIC SALE WITHOUT AUTHORIZATION; 5=REVOKED SALE WITHOUT AUTHORIZATION; 6=INTERNAL TRANSACTION; 7=EDITIONED SALE; 8=EDITIONED SALE AT PUMP; 9=NEW SALE



CA HUMBOLDT STATE UNIV
INVOICE REPORT

06-24-2006

CLOSING DATE

06901-3045

ACCOUNT NUMBER

T STATE UNIV
ONEY
ST
5521-8222

TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	MSG ID	PROD ID	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
06-22 12:11	CH	101 MAIN ST TRINIDAD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700114		UNLD	4.42	15.16	0.61
<i>Mk</i>					4.42	15.16	0.61
06-22 13:10	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700117		DISL	15.04	49.47	3.65
<i>Pool</i>					15.04	49.47	3.65
05-23 17:55	IN	5000 WEST END ROAD ARCATA CA		DISL	20.41	68.56	4.96
06-03 18:29	IN	5000 WEST END ROAD ARCATA CA		DISL	19.89	65.38	4.78
<i>Pool</i>					40.10	133.94	9.74
05-23 17:55	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700121		DISL	17.99	60.46	4.37
<i>Pool</i>					17.99	60.46	4.37
05-24 16:04	CH	20 NORTH MAIN ST EUREKA NV		UNLD	24.66	86.01	4.55
05-25 16:16	CH	1693 GREAT BASIN BLVD ELY NV		UNL+	7.45	23.91	1.36
05-30 13:12	CH	1693 GREAT BASIN BLVD ELY NV		UNL+	31.16	100.00	5.70
06-04 15:33	SH	1100 AUTUMN ST ELY NV		UNL+	27.77	91.58	1.58
06-05 10:47	CH	1693 GREAT BASIN BLVD ELY NV		UNLD	8.13	25.61	1.49
06-07 10:58	CH	1693 GREAT BASIN BLVD ELY NV		UNLD	4.98	15.89	0.91
06-08 14:21	CH	1693 GREAT BASIN BLVD ELY NV		UNLD	13.54	42.64	2.48
06-10 11:35	CH	1693 GREAT BASIN BLVD ELY NV		UNLD	9.87	31.09	1.81
06-11 11:53	SH	1690 S GREAT BASIN BLVD ELY NV		UNLD	11.80	37.19	2.16
06-15 10:23	SH	1100 AUTUMN ST ELY NV		UNL+	9.73	31.35	1.78
06-19 12:34	CH	1693 GREAT BASIN BLVD ELY NV CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700127		UNL+	9.60	30.84	1.76
<i>Geo</i>					133.74	452.10	25.58
06-02 11:18	IN	5000 WEST END ROAD ARCATA CA		DISL	27.07	89.85	6.53
06-03 18:29	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700123		DISL	17.74	58.91	4.31
<i>Pool</i>					44.81	148.76	10.89
05-24 05:12	SH	1401 G STREET ARCATA CA		UB57	3.80	13.56	0.70
05-27 20:45	SH	1401 G STREET ARCATA CA		UB57	2.61	9.24	0.48
05-28 21:36	SH	1401 G STREET ARCATA CA		UB57	7.32	25.92	1.34
05-30 06:16	SH	1401 G STREET ARCATA CA		UB57	8.29	29.16	1.52
06-01 13:05	SH	1401 G STREET ARCATA CA		UB57	5.14	17.99	0.94
05-02 20:58	SH	1401 G STREET ARCATA CA		UB57	3.63	12.72	0.66
06-03 23:46	SH	1401 G STREET ARCATA CA		UB57	3.42	11.98	0.63
06-04 17:41	SH	1401 G STREET ARCATA CA		UB57	4.52	15.82	0.83
06-05 17:53	SH	1401 G STREET ARCATA CA		UB57	21.46	74.55	1.12
06-05 18:16	SH	1401 G STREET ARCATA CA		UB57	1.17	4.04	0.20
06-07 18:10	SH	1401 G STREET ARCATA CA		UB57	5.69	19.80	1.04
06-09 05:28	SH	1401 G STREET ARCATA CA		UB57	4.50	15.69	0.82
06-10 02:13	SH	1401 G STREET ARCATA CA		UB57	2.82	9.82	0.52
06-10 22:49	SH	1401 G STREET ARCATA CA		UB57	3.78	13.15	0.69
06-11 20:10	SH	1401 G STREET ARCATA CA		UB57	4.73	16.48	0.87
06-12 17:50	SH	1401 G STREET ARCATA CA		UB57	3.58	12.46	0.66
06-13 06:24	SH	1401 G STREET ARCATA CA		UB57	1.95	6.80	0.36

MESSAGE CODES: TELEPHONIC SALE WITHOUT AUTHORIZATION; KEYED SALE WITH AUTHORIZATION; TELEPHONIC SALE WITHOUT AUTHORIZATION; SHKEYED SALE WITHOUT AUTHORIZATION; INTERNAL TRANSACTION; TELEPHONIC SALE AT EMPLOYEE'S REQUEST; TELEPHONIC SALE AT EMPLOYEE'S REQUEST.

Zoo 114

Zoo 112

Zoo 120

Zoo 121

Zoo 127

Zoo 127

Zoo 128

Zoo 128

Zoo 129

UPD



CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARP ST ST
ARCATA CA 95521-9222

CA HUMBOLDT STATE UNIV
INVOICE REPORT

ACCOUNT NUMBER

86907-3045

CLOSING DATE

05-24-2005

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EVENT TAXES
700129	05-13 18:40	SH	1401 G STREET ARCATA CA	0470211	8	UB57	1.94	6.76	0.36
700129	05-15 06:30	SH	1401 G STREET ARCATA CA	0472944	8	UB57	4.48	15.62	0.52
700129	05-16 05:39	SH	1401 G STREET ARCATA CA	0475509	8	UB57	5.09	17.70	0.53
700129	06-17 16:57	SH	1401 G STREET ARCATA CA	0479725	8	UB57	6.89	23.27	1.22
700129	06-18 18:20	SH	1401 G STREET ARCATA CA	0482042	8	UB57	6.33	22.04	1.16
700129	05-19 06:28	SH	1401 G STREET ARCATA CA	0482430	8	UB57	2.16	7.53	0.40
700129	05-19 18:14	SH	1401 G STREET ARCATA CA	0484451	8	UB57	1.89	6.60	0.35
700129	05-20 05:17	SH	1401 G STREET ARCATA CA	0484898	8	UB57	1.95	6.79	0.33
700129	05-20 17:47	SH	1401 G STREET ARCATA CA	0487215	8	UB57	4.53	15.77	0.63
700129	06-21 14:09	SH	1401 G STREET ARCATA CA	0489203	8	UB57	2.00	6.84	0.58
700129	06-22 02:15	SH	1401 G STREET ARCATA CA	0490524	8	UB57	4.09	14.00	0.75
700129	06-23 21:15	SH	CA HUMBOLDT STATE UNIV	0495358	8	UB57	4.97	16.65	0.89
			TOTAL FOR CARD 700129				120.09	419.38	22.72
700131	05-24 14:59	GH	315 HWY 101 S CRESCENT CITY CA	5239979	8	UNLD	8.61	29.44	1.50
700131	06-14 11:20	SS	724 G STREET ARCATA CA	112024	8	UNLD	13.69	47.63	2.51
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700131				22.30	77.07	4.01
			Pool						
			GRAND TOTAL				823.33	2,726.87	158.1

MESSAGE CODES: 1-ELECTRONIC SALE WITH AUTHORIZATION 2-KEYED SALE WITH AUTHORIZATION 3-KEYED SALE WITHOUT AUTHORIZATION 4-ELECTRONIC SALE WITHOUT AUTHORIZATION
5-KEYED SALE WITHOUT AUTHORIZATION 6-INTERNAL TRANSACTION 7-ELECTRONIC SALE FROM INMAN AT SALE

VOYAGER BILLING BREAKDOWN

August 2006

8/24/06

INV #869013045608

Card ID #	Vehicle #	License #	Department	Account	Fund	Dept.	Program	Class	Project	Total Charges	Less Excise Taxes	Net Charges
700008	8	429565	Wildlife	1.22.1291-775-20						24.15	1.34	22.81
700022	25	429590	Rowing Crew	7185-4623								0.00
700131	36	1187946	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	291.07	15.64	275.43
700126	101	901078	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			0.00
700120	Bus 1	901065	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			0.00
700121	Bus 2	400399	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	260.96	19.29	241.67
700089	Bus 3	404020	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			0.00
700090	Bus 4	403110	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	74.90	5.11	69.79
700128	Bus 5	429585	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			0.00
700092	Bus 6	436431	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			0.00
700117	Bus 7	901066	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	237.47	17.57	219.90
(Pool Vehicle Total)										864.40	57.61	806.79
700130	46	419366	Coral Sea	660901	HM500	D20086	P0110	00000	000000			0.00
700064	67	901079	Geology	660903	HM500	D20048	RS016	00000	000000			0.00
700065	68	901073	Geology	660903	HM500	D20048	RS016	00000	000000			0.00
700127	83	429591	Geology	660903	HM500	D20048	RS016	00000	000000			0.00
700085	88	901052	Geology	660903	HM500	D20048	RS016	00000	000000			0.00
Geology Total)										0.00	0.00	0.00
00074	77	419399	Motor Pool	660901	HM500	D30019	00000	00000	000000			0.00
00077	80	429579	Marine Lab	660903	TU014	D20086	00000	00000	000000			0.00
00129	0218	1170218	UPD	660901	HM600	D40019	R0042	00000	000000	346.01	18.70	327.31
00099	Extra Card		Plant Op-Cox	660901	HM500	D30019	00000	00000	000000	41.62	2.41	39.21
00100	Extra Card		Plant Op-Hart	660901	HM500	D30019	00000	00000	000000			0.00
00101	Extra Card		Plant Op-Fields	660901	HM500	D30019	00000	00000	000000			0.00
00102	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
00103	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
00114	Extra Card		Marine Lab Gas Can	660903	TU014	D20086	00000	00000	000000			0.00
TOTALS										1276.13	80.06	1196.12

+ 22.81
829.60

PAID
449459
9-7-06
CK. NO.
DATE



CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

CA HUMBOLDT STATE UNIV
INVOICE REPORT

ACCOUNT NUMBER

86901-3045

CLOSING DATE

08-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008	07-29 17:45	IN	2782 CENTRAL AVE MCKINLEYVILLE CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700008	00807667	1	UNLD	7.32	24.15	1.34
700090	08-10 23:05	IN	125 EHLERS WAY KLAMATH CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700090	00004181	1	DISL	21.04	74.90	5.11
700099	08-09 08:32	CH	90 CORTE MADERA AVE CORTE MADERA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700099	3706957	8	UNLD	13.17	41.62	2.41
700117	08-08 16:13	IN	5000 WEST END ROAD ARCATA CA	00466694	1	DISL	24.77	80.73	6.02
700117	08-19 08:28	IN	5000 WEST END ROAD ARCATA CA	00592104	1	DISL	22.50	74.26	5.47
700117	08-20 18:21	IN	5000 WEST END ROAD ARCATA CA	00192865	1	DISL	25.00	82.48	6.08
Pool			TOTAL FOR CARD 700117				72.27	237.47	17.57
700121	08-07 20:28	IN	5000 WEST END ROAD ARCATA CA	00159372	1	DISL	23.05	75.12	5.60
700121	08-10 15:39	IN	5000 WEST END ROAD ARCATA CA	00590085	1	DISL	13.00	42.89	3.16
700121	08-11 17:35	IN	5000 WEST END ROAD ARCATA CA	00499247	1	DISL	20.00	65.98	4.86
700121	08-19 19:39	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700121	00604988	1	DISL	23.33	76.97	5.67
Pool							79.38	260.96	19.29
700129	07-24 05:25	SH	1401 G STREET ARCATA CA	0566646	8	UB57	6.99	23.76	1.28
700129	07-24 17:51	SH	1401 G STREET ARCATA CA	0568907	8	UB57	3.27	11.13	0.60
700129	07-25 17:46	SH	1401 G STREET ARCATA CA	0570945	8	UB57	3.99	13.58	0.73
700129	07-26 14:35	SH	1401 G STREET ARCATA CA	0572784	8	UB57	3.84	13.06	0.70
700129	07-27 23:43	SH	1401 G STREET ARCATA CA	0576751	8	UB57	2.92	9.95	0.53
700129	07-29 20:26	SH	1401 G STREET ARCATA CA	0581538	8	UB57	5.88	20.01	1.08
700129	07-30 18:53	IN	5000 WEST END ROAD ARCATA CA	00080311	1	UNLD	4.63	15.30	0.85
700129	07-31 06:14	SH	1401 G STREET ARCATA CA	0584003	8	UB57	3.82	13.00	0.70
700129	07-31 18:25	SH	1401 G STREET ARCATA CA	0585968	8	UB57	3.25	11.06	0.59
700129	08-01 18:07	SH	1401 G STREET ARCATA CA	0588368	8	UB57	4.62	15.71	0.85
700129	08-02 16:05	SH	1401 G STREET ARCATA CA	0590729	8	UB57	4.00	13.60	0.73
700129	08-05 06:40	SH	1401 G STREET ARCATA CA	0597260	8	UB57	4.96	16.88	0.91
700129	08-07 04:45	SH	1401 G STREET ARCATA CA	0601351	8	UB57	3.53	12.00	0.65
700129	08-07 18:39	SH	1401 G STREET ARCATA CA	0603662	8	UB57	3.40	11.57	0.62
700129	08-08 18:18	IN	5000 WEST END ROAD ARCATA CA	00487908	1	UNLD	2.60	8.61	0.48
700129	08-09 02:46	SH	1401 G STREET ARCATA CA	0607093	8	UB57	2.05	6.99	0.38
700129	08-09 14:25	SH	1401 G STREET ARCATA CA	0608299	8	UB57	1.87	6.37	0.34
700129	08-11 20:07	SH	1401 G STREET ARCATA CA	0614628	8	UB57	3.24	11.03	0.59
700129	08-12 23:28	SH	1401 G STREET ARCATA CA	0617340	8	UB57	3.19	10.86	0.58
700129	08-13 17:24	SH	1401 G STREET ARCATA CA	0619122	8	UB57	3.85	13.10	0.70
700129	08-14 17:34	SH	1401 G STREET ARCATA CA	0621342	8	UB57	2.92	9.95	0.53
700129	08-15 18:04	SH	1401 G STREET ARCATA CA	0624221	8	UB57	2.59	8.82	0.47
700129	08-16 17:35	SH	1401 G STREET ARCATA CA	0626820	8	UB57	3.04	10.35	0.56
700129	08-18 05:06	SH	1401 G STREET ARCATA CA	0630897	8	UNLD	4.22	14.37	0.77
700129	08-19 05:20	IN	5000 WEST END ROAD ARCATA CA	06352468	1	UNLD	4.91	16.01	0.90
700129	08-21 18:48	SH	1401 G STREET ARCATA CA	0641936	8	UB57	3.98	13.31	0.73
700129	08-22 06:39	SH	1401 G STREET ARCATA CA	0642488	8	UB57	2.02	6.77	0.37
700129	08-23 05:47	SH	1401 G STREET ARCATA CA	0645598	8	UB57	2.65	8.96	0.48

2488 /4/8

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=KEYED SALE WITH AUTHORIZATION 3=ELECTRONIC SALE WITHOUT AUTHORIZATION 4=ELECTRONIC SALE WITH AUTHORIZATION 5=KEYED SALE WITHOUT AUTHORIZATION 6=INTERNAL P... OF 2

UPD



HUMBOLDT STATE UNIV
 100 FINNEY
 HRPST ST
 A CA 95521-8222

CA HUMBOLDT STATE UNIV
 INVOICE REPORT

ACCOUNT NUMBER

86901-3045

CLOSING DATE

08-24-2006

ACTURID ID NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
29563			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700129				102.23	346.01	18.70
00	07-25 16:11	SH	1401 G STREET ARCATA CA	0570648	8	UB57	18.29	62.19	3.95
00	07-30 16:52	CH	101 MAIN ST TRINIDAD CA	2860353	8	UNLD	21.20	73.12	3.88
00	08-11 21:34	SH	1401 G STREET ARCATA CA	0614834	8	UB57	20.18	68.60	3.69
00	08-17 11:02	SH	1401 G STREET ARCATA CA	0628255	8	UB57	10.37	35.26	1.90
00	08-20 21:28	CH	101 MAIN ST TRINIDAD CA	2867694	8	UNLD	15.40	51.90	2.82
	Pool		CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700131				85.44	291.07	15.64
			GRAND TOTAL				380.85	1,276.18	80.06

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=KEYED SALE WITH AUTHORIZATION 3=KEYED SALE WITHOUT AUTHORIZATION 4=ELECTRONIC SALE WITHOUT AUTHORIZATION
 5=KEYED SALE WITHOUT AUTHORIZATION 6=INTERNAL TRANSACTION 8=ELECTRONIC SALE AT PUMP 9=MANUAL SALE

VOYAGE. GAS CARD ASSIGNMENT

VOYAGER BILLING BREAKDOWN

July 2006

INV #869013045607

Card ID #	Vehicle #	License #	Department	Account	Fund	Dept.	Program	Class	Project	New Purchases		Net Charges
										Total Charges	Less Excise Taxes	
700008	8	429565	Wildlife	660906	HM500	(per Bishop)				94.48	5.24	89.24
700022	25	429590	Rowing Crew	7185-4623		D30019						0.00
700131	36	1187946	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	75.00	4.04	70.96
700126	101	901078	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	124.19	6.89	117.30
700120	Bus 1	901065	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	131.99	9.84	122.15
700121	Bus 2	400399	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	227.54	16.96	210.58
700089	Bus 3	404020	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	70.88	5.28	65.60
700090	Bus 4	403110	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			
700128	Bus 5	429585	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			
700092	Bus 6	436431	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			
700117	Bus 7	901066	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	58.69	4.37	54.32
(Pool Vehicle Total)										688.29	47.38	640.91
700130	46	419366	Coral Sea	660901	HM500	D20086	P0110	00000	000000			
700064	67	901079	Geology	660903	HM500	D20048	RS016	00000	000000	222.28	12.39	209.89
700065	68	901073	Geology	660903	HM500	D20048	RS016	00000	000000	446.98	27.27	419.71
700127	83	429591	Geology	660903	HM500	D20048	RS016	00000	000000	281.05	15.56	265.49
700085	88	901052	Geology	660903	HM500	D20048	RS016	00000	000000	189.54	10.51	179.03
(Geology Total)										1139.85	65.73	1074.12
700074	77	419399	Motor Pool	660901	HM500	D30019	00000	00000	000000			
700077	80	429579	Marine Lab	660903	HM500	D20086	00000	00000	000000	50.42	2.69	47.73
700129	0218	1170218	UPD	660901	HM600	D40019	R0042	00000	000000	316.75	17.03	299.72
700099	Extra Card		Plant Op-Cox	660901	HM500	D30019	00000	00000	000000			
700100	Extra Card		Plant Op-Hart	660901	HM500	D30019	00000	00000	000000			
700101	Extra Card		Plant Op-Fields	660901	HM500	D30019	00000	00000	000000			
00102	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
00103	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
00114	Extra Card		Marine Lab Gas Can	660903	TU014	D20086	00000	00000	000000			
TOTALS										2289.79	138.07	2151.72

DATE: 8/10/06
 CK. NO. 413533
 PAID

660906 HM500 D30019 730.15
 660903 HM500 D20048 R5016 1074.12
 660903 HM500 D20086 47.73
 660901 HM600 D40019 R0042 299.72



CA HUMBOLDT STATE UNIV
INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER

86901-3045

CLOSING DATE

07-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700126	07-14 18:29	IN	5000 WEST END ROAD ARCATA CA	00403450	1	UNLD	18.39	60.69	3.37
700126	07-21 16:38	IN	5000 WEST END ROAD ARCATA CA	00586714	1	UNLD	19.24	63.50	3.52
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700126				37.63	124.19	6.89
700127	06-27 12:09	CH	1683 GREAT BASIN BLVD ELY NV	3950466	1	UNL+	26.98	86.58	4.94
700127	06-29 10:48	SH	1100 AUTUMN ST ELY NV	0281014	8	UNLD	11.31	35.63	2.07
700127	06-30 15:18	CH	20 NORTH MAIN ST EUREKA NV	9924975	8	UNLD	8.66	27.73	1.58
700127	06-30 22:02	SH	753 HWY 70 CHILCOOT CA	0295881	8	UB57	11.07	37.64	2.03
700127	07-01 12:46	SS	39143 HWY 266 WILLOW CREEK CA	124635	8	UNLD	27.02	93.47	4.94
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700127				85.04	281.05	15.56
700129	06-24 19:32	SH	1401 G STREET ARCATA CA	0497529	8	UB57	2.90	9.93	0.53
700129	06-26 17:48	SH	1401 G STREET ARCATA CA	0501262	8	UB57	5.83	19.95	1.07
700129	06-27 17:52	SH	1401 G STREET ARCATA CA	0503839	8	UB57	5.09	17.42	0.93
700129	06-28 14:54	SH	1401 G STREET ARCATA CA	0505719	8	UB57	2.81	9.63	0.51
700129	06-30 19:49	SH	1401 G STREET ARCATA CA	0511634	8	UB57	4.46	15.28	0.82
700129	07-01 19:39	SH	1401 G STREET ARCATA CA	0513879	8	UB57	3.00	10.26	0.55
700129	07-02 17:22	SH	1401 G STREET ARCATA CA	0515718	8	UB57	3.58	12.25	0.66
700129	07-03 18:39	SH	1401 G STREET ARCATA CA	0517987	8	UB57	2.47	8.46	0.45
700129	07-04 17:55	SH	1401 G STREET ARCATA CA	0519660	8	UB57	2.53	8.66	0.46
700129	07-05 18:20	SH	1401 G STREET ARCATA CA	0522086	8	UB57	4.02	13.67	0.74
700129	07-06 21:37	SH	1401 G STREET ARCATA CA	0525030	8	UB57	2.51	8.55	0.46
700129	07-07 16:49	SH	1401 G STREET ARCATA CA	0526764	8	UB57	3.56	12.10	0.65
700129	07-08 19:43	SH	1401 G STREET ARCATA CA	0529636	8	UB57	2.80	9.53	0.51
700129	07-10 05:13	SH	1401 G STREET ARCATA CA	0531830	8	UB57	4.36	14.83	0.80
700129	07-10 18:33	SH	1401 G STREET ARCATA CA	0533596	8	UB57	2.00	6.88	0.37
700129	07-11 06:43	SH	1401 G STREET ARCATA CA	0533976	8	UB57	2.01	6.86	0.37
700129	07-14 04:28	SH	1401 G STREET ARCATA CA	0541219	8	UB57	3.56	12.11	0.65
700129	07-15 21:03	SH	1401 G STREET ARCATA CA	0545905	8	UNLD	2.81	9.57	0.51
700129	07-16 18:07	IN	5000 WEST END ROAD ARCATA CA	00841769	1	UNLD	4.98	16.45	0.91
700129	07-17 06:48	SH	1401 G STREET ARCATA CA	0548230	8	UB57	1.59	5.40	0.29
700129	07-17 17:46	SH	1401 G STREET ARCATA CA	0550046	8	UB57	2.75	9.35	0.50
700129	07-18 17:57	SH	1401 G STREET ARCATA CA	0552554	8	UB57	2.99	10.17	0.55
700129	07-19 18:24	SH	1401 G STREET ARCATA CA	0555581	8	UB57	4.64	15.79	0.85
700129	07-21 00:11	SH	1401 G STREET ARCATA CA	0559096	8	UB57	4.26	14.50	0.78
700129	07-22 05:28	SH	1401 G STREET ARCATA CA	0561647	8	UB57	7.53	25.60	1.38
700129	07-22 20:48	SH	1401 G STREET ARCATA CA	0564096	8	UB57	4.00	13.60	0.73
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700129				93.04	316.75	17.03
700131	07-20 19:38	SH	1401 G STREET ARCATA CA	0558700	8	UB57	22.06	75.00	4.04
			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700131				22.06	75.00	4.04
			GRAND TOTAL				692.17	2,289.79	138.07

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=KEYED SALE WITH AUTHORIZATION 3=INTERNAL TRANSACTION 4=ELECTRONIC SALE WITHOUT AUTHORIZATION
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VOYAC GAS CARD ASSIGNEMENT

VOYAGER BILLING BREAKDOWN

September 2006

INV #869013045609

Card ID #	Vehicle #	License #	Department	Account	Fund	Dept.	Program	Class	Project	Total Charges	Less Excise Taxes	Net Charges
700008	8	429565	Wildlife	660906	HM600	D20057	R0009	00000	000000	0.00	0.00	0.00
700022	25	429590	Rowing Crew	7185-4623						0.00	0.00	0.00
700131	36	1187946	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	274.49	16.45	258.04
700126	101	901078	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	191.79	11.26	180.53
700120	Bus 1	901065	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	265.47	20.71	244.76
700121	Bus 2	400399	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	273.48	20.54	252.94
700089	Bus 3	404020	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	177.94	13.49	164.45
700090	Bus 4	403110	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	359.32	26.58	332.74
700128	Bus 5	429585	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	366.89	27.13	339.76
700092	Bus 6	436431	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	366.36	28.09	338.27
700117	Bus 7	901066	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	59.48	4.25	55.23
Pool Vehicle Total)										2335.22	168.50	2166.72
700130	46	419366	Coral Sea	660901	HM500	D20086	P0110	00000	000000			
700064	67	901079	Geology	660903	HM500	D20048	RS016	00000	000000	92.42	5.30	87.12
700065	68	901073	Geology	660903	HM500	D20048	RS016	00000	000000	167.24	10.27	156.97
700127	83	429591	Geology	660903	HM500	D20048	RS016	00000	000000			0.00
700085	88	901052	Geology	660903	HM500	D20048	RS016	00000	000000			0.00
Geology Total)										259.66	15.57	244.09
700074	77	419399	Motor Pool	660901	HM500	D30019	00000	00000	000000			
700077	80	429579	Marine Lab	660903	HM500	D20086	00000	00000	000000	79.72	4.66	75.06
700129	0218	1170218	UPD	660901	HM600	D40019	R0042	00000	000000	315.22	17.99	297.23
700099	Extra Card		Plant Op-Cox	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700100	Extra Card		Plant Op-Hart	660901	HM500	D30019	00000	00000	000000			
700101	Extra Card		Plant Op-Fields	660901	HM500	D30019	00000	00000	000000			
700102	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
700103	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
700114	Extra Card		Marine Lab Gas Can	660903	HM500	D20086	00000	00000	000000	54.09	2.95	51.14
TOTALS										3043.91	209.67	2834.24

10-8-06
 CK
 DATE

CA HUMBOLDT STATE UNIV INVOICE REPORT

ST STATE UNIV
INNEY
T ST
95521-8222

ACCOUNT NUMBER 86901-3045

CLOSING DATE 09-24-2006

TRANS ID	VEN ID	TRANS DATE/TIME	TRANSACTION LOCATION/DESCRIPTION	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
00984718	IN	08-30 11:47	5000 WEST END ROAD ARCATA CA	1	UNLD	13.71	43.38	2.51
0680058	SH	09-03 17:39	1401 G STREET ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700064	8	UB57	15.24	49.09	2.79
00452633	IN	09-14 15:56	5000 WEST END ROAD ARCATA CA	1	UNLD	28.95	92.42	5.30
9037567	EM	09-16 10:21	37047 MAIN STREET BURNLEY CA	8	UNL+	13.29	37.89	2.48
5448222	CH	09-17 11:48	117 SQUAW VALLEY ROAD MOCLOUD CA	8	UNL+	16.76	51.62	3.07
	CH	09-17 16:19	39103 HIGHWAY 299 WILLOW CREEK CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700065	8	UNL+	14.92	44.01	2.73
	CH					11.16	33.72	2.04
	CH					56.13	167.24	10.27
2874541	CH	09-12 10:08	101 MAIN ST TRINIDAD CA	8	UNL+	0.18	0.58	0.03
2874548	CH	09-12 10:17	101 MAIN ST TRINIDAD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700077	8	UNLD	25.29	79.14	4.63
00111992	IN	09-02 18:17	5000 WEST END ROAD ARCATA CA	1	DISL	25.47	79.72	4.66
00732231	IN	09-19 20:42	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700089	1	DISL	31.55	103.48	7.67
	IN					23.94	74.46	5.82
	SH					55.49	177.94	13.49
0585240	SH	09-03 13:15	860 REDWOOD HWY GARBerville CA	8	DISL	22.06	75.00	5.96
7119066	CH	09-04 18:27	781 S MAIN ST WILLITS CA	8	DISL	29.77	100.00	7.23
00307102	IN	09-09 17:32	5000 WEST END ROAD ARCATA CA	1	DISL	35.55	115.89	8.64
00442024	IN	09-16 18:36	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700090	1	DISL	22.01	68.43	5.35
	CH					109.39	359.32	26.58
2554577	CH	09-03 13:10	830 REDWOOD DR GARBerville CA	8	DISL	17.73	59.21	4.31
7119067	CH	09-04 18:27	781 S MAIN ST WILLITS CA	8	DISL	26.30	88.37	6.99
0090578	IN	09-15 13:14	5000 WEST END ROAD ARCATA CA	1	DISL	9.13	28.57	2.22
GJV0284	EM	09-16 10:32	37047 MAIN STREET BURNLEY CA	1	DISL	30.24	93.72	7.95
9037569	CH	09-17 11:49	117 SQUAW VALLEY ROAD MOCLOUD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700092	8	DISL	32.17	96.49	7.82
	CH					115.57	366.36	28.09
2868977	CH	08-25 11:30	101 MAIN ST TRINIDAD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700114	8	UNLD	16.10	54.09	2.95
0717306	SH	09-16 14:22	1401 G STREET ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700117	8	DISL	16.10	54.09	2.95
	IN					17.49	59.48	4.25
	IN					17.49	59.48	4.25
	CH					85.25	265.47	20.71
00012257	IN	08-25 18:09	5000 WEST END ROAD ARCATA CA	1	DISL	19.99	65.95	4.86
00892290	IN	09-10 13:15	5000 WEST END ROAD ARCATA CA	1	DISL	0.37	1.21	0.09
00694782	IN	09-10 13:47	5000 WEST END ROAD ARCATA CA	1	DISL	22.20	72.35	5.39
00785787	IN	09-22 11:32	5000 WEST END ROAD ARCATA CA	1	DISL	14.62	44.58	3.55
5130764	CH	09-23 14:48	42930 OLD HWY 30 KNAPPA OR CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700120	8	DISL	28.07	81.38	6.82
	CH					85.25	265.47	20.71

MESSAGE CODES: 1=ELECTRONIC SALE WITH AUTHORIZATION 2=KEYED SALE WITH AUTHORIZATION 3=KEYED SALE WITH AUTHORIZATION 4=ELECTRONIC SALE WITHOUT AUTHORIZATION
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CA HUMBOLDT STATE UNIV
INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER

86901-3045

CLOSING DATE

09-24-2006

TRAN
DATE

EXEMPT
DATE

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPT DATE
700121	08-27 16:24	IN	5000 WEST END ROAD ARCATA CA	00444932	1	DISL	34.67	114.38	8.42
700121	09-04 18:39	IN	5000 WEST END ROAD ARCATA CA	00146573	1	DISL	23.83	78.14	5.70
700121	09-16 18:04	IN	5000 WEST END ROAD ARCATA CA	00436210	1	DISL	26.04	80.36	6.33
Pool			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700121				84.54	273.48	20.45
700126	09-08 09:05	IN	5000 WEST END ROAD ARCATA CA	00130918	1	UNLD	12.27	37.43	2.25
700126	09-09 08:39	CH	409 REDWOOD HWY CAVE JUNCTION OR	3443913	8	UNLD	13.13	40.70	2.40
700126	09-10 12:32	CH	101 MAIN ST TRINIDAD CA	2874103	8	UNLD	17.14	55.35	3.14
700126	09-10 12:34	CH	101 MAIN ST TRINIDAD CA	2874105	8	UNLD	6.59	21.30	1.21
700126	09-10 13:15	IN	5000 WEST END ROAD ARCATA CA	00892276	1	UNLD	12.34	37.01	2.28
Pool			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700126				61.47	191.79	2.26
700128	08-26 16:34	CH	101 MAIN ST TRINIDAD CA	2869362	1	DISL	30.62	105.01	7.44
700128	08-31 18:17	IN	5000 WEST END ROAD ARCATA CA	00203910	1	DISL	17.51	57.42	4.25
700128	09-02 16:59	IN	5000 WEST END ROAD ARCATA CA	00781248	1	DISL	16.08	52.73	3.91
700128	09-03 18:17	IN	5000 WEST END ROAD ARCATA CA	00228965	1	DISL	24.73	81.09	6.01
700128	09-17 14:23	IN	5000 WEST END ROAD ARCATA CA	00888417	1	DISL	22.72	70.64	5.52
Pool			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700128				111.66	366.89	27.13
700129	08-24 02:33	SH	1401 G STREET ARCATA CA	0648527	8	UB57	3.42	11.45	0.63
700129	08-25 14:47	SH	1401 G STREET ARCATA CA	0653360	8	UB57	7.59	24.91	1.39
700129	08-26 07:40	SH	1401 G STREET ARCATA CA	0655142	8	UB57	5.49	18.01	1.00
700129	08-27 18:00	SH	1401 G STREET ARCATA CA	0659243	8	UB57	7.43	24.38	1.36
700129	08-28 06:06	SH	1401 G STREET ARCATA CA	0659813	8	UB57	4.95	16.23	0.91
700129	08-29 06:40	IN	5000 WEST END ROAD ARCATA CA	00538471	1	UNLD	2.43	7.68	0.44
700129	08-30 05:47	SH	1401 G STREET ARCATA CA	0665612	8	UB57	2.59	8.46	0.47
700129	08-31 06:26	SH	1401 G STREET ARCATA CA	0666624	8	UB57	5.27	17.20	0.96
700129	09-01 08:18	SH	1401 G STREET ARCATA CA	0671982	8	UB57	3.62	11.75	0.66
700129	09-01 16:00	SH	1401 G STREET ARCATA CA	0674226	8	UB57	1.55	4.99	0.28
700129	09-03 17:44	SH	1401 G STREET ARCATA CA	0680066	8	UB57	3.60	11.59	0.66
700129	09-04 06:23	SH	1401 G STREET ARCATA CA	0680637	8	UB57	4.61	14.85	0.84
700129	09-05 06:33	SH	1401 G STREET ARCATA CA	0683219	8	UB57	2.60	8.33	0.48
700129	09-06 06:22	SH	1401 G STREET ARCATA CA	0686105	8	UB57	5.25	16.82	0.96
700129	09-07 06:44	SH	1401 G STREET ARCATA CA	0688820	8	UB57	3.59	11.51	0.66
700129	09-08 14:44	SH	1401 G STREET ARCATA CA	0693499	8	UB57	6.27	19.90	1.15
700129	09-10 18:02	SH	1401 G STREET ARCATA CA	0698744	8	UB57	9.15	29.01	1.67
700129	09-12 06:24	SH	1401 G STREET ARCATA CA	0703157	8	UB57	3.90	12.36	0.71
700129	09-13 18:22	SH	1401 G STREET ARCATA CA	0708446	8	UB57	3.86	11.98	0.71
700129	09-14 08:14	SH	1401 G STREET ARCATA CA	0709105	8	UB57	2.96	9.18	0.54
700129	09-16 17:58	SH	1401 G STREET ARCATA CA	0717967	8	UB57	3.97	11.91	0.73
700129	09-17 17:19	SH	1401 G STREET ARCATA CA	0720300	8	UB57	4.24	12.72	0.78
Pool			CA HUMBOLDT STATE UNIV						
			TOTAL FOR CARD 700129				98.34	315.22	17.99
700131	08-27 19:37	SH	1401 G STREET ARCATA CA	0659482	8	UB57	17.94	58.85	3.28
700131	09-15 15:26	CH	781 S MAIN ST WILLITS CA	7123369	8	UNLD	24.84	74.50	4.55
700131	09-17 14:02	CH	781 S MAIN ST WILLITS CA	7124168	8	UNLD	22.01	65.15	4.03
700131	09-24 07:25	CH	101 MAIN ST TRINIDAD CA	2801013	8	UNLD	25.08	75.99	4.59
Pool			CA HUMBOLDT STATE UNIV						

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INVOICE REPORT

DT'S - UNIV
 WINNEY
 T ST
 (95521-8222

ACCOUNT NUMBER

86901 5

CLOSING DATE

09-24-2006

EXEMPT TAX	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700131				89.87	274.49	16.35
			GRAND TOTAL				955.72	3,043.91	209.67

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VOYAGER GAS CARD ASSIGNMENT

VOYAGER BILLING BREAKDOWN
October 2006

INV #869013045610

Card #	Vehicle #	License #	Department	Account	Fund	Dept.	Program	Class	Project	New Purchases		Net Charges
										Total Charges	Less Excise Taxes	
				660906	HM600	D20057	R0009	00000	000000	44.40	2.99	41.41
			Wildlife	7185-4623								0.00
700008	8	429565	Rowing Crew	660906	HM500	D30019	00000	00000	000000	42.36	2.59	39.77
700022	25	429590	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	36.84	2.50	34.34
700131	36	1187946	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	365.10	29.47	335.63
700126	101	901078	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	256.36	21.56	234.80
700120	Bus 1	901065	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			0.00
700121	Bus 2	400399	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			52.56
700121	Bus 3	404020	Pool Vehicle	660906	HM500	D30019	00000	00000	000000			549.72
00089	Bus 4	403110	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	57.37	4.81	163.73
00090	Bus 5	429585	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	599.07	49.35	100.86
00128	Bus 6	436431	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	178.39	14.66	1511.41
00092	Bus 7	901066	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	109.75	8.89	133.83
00117	Bus 7	901066	Pool Vehicle	660901	HM500	D30019	00000	00000	000000	1645.24		26.67
00130	46	419366	Coral Sea	660903	HM500	D20086	P0110	00000	000000	28.57	1.90	144.62
0064	67	901079	Geology	660903	HM500	D20048	RS016	00000	000000	154.77	8.66	128.33
0065	68	901073	Geology	660903	HM500	D20048	RS016	00000	000000	136.99		0.00
0127	83	429591	Geology	660903	HM500	D20048	RS016	00000	000000			299.62
0085	88	901052	Geology	660903	HM500	D20048	RS016	00000	000000			187.46
0074	77	419399	Motor Pool	660901	HM500	D30019	00000	00000	000000	95.59	5.97	89.62
0077	80	429579	Marine Lab	660903	TU006	D20086	00000	00000	000000	199.96	12.50	187.46
0129	0218	1170218	UPD	660901	HM600	D40019	R0042	00000	000000			0.00
0099	Extra Card		Plant Op-Cox	660901	HM500	D30019	00000	00000	000000			
0100	Extra Card		Plant Op-Hart	660901	HM500	D30019	00000	00000	000000			
0101	Extra Card		Plant Op-Fields	660901	HM500	D30019	00000	00000	000000			
0102	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.					000000			0.00
0103	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.					000000			0.00
0114	Extra Card		Marine Lab Gas Can	660903	TU014	D20086	00000	00000	000000			
TOTALS										176.00		2129.52



CA HUMBOLDT STATE UNIV
INVOIC REPORT

HUMBOLDT STATE UNIV
GAIL FINNEY
HARFST ST
UTA CA 95521-8222

ACCOUNT NUMBER 86901-3045

CLOSING DATE 10-24-2005

ARD MBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700008	10-09 15:24	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00105501	1	UNLD	9.87	26.84	1.81
700008	10-09 19:13	IN	2782 CENTRAL AVE MCKINLEYVILLE CA	00625847	1	UNLD	6.45	17.56	1.18
	<i>WL</i>		CA HUMBOLDT STATE UNIV				16.32	44.40	2.99
			TOTAL FOR CARD 700008						
700064	09-27 15:55	IN	5000 WEST END ROAD ARCATA CA	00644586	1	UNLD	10.39	28.57	1.90
	<i>Geo</i>		CA HUMBOLDT STATE UNIV				10.39	28.57	1.90
			TOTAL FOR CARD 700064						
700065	09-28 14:23	IN	5000 WEST END ROAD ARCATA CA	00675358	1	UNLD	6.40	17.61	1.17
700065	10-02 15:43	IN	5000 WEST END ROAD ARCATA CA	00901679	1	UNLD	13.68	37.63	2.50
700065	10-07 13:17	IN	4175 BROADWAY EUREKA CA	00569538	1	UNLD	17.24	50.00	3.15
700065	10-09 15:37	IN	5000 WEST END ROAD ARCATA CA	00109140	1	UNLD	18.21	49.53	3.33
	<i>Geo</i>		CA HUMBOLDT STATE UNIV				55.53	154.77	10.15
			TOTAL FOR CARD 700065						
700077	10-17 11:02	CH	101 MAIN ST TRINIDAD CA	2806547	8	UNLD	10.02	29.37	1.83
700077	10-18 12:20	CH	101 MAIN ST TRINIDAD CA	2806769	8	UNLD	22.60	66.22	4.14
	<i>ML</i>		CA HUMBOLDT STATE UNIV				32.62	95.59	5.97
			TOTAL FOR CARD 700077						
700090	10-09 18:46	IN	5000 WEST END ROAD ARCATA CA	00678365	1	DISL	19.78	57.37	4.81
	<i>Pool</i>		CA HUMBOLDT STATE UNIV				19.78	57.37	4.81
			TOTAL FOR CARD 700090						
700092	09-25 11:41	IN	5000 WEST END ROAD ARCATA CA	00523821	1	DISL	35.26	105.77	8.57
700092	10-10 17:41	IN	5000 WEST END ROAD ARCATA CA	00584258	1	DISL	25.05	72.62	6.09
	<i>Pool</i>		CA HUMBOLDT STATE UNIV				60.31	178.39	14.66
			TOTAL FOR CARD 700092						
700117	09-23 15:50	IN	5000 WEST END ROAD ARCATA CA	00485422	1	DISL	21.40	64.18	5.20
700117	10-06 17:42	SH	1401 G STREET ARCATA CA	0777359	8	DISL	15.19	45.57	3.69
	<i>Pool</i>		CA HUMBOLDT STATE UNIV				36.59	109.75	8.89
			TOTAL FOR CARD 700117						
700120	09-24 12:29	SH	1780 SHERMAN AVE NORTH BEND OR	0750976	1	DISL	28.94	92.00	7.03
700120	09-25 18:37	IN	5000 WEST END ROAD ARCATA CA	00476358	1	DISL	36.17	108.50	8.79
700120	10-02 12:11	IN	5000 WEST END ROAD ARCATA CA	00527209	1	DISL	30.50	91.47	7.41
700120	10-14 16:12	IN	5000 WEST END ROAD ARCATA CA	00680824	1	DISL	25.66	73.13	6.24
	<i>Pool</i>		CA HUMBOLDT STATE UNIV				121.27	365.10	29.47
			TOTAL FOR CARD 700120						
700121	09-24 15:48	IN	5000 WEST END ROAD ARCATA CA	00693052	1	DISL	20.79	62.35	5.05
700121	09-29 17:44	IN	5000 WEST END ROAD ARCATA CA	00002414	1	DISL	30.14	90.39	7.32
700121	10-21 09:59	IN	5000 WEST END ROAD ARCATA CA	00833501	1	DISL	12.20	33.42	2.96
700121	10-22 16:29	IN	5000 WEST END ROAD ARCATA CA	00680752	1	DISL	25.62	70.20	6.23
	<i>Pool</i>		CA HUMBOLDT STATE UNIV				88.75	256.36	21.56
			TOTAL FOR CARD 700121						
700126	10-16 11:31	IN	5000 WEST END ROAD ARCATA CA	00026714	1	UNLD	13.64	36.84	2.50
	<i>Pool</i>		CA HUMBOLDT STATE UNIV				13.64	36.84	2.50
			TOTAL FOR CARD 700126						

MESSAGE CODES: 1-ELECTRONIC SALE WITH AUTHORIZATION 2-KEYED SALE WITH AUTHORIZATION 4-ELECTRONIC SALE WITHOUT AUTHORIZATION
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CA HUMBOLDT STATE UNIV
INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER 86901-3045

CLOSING DATE 10-24-2006

BALANCE RANGE	PERIODIC RATE (MONTHLY)	ANNUAL PERCENTAGE RATE	MONTHLY MINIMUM	BALANCE SUBJECT TO FINANCE CHARGE
10-\$	1.7500%	21.00%		

SEND INQUIRIES TO:
VOYAGER FLEET SYSTEMS INC
P.O. BOX 790049
HOUSTON TX 77279-0049
832.987.8581

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700127	10-03 15:38	IN	5000 WEST END ROAD ARCATA CA	00776253	1	UNLD	11.18	30.76	2.05
700127	10-04 14:33	SH	1125 4TH ST EUREKA CA	0015313	8	UB57	2.24	6.59	0.41
700127	10-07 17:51	SH	1125 4TH ST EUREKA CA	0020511	8	UB57	25.51	75.00	4.67
700127	10-08 10:41	SS	1021 MURRAY RD MCKINLEYVILLE CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700127	104100	8	UNLD	8.38	24.64	1.53
	<i>Cleo</i>						47.31	136.99	8.66
700128	10-02 18:29	IN	5000 WEST END ROAD ARCATA CA	00580555	1	DISL	29.27	86.61	7.11
700128	10-06 15:11	EM	37047 MAIN STREET BURNEY CA	GJV0537	1	DISL	22.44	63.26	5.45
700128	10-08 11:20	SH	HWY 97 MACDOEL CA	0097576	1	DISL	30.95	90.04	7.52
700128	10-08 18:13	IN	5000 WEST END ROAD ARCATA CA	00165126	1	DISL	30.00	86.97	7.29
700128	10-12 17:45	IN	5000 WEST END ROAD ARCATA CA	00255509	1	DISL	7.38	21.05	1.79
700128	10-19 16:48	IN	5000 WEST END ROAD ARCATA CA	00424483	1	DISL	19.80	56.04	4.81
700128	10-21 09:52	SH	745-750 RACHEL DR DOYLE CA	0826628	1	DISL	28.82	95.10	7.00
700128	10-22 16:46	CH	HWAY 3 WEAVERVILLE CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700128	9411142	8	DISL	34.49	100.00	8.38
	<i>Pool</i>						203.15	599.07	49.35
700129	09-24 14:22	SH	1401 G STREET ARCATA CA	0740506	8	UB57	5.60	16.75	1.02
700129	09-25 06:43	SH	1401 G STREET ARCATA CA	0742049	8	UB57	3.32	9.95	0.61
700129	09-26 04:45	SH	1401 G STREET ARCATA CA	0744771	8	UB57	2.95	8.84	0.54
700129	09-27 06:07	SH	1401 G STREET ARCATA CA	0748020	8	UB57	4.16	12.24	0.76
700129	09-28 06:15	SH	1401 G STREET ARCATA CA	0750992	8	UB57	3.92	11.54	0.62
700129	10-01 14:23	SH	1401 G STREET ARCATA CA	0761437	8	UNLD	3.41	10.04	0.62
700129	10-04 23:25	CH	1605 GIUNTOLINI ARCATA CA	3506513	8	UNLD	5.22	15.25	0.96
700129	10-07 02:59	SH	1401 G STREET ARCATA CA	0778456	8	UB57	7.64	22.48	1.40
700129	10-10 06:53	SH	1401 G STREET ARCATA CA	0786384	8	UB57	6.89	20.26	1.26
700129	10-11 14:31	SH	1401 G STREET ARCATA CA	0790535	8	UB57	3.13	9.21	0.57
700129	10-15 02:39	SH	1401 G STREET ARCATA CA	0801050	8	UB57	5.51	15.98	1.01
700129	10-17 14:37	SH	1401 G STREET ARCATA CA	0807123	8	UB57	4.90	14.01	0.90
700129	10-21 02:17	SH	1401 G STREET ARCATA CA	0818971	8	UB57	6.80	19.46	1.24
700129	10-22 14:27	SH	1401 G STREET ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700129	0822841	8	UB57	4.87	13.95	0.89
	<i>VPD</i>						68.32	199.96	12.50
700131	09-24 17:55	SH	1401 G STREET ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700131	0741397	8	UB57	14.17	42.36	2.59
	<i>Pool</i>						14.17	42.36	2.59
			GRAND TOTAL				788.15	2,305.52	176.00

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VOYAGER GAS CARD ASSIGNMENT

VOYAGER BILLING BREAKDOWN

November 2006

INV #869013045611

Voyager

Card ID #	Vehicle #	License #	Department	Account	Fund	Dept.	Program	Class	Project	Total Charges	Less Excise Taxes	Net Charges
700008	8	429565	Wildlife	660906	HM600	D20057	R0009	00000	000000	0.00	0.00	0.00
700022	25	429590	Rowing Crew	7185-4623						0.00	0.00	0.00
700131	36	1187946	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700126	101	901078	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	133.16	9.39	123.77
700120	Bus 1	901065	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	81.98	7.31	74.67
700121	Bus 2	400399	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	323.24	28.45	294.79
700089	Bus 3	404020	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	62.45	5.54	56.91
700090	Bus 4	403110	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	602.44	46.21	556.23
700128	Bus 5	429585	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	391.16	34.93	356.23
700092	Bus 6	436431	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	171.76	15.47	156.29
700117	Bus 7	901066	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	58.83	5.22	53.61
(Pool Vehicle Total)										1825.02	152.52	1672.50
700130	46	419366	Coral Sea	660901	HM500	D20086	P0110	00000	000000	0.00	0.00	0.00
700064	67	901079	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
700065	68	901073	Geology	660903	HM500	D20048	RS016	00000	000000	71.55	5.04	66.51
700127	83	429591	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
700085	88	901052	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
(Geology Total)										71.55	5.04	66.51
700074	77	419399	Motor Pool	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700077	80	429579	Marine Lab	660903	TU014	D20086	00000	00000	000000	71.70	4.64	67.0
700129	02-18	1170218	UPD	660901	HM600	D40019	R0042	00000	000000	143.15	9.35	133.7
700099	Extra Card		Plant Op-Cox	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700100	Extra Card		Plant Op-Hart	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700101	Extra Card		Plant Op-Fields	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700102	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
700103	Extra Card		Plant Op-Garage	Auto Shop to notify Accounting when issued.								
700114	Extra Card		Marine Lab Gas Can	660903	TU014	D20086	00000	00000	000000	0.00	0.00	0.00
TOTALS										2111.42	171.55	
CREDIT												
BALANCE												

DATE 12-14-06
 CK NO. 457002
2006

PAID



CA HUMBOLDT STATE UNIV
INVOICE REPORT

11-24-2006

CLOSING DATE

86901-3045

ACCOUNT NUMBER



CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700065	11-14 14:54	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700065	00277623	1	UNLD	27.52	71.55	5.04
700077	Geo 11-14 09:52	CH	101 MAIN ST TRINIDAD CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700077	2805427	8	UNLD	25.34	71.70	4.64
700089	ML 10-23 16:56	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700089	00817941	1	DISL	22.80	62.45	5.54
700090	Pool 10-30 18:41	IN	5000 WEST END ROAD ARCATA CA	00546717	1	DISL	28.63	78.42	6.96
700090	11-17 21:34	SH	1579 S MAIN STREET WILLITS CA	0707323	1	DISL	33.46	95.00	8.13
700090	11-18 11:13	DS	341 GREEN VALLEY RD EL DORADO HILLS CA	00426790	8	DISL	26.80	75.00	6.51
700090	11-18 11:17	DS	341 GREEN VALLEY RD EL DORADO HILLS CA	00733660	8	DISL	7.10	20.00	1.73
700090	11-18 15:58	SH	25712 WARD DRIVE KETTLEMAN CTY CA	0117879	8	DISL	23.44	75.00	5.70
700090	11-18 16:00	SH	25712 WARD DRIVE KETTLEMAN CTY CA	0117903	8	DISL	12.50	40.00	3.04
700090	11-18 18:17	SH	9069 GRAPEVINE ROAD WEST LEBEC CA	0722264	8	DISL	14.86	52.00	4.73
700090	11-19 18:25	SH	4530 TORRANCE BLVD TORRANCE CA	0726224	8	UB77	25.87	75.00	2.65
700090	11-19 18:28	SH	4530 TORRANCE BLVD TORRANCE CA	0726240	8	UB77	14.49	42.02	3.15
700090	11-20 23:15	SH	4530 TORRANCE BLVD TORRANCE CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700090	0732701	8	UB77	17.24	50.00	46.21
700092	Pool 11-07 20:44	IN	5000 WEST END ROAD ARCATA CA	00937326	1	DISL	20.81	56.19	5.06
700092	11-11 17:07	IN	5000 WEST END ROAD ARCATA CA	00697399	1	DISL	15.00	40.51	3.65
700092	11-13 18:16	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700092	00106332	1	DISL	27.91	75.06	6.76
700117	Pool 10-27 14:01	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700117	00258334	1	DISL	63.62	171.76	15.47
700120	Pool 10-30 13:48	IN	576 T STREET EUREKA CA	00749492	1	DISL	21.47	58.83	5.22
700120	11-04 17:20	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700120	00196151	1	DISL	21.47	58.83	5.22
700121	Pool 10-27 09:37	CH	781 S MAIN ST WILLITS CA	7100947	8	DISL	30.08	81.98	7.31
700121	10-29 15:22	SH	777 STEELE LANE SANTA ROSA CA	0092841	8	DISL	22.14	61.97	5.38
700121	10-29 17:04	CH	781 S MAIN ST WILLITS CA	7101559	8	DISL	26.79	75.00	6.51
700121	11-06 21:50	IN	576 T STREET EUREKA CA	00907707	1	DISL	22.64	63.38	5.30
700121	11-12 12:58	IN	5000 WEST END ROAD ARCATA CA CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700121	00999940	1	DISL	31.81	85.86	7.73
700126	Pool 11-05 14:29	SH	1401 G STREET ARCATA CA	0863894	8	UB57	13.98	39.15	2.56
700126	11-18 06:49	SH	1300 W WOODH-5 WILLOWS CA	1310911	8	UNLD	17.11	45.51	3.13
700126	11-19 14:46	DS	2026 EUREKA WAY REDDING CA	00002394	8	UNLD	20.20	48.50	3.79

5.38
6.51
5.30
7.73
3.33
28.45
2.56
3.13
3.79

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CA HUMBOLDT STATE UNIV INVOICE REPORT

HUMBOLDT STATE UNIV
TIN GAIL FINNEY
101 E HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER

86901-3045

CLOSING DATE

11-24-2006

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700126				51.29	133.16	9.39
700128	10-28 18:05	IN	5000 WEST END ROAD ARCATA CA	00581528	1	DISL		73.05	6.48
700128	11-10 11:54	CH	50 W LAKE MENDOCINO DR UKIAH CA	1808771	8	DISL	26.67	100.12	8.69
700128	11-12 09:44	SS	2428 JUNIPERO SERRA BLVD DALY CITY CA	094426	8	DISL	35.77	101.64	9.29
700128	11-12 18:05	IN	5000 WEST END ROAD ARCATA CA	00988863	1	DISL	38.22	116.35	10.47
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700128				143.76	391.16	34.93
700129	10-25 14:33	SH	1401 G STREET ARCATA CA	0831032	8	UB57	5.76	16.14	1.05
700129	10-28 06:27	SH	1401 G STREET ARCATA CA	0839647	8	UB57	7.84	21.96	1.43
700129	10-28 14:33	SH	1401 G STREET ARCATA CA	0843680	8	UB57	7.48	20.96	1.37
700129	11-01 02:11	SH	1401 G STREET ARCATA CA	0851055	8	UB57	4.97	13.93	0.91
700129	11-05 17:13	SH	1401 G STREET ARCATA CA	0864405	8	UB57	3.70	10.36	0.68
700129	11-14 11:06	SH	1401 G STREET ARCATA CA	0889055	8	UB57	9.50	26.59	1.74
700129	11-16 14:17	SH	1401 G STREET ARCATA CA	0896365	8	UB57	3.34	9.35	0.61
700129	11-18 07:30	SH	1401 G STREET ARCATA CA	0902403	8	UB57	4.05	11.34	0.74
700129	11-20 13:59	SH	1401 G STREET ARCATA CA	0908269	8	UB57	4.47	12.52	0.82
			CA HUMBOLDT STATE UNIV TOTAL FOR CARD 700129				51.11	143.15	9.35
			GRAND TOTAL				758.47	2,111.42	171.55

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VOYAC

MENT

VOYAGER BILLING BREAKDOWN

December 2006

INV #869013045612

Card ID #	V.	Department	Account	Fund	Dept.	Program	Class	Project	New Purchases		Net Charges
									Total Charges	Less Excise Taxes	
700008	8	Wildlife	660906	HM600	D20057	R0009	00000	000000	0.00	0.00	0.00
700022	25	Rowing Crew	7185-4623						0.00	0.00	0.00
700131	36	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700126	101	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700120	Bus 1	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	293.92	24.13	269.79
700121	Bus 2	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700089	Bus 3	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	57.20	5.09	52.11
700090	Bus 4	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	340.48	29.91	310.57
700128	Bus 5	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700092	Bus 6	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	119.20	10.17	109.03
700117	Bus 7	Pool Vehicle	660906	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
(Pool Vehicle Total)											
700130	46	Coral Sea	660901	HM500	D20086	P0110	00000	000000	0.00	0.00	0.00
700064	67	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
700065	68	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
700127	83	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
700085	88	Geology	660903	HM500	D20048	RS016	00000	000000	0.00	0.00	0.00
(Geology Total)											
700074	77	Motor Pool	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700077	80	Marine Lab	660903	HM500	D20086	00000	00000	000000	122.52	8.18	114.34
700129	0218	UPD	660901	HM600	D40019	R0042	00000	000000	118.16	7.89	110.27
700099	Extra Card	Plant Op-Cox	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700100	Extra Card	Plant Op-Hart	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700101	Extra Card	Plant Op-Fields	660901	HM500	D30019	00000	00000	000000	0.00	0.00	0.00
700102	Extra Card	Plant Op-Garage	Auto Shop to notify Accounting when issued.								
700103	Extra Card	Plant Op-Garage	Auto Shop to notify Accounting when issued.								
700114	Extra Card	Marine Lab Gas Can	660903	HM500	D20086	00000	00000	000000	0.00	0.00	0.00
TOTALS									1051.48	85.37	1051.48

966.11



CA HUMBOLDT STATE UNIV
INVOICE REPORT

CA HUMBOLDT STATE UNIV
ATTN GAIL FINNEY
ONE HARPST ST
ARCATA CA 95521-8222

ACCOUNT NUMBER

86901-3045

CLOSING DATE

12-24-2005

CARD NUMBER	TRANS DATE/TIME	VEN ID	TRANSACTION LOCATION/DESCRIPTION	TRANS ID	MSG ID	PROD CD	QUANTITY	TRANS AMOUNT	EXEMPTED TAXES
700077	11-27 10:03	CH	101 MAIN ST TRINIDAD CA	2808024	8	UNLD	18.64	52.76	3.41
700077	12-19 13:12	CH	1605 GIUNTOLLIN ARCATA CA	3529876	8	UNLD	26.04	69.76	4.77
<i>ML</i>			CA HUMBOLDT STATE UNIV				44.68	122.52	8.18
			TOTAL FOR CARD 700077						
700089	11-27 17:08	IN	5000 WEST END ROAD ARCATA CA	00759323	1	DISL	20.96	57.20	5.09
<i>Pool</i>			CA HUMBOLDT STATE UNIV				20.96	57.20	5.09
			TOTAL FOR CARD 700089						
700090	11-21 17:04	PI	29025 W PLAZA DR SANTA NELLA CA	00919947	8	DISL	44.60	121.37	10.84
700090	11-22 12:30	IN	& CASINO BROOKS CA	00562478	1	DISL	26.32	75.00	6.40
700090	11-22 12:34	IN	& CASINO BROOKS CA	00316057	1	DISL	14.89	42.44	3.62
700090	11-22 19:28	IN	576 T STREET EUREKA CA	00195794	1	DISL	37.25	101.67	9.05
<i>Pool</i>			CA HUMBOLDT STATE UNIV				123.06	340.48	29.91
			TOTAL FOR CARD 700090						
700092	12-03 17:35	IN	5000 WEST END ROAD ARCATA CA	00705432	1	DISL	15.99	45.58	3.89
700092	12-04 18:43	IN	5000 WEST END ROAD ARCATA CA	00484344	1	DISL	25.84	73.62	6.28
<i>Pool</i>			CA HUMBOLDT STATE UNIV				41.83	119.20	10.17
			TOTAL FOR CARD 700092						
700120	11-30 20:40	SH	2020 DESCHUTES RD ANDERSON CA	0037481	8	DISL	25.87	75.00	6.29
700120	12-01 13:54	SH	2401 SUNRISE BLVD RANCHO CORDOVA CA	0405977	8	DISL	25.00	75.00	6.08
700120	12-02 13:11	SH	1300 W WOODY/1-5 WILLOWS CA	1337476	8	DISL	24.20	75.00	5.88
700120	12-02 18:36	IN	5000 WEST END ROAD ARCATA CA	00382447	1	DISL	24.19	68.92	5.88
<i>Pool</i>			CA HUMBOLDT STATE UNIV				99.26	293.92	24.13
			TOTAL FOR CARD 700120						
700129	11-24 10:01	SH	1401 G STREET ARCATA CA	0915512	8	UB57	3.43	9.61	0.63
700129	11-28 12:21	SH	1401 G STREET ARCATA CA	0924241	8	UB57	4.10	11.41	0.75
700129	12-01 12:30	SH	1401 G STREET ARCATA CA	0933804	8	UB57	7.12	19.79	1.30
700129	12-02 08:47	SH	1401 G STREET ARCATA CA	0936617	8	UB57	2.64	7.36	0.46
700129	12-05 08:53	SH	1401 G STREET ARCATA CA	0945121	8	UB57	4.11	11.26	0.75
700129	12-08 08:49	SH	1401 G STREET ARCATA CA	0954750	8	UB57	4.86	13.13	0.89
700129	12-13 08:50	SH	1401 G STREET ARCATA CA	0969568	8	UB57	5.92	15.87	1.08
700129	12-15 12:12	SH	1401 G STREET ARCATA CA	0976985	8	UB57	5.05	13.45	0.92
700129	12-19 14:05	SH	1401 G STREET ARCATA CA	0987834	8	UB57	5.98	16.28	1.09
<i>Pool</i>			CA HUMBOLDT STATE UNIV				43.21	118.16	7.89
			TOTAL FOR CARD 700129						
			GRAND TOTAL				373.00	1,051.48	85.37

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Integrated Waste Management Plan for Humboldt State University

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[General Agency Information](#)

Reported Programs

1. Diversion

Comparisons:
[Three-Year Multiple Org Summary](#)

2. Promotion

3. Procurement

4. Narrative Responses

Part III, Section 1: Diversion Program Activities

2002 Actual Tonnage Reported Diversion Program Summary

Diversion Program Summary	
Total Tonnage Diverted	647.4
Total Tonnage Disposed	601.0
Total Tonnage Generated	1,248.4
Overall Diversion Percentage	51.9%

Program Activities	Existing	Planned/Expanding	Actual Tonnage
Source Reduction			
<u>Material Exchange</u>	X		16.48
Recycling			
<u>Beverage Containers</u>	X		1.5
<u>Cardboard</u>	X		45
<u>Glass</u>	X		44.35
<u>Newspaper</u>	X		21.34
<u>Office Paper (white)</u>	X		19.2
<u>Office Paper (mixed)</u>	X		67.04
<u>Plastics</u>	X		9.28
<u>Scrap Metal</u>	X		5.12
Composting			
<u>Xeriscaping, grasscycling</u>	X		12.85
<u>On-site composting/mulching</u>	X		58.58
<u>Self-haul greenwaste</u>	X		149
<u>Food waste composting</u>	X		24.48
Special Waste			
<u>White/brown goods</u>	X		0.64
<u>Wood waste</u>	X		5.53
<u>Concrete/asphalt/rubble (C&D)</u>	X		167



Integrated Waste Management Plan for Humboldt State University

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Reported Programs

1. Diversion

Comparisons:
[Three-Year Multiple Org Summary](#)

2. Promotion

3. Procurement

4. Narrative Responses

Part III, Section 1: Diversion Program Activities

2006 Actual Tonnage Reported Diversion Program Summary

Diversion Program Summary

Total Tonnage Diverted	3,634.5
Total Tonnage Disposed	1,036.2
Total Tonnage Generated	4,670.7
Overall Diversion Percentage	77.8%

Program Activities	Actual Tonnage	
	Existing	Planned/Expanding
Source Reduction		
Business Source Reduction	X	96.2
Material Exchange	X	33
Salvage Yards	X	8
Recycling		
Beverage Containers	X	12
Cardboard	X	58.3
Glass	X	29.3
Newspaper	X	18.7
Office Paper (mixed)	X	71.97
Plastics	X	1.55
Scrap Metal	X	19
Special Collection Events	X	2.5
Composting		
Xeriscaping, grasscycling	X	46
On-site composting/mulching	X	134
Self-haul greenwaste	X	63
Food waste composting	X	20
Special Waste		
Tires	X	2
Wood waste	X	19



The following table is an attempt to put the results of this inventory in the broader context of inventories to date in higher education.

Table 1

College / University Ranking by GHG Emissions Per Campus User

	College / University (ranked by GHG emissions per campus user)	Per Capita Metric Tonnes CO ₂ e	Total Emissions Metric Tonnes CO ₂ e*	
2000	Yale University ^{xx}	12.6	284,663	
	Smith College ^{xxi}	8.7	33,025	
	Oberlin College	8.4	50,417	
2000	University of Vermont	6.2	63,900	
2001	Oregon State University	5.1	112,620	F, P, SW, E, S, A
	University of California, San Diego ^{xxii}	3.38	178,896	
	OUS (all institutions, estimated total emissions)	3.00	253,544	
	Tulane University	2.8	52,981	
2004	Oregon Institute of Technology	2.47	7,399	F, P, SW, E, S
	OUS (all institutions, core emissions only)	2.31	195,087	
2004	Portland State University	1.81	33,627	F, SW, E, S
	Tufts University	1.3	17,783	
2004	University of Oregon	1.29	29,610	F, SW, S, E
	University of Colorado – Boulder	1.0	34,567	
2004	Southern Oregon University	0.95	5,320	F, SW, E, S
2004	Western Oregon University	0.92	5,090	F, P, SW, E, S
	Eastern Oregon University	0.46	1,421	

* Baseline years vary: 2004 for all OUS institutions; 2002 for Yale; 2000 for Oberlin; 1998 for Tufts; 2003 for UCSD; 2000 for Tulane; 2004 for Smith; 1990-2000 average for University of Vermont; unknown for other institutions. All OUS data based on this report, using 2004 core emissions only (stationary fuel use, indirect emissions from electricity, fleet vehicles), unless specified. OUS emissions normalized by *modified headcount*, as explained elsewhere in this report. See endnotes for sources for non OUS institutions.

It is crucially important to note that, unlike the intra-OUS comparisons, this table does not provide apples-to-apples comparisons. In addition to the diverse circumstances of the institutions mentioned here – including differences of climate, age and composition of infrastructure, square footage per campus user and other factors – *there is no assurance that the respective GHG inventory methodologies were the same across these varied studies.* This graph is provided only for general sense of scale.

For example, the only close apples-to-apples comparison would be Yale's number (12.6 mt CO₂e) to OSU's *core emissions plus travel and commute* (5.79). This OSU number is slightly different from what appears in the table for OSU and other OUS institutions since we can only estimate emissions corresponding to those specific boundaries for institutions other than OSU.

Table 2

OUS Rough Cross-Institution Comparisons

	EOU	OIT	OSU	PSU	SOU	UO	WOU
MTCO ₂ e / square foot	4.1	23.0	38.1	4.3	8.1	12.5	9.9
square foot / headcount	245	236	335	198	66	1,108	50
MTCO ₂ e / headcount	0.46	2.47	5.79	0.38	0.24	6.29	0.22

Historical Summary

Academic Year Average FTEF

Subject	Description	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
College of Arts, Humanities & Soc Science											
AH	Arts and Humanities	1.02	0.88	0.20	0.94	0.94	0.96	0.63	0.30	0.30	0.00
BSS	Behavioral & Social Sciences	0.84	0.72	0.68	0.04	0.00	0.02	0.02	0.26	0.23	0.00
AHSS	Arts, Humanities & Social Sci								0.33	0.08	0.30
ANTH	Anthropology	5.68	6.17	5.46	6.20	6.15	6.06	5.98	5.91	5.96	5.93
ART	Art	20.29	19.28	19.54	20.81	19.74	19.86	18.83	19.47	19.23	18.64
COMM	Communication	9.47	9.33	9.03	10.31	9.32	9.74	9.47	9.85	9.40	10.10
ENGL	English	24.14	24.49	22.85	22.99	21.75	23.14	21.38	20.43	21.39	19.97
LING	Linguistics	0.21	0.27	0.22	0.10	0.23	0.13	0.15	0.10	0.12	0.11
GEOG	Geography	4.52	5.73	5.59	5.74	5.68	4.91	4.82	4.23	4.61	5.71
HIST	History	8.27	8.00	7.49	7.99	7.93	8.20	6.41	5.45	6.31	6.97
JMC	Journalism & Mass Comm	4.79	6.96	5.99	6.37	5.37	5.36	5.37	5.51	5.49	5.77
MUS	Music	14.22	13.88	13.97	13.22	12.47	12.33	11.87	11.82	13.66	12.63
NAS	Native American Studies	3.74	4.00	4.25	3.95	3.92	4.00	2.62	3.21	3.29	3.09
PHIL	Philosophy	7.67	7.85	8.35	8.66	8.66	8.48	7.43	6.34	6.70	7.42
PSCI	Political Science	7.16	7.26	8.36	7.97	8.28	7.39	6.91	6.20	7.16	7.80
RS	Religious Studies	2.30	3.64	3.10	3.46	3.40	3.32	2.86	3.29	2.90	2.67
SOC	Sociology	8.17	7.76	8.16	7.49	8.22	9.05	7.98	7.39	7.76	6.75
THEA	Theater Arts	13.23	13.27	12.80	13.23	13.09	12.28	11.05	10.63	11.68	10.30
ES	Ethnic Studies	1.48	1.59	2.39	2.96	3.01	3.03	2.90	3.01	3.30	3.12
FREN	French	2.32	2.12	1.88	2.03	1.87	2.14	1.83	2.05	2.11	2.16
GERM	German	1.69	1.93	1.97	2.10	1.96	1.71	1.68	1.82	1.78	2.03
INTL	International Studies						0.12	0.21	0.11	0.13	0.36
SPAN	Spanish	5.46	6.18	5.69	5.98	5.98	5.83	5.56	4.47	5.06	5.06
WLC	World Languages and Cultures	0.32	0.35	0.37	0.61	0.66	1.32	1.33	1.35	1.27	0.94
WS	Women's Studies	1.43	2.29	2.59	3.24	2.95	3.08	2.91	3.31	3.39	3.33
IS	Interdisciplinary Studies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
College of AHSS Totals:		148.39	153.93	150.94	156.39	151.56	152.46	140.20	136.80	143.30	141.15
College of Natural Resources & Sciences											
BIOL	Biology	13.57	14.95	14.00	15.69	12.68	14.10	12.28	12.66	13.89	14.33
BOT	Botany	8.48	9.38	8.95	8.68	7.75	8.88	7.60	8.96	7.43	6.52
ZOOL	Zoology	9.95	8.53	8.44	7.22	7.27	6.99	6.39	6.88	7.08	6.09
CHEM	Chemistry	10.89	11.32	11.01	10.31	10.68	9.69	10.09	9.86	10.75	11.23
CIS	Computer Info Systems	9.14	9.49	9.44	10.26	10.01	7.42	5.97	5.47	5.66	4.62
CS	Computer Science	0.32	0.14	0.16	0.46	0.53	0.98	1.32	1.06	1.62	1.37
ENGR	Engineering	11.87	11.02	11.88	10.79	10.39	9.51	9.71	9.81	10.09	7.89

Historical Summary

Academic Year Average FTEF

Subject	Description	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
ENVS	Environmental Science	0.10	1.03	0.53	0.94	0.75	1.08	1.02	0.87	0.44	0.52
NR	Natural Resources	1.92	1.78	1.76	1.38	0.55	0.00	0.00	0.00	0.36	0.15
NRPI	NR Planning & Interpretation	6.64	7.60	7.43	6.74	7.37	6.80	6.98	5.62	7.54	5.80
FISH	Fisheries	5.04	5.42	5.82	6.52	6.40	5.16	5.18	5.66	6.54	4.16
FOR	Forestry	6.72	7.15	7.74	7.45	7.45	7.57	6.40	6.51	6.21	6.51
WSHD	Watershed Management	1.01	0.97	1.50	1.00	0.87	1.93	1.69	1.03	1.04	1.01
GEOL	Geology	8.15	7.34	7.32	7.07	6.63	8.16	8.32	8.07	7.51	6.48
MATH	Mathematics	19.78	20.26	21.66	21.23	21.16	20.61	20.74	19.75	19.84	19.13
BIOM	Biometrics	1.17	2.22	2.84	3.13	3.52	2.92	2.59	2.09	2.05	2.57
STAT	Statistics	2.93	1.47	1.86	1.94	1.93	1.75	1.13	1.23	1.40	1.43
NURS	Nursing	10.98	11.01	11.19	11.11	10.16	11.76	10.02	9.91	10.20	9.58
OCN	Oceanography	3.83	4.20	3.53	4.24	4.03	4.03	3.20	3.13	3.69	3.63
PHSC	Physical Science	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHYX	Physics	7.04	6.28	6.82	7.12	7.05	7.04	5.94	6.52	6.40	6.63
PSYC	Psychology	17.70	17.18	16.53	18.18	18.56	18.69	16.77	16.18	15.75	14.36
RRS	Rangeland Resource Science	0.80	1.35	1.00	1.19	1.12	1.06	1.07	1.32	0.64	0.60
SOIL	Soils	1.71	1.47	1.73	1.85	1.48	1.27	1.23	1.45	1.35	1.31
SCI	Science	1.36	0.66	0.89	1.12	1.27	1.34	1.19	1.52	1.60	1.44
WLDF	Wildlife	8.06	6.58	8.05	7.56	8.36	7.73	8.32	6.45	6.08	6.76
College of NRS Totals:		169.17	168.81	172.12	173.14	167.96	166.48	155.14	152.03	155.13	144.09

College of Professional Studies

BA	Business Administration	9.71	9.67	9.19	8.95	7.47	7.84	6.96	7.54	7.43	8.27
ECON	Economics	2.80	4.09	3.35	3.32	3.95	3.99	4.24	4.23	3.43	3.70
MBA	Masters of Business Admin.	0.84	0.79	0.96	1.09	0.96	1.24	1.01	0.99	1.00	0.84
CD	Child Development	4.30	4.67	4.47	4.75	5.07	4.66	4.92	4.61	5.02	4.76
EDUC	Education	0.00	0.14	1.24	1.93	3.92	4.05	4.05	3.74	3.76	3.44
AS	Administrative Services	0.74	0.60	0.74	0.52	0.86	0.73	1.03	0.82	1.06	0.50
EED	Elementary Education	6.57	8.48	8.43	8.95	8.07	9.28	7.53	7.03	7.83	5.68
LSEE	Liberal Studies - Elementary Ed	1.37	0.85	1.13	0.80	1.33	0.97	0.95	1.23	1.10	1.03
SED	Secondary Education	5.78	5.29	6.15	6.99	5.42	5.57	4.82	5.19	5.72	3.52
SPED	Special Education	1.46	1.19	1.31	1.31	1.47	1.90	1.78	1.84	1.81	3.08
IT	Industrial Technology	3.37	3.46	3.08	3.23	1.98	2.64	2.69	3.17	2.82	3.19
HED	Health Education	2.68	2.37	2.58	2.54	2.19	2.49	1.91	1.32	1.59	1.37
KINS	Kinesiology	8.21	8.16	7.44	8.21	8.67	8.81	7.84	6.47	6.76	6.55
PE	Physical Education	26.69	22.14	23.34	23.63	24.24	24.45	23.59	23.03	26.04	6.74
REC	Recreational Studies	1.93	1.93	2.00	2.11	2.68	2.66	2.51	2.16	2.95	2.30
AIE	American Indian Education			0.70	1.14	1.39	2.17	1.11	0.73	0.66	0.33

Historical Summary

Academic Year Average FTEF

Subject	Description	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
LEAD	Leadership Studies					2.96	1.31	2.28	1.72	1.83	0.27
PS	Professional Studies	2.34	2.72	2.11	2.99	0.07	0.07	0.07	0.19	0.21	0.07
SPH	Speech & Hearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SW	Social Work	4.29	4.43	4.79	4.12	4.76	4.54	5.51	8.16	9.97	9.65
College of PS Totals:		83.08	80.99	82.99	86.56	87.48	89.37	84.79	84.17	91.00	65.27
College of All University											
SP	Special Programs	1.21	1.14	1.90	2.06	1.63	1.38	1.60	1.34	1.50	0.98
College of AU Totals:		1.21	1.14	1.90	2.06	1.63	1.38	1.60	1.34	1.50	0.98
UNIVERSITY TOTALS		401.85	404.87	407.94	418.15	408.62	409.67	381.73	374.33	390.92	351.49

COLLEGE FTEF SUMMARY

College of Arts, Humanities & Soc Science	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07
College of Natural Resources & Sciences	148.39	153.93	150.94	156.39	151.56	152.46	140.20	136.80	143.30	141.15
College of Professional Studies	169.17	168.81	172.12	173.14	167.96	166.48	155.14	152.03	155.13	144.09
College of All University	83.08	80.99	82.99	86.56	87.48	89.37	84.79	84.17	91.00	65.27
UNIVERSITY TOTALS		401.85	404.87	407.94	418.15	408.62	381.73	374.33	390.92	351.49

NOTE:

This data is from the CDPS Course Section Report. These figures represent the FTEF used to teach courses in each subject area. They will NOT match the CDPS FAD report since that report summarizes by department of appointment. These FTEF figures are used to generate Student/Faculty Ratios.

Historical Summary

Academic Year Average FTES by Subject

Subject	Description	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
College of Arts, Humanities & Soc Science											
AH	Arts and Humanities	19.2	13.1	10.6	2.0	14.3	13.2	14.9	9.2	3.8	2.2
BSS	Behavioral & Social Sciences	1.7	12.9	6.6	1.4	0.3	0.0	0.1	0.2	12.9	9.7
AHSS	Arts, Humanities & Social Sci								0.0	3.9	0.3
ANTH	Anthropology	161.9	149.5	135.0	127.7	136.0	129.2	143.8	152.3	148.8	148.5
ART	Art	311.9	316.1	314.2	325.2	326.2	344.7	348.2	342.0	343.3	325.8
COMM	Communication	206.7	192.8	187.7	197.1	194.6	186.0	204.0	198.1	211.0	207.3
ENGL	English	377.6	382.6	410.0	383.4	369.9	374.3	388.5	370.6	338.7	325.0
LING	Linguistics	0.1	0.6	1.1	0.5	0.2	0.5	0.4	0.4	0.2	0.5
GEOG	Geography	144.7	170.6	169.8	174.2	160.3	154.8	150.8	134.4	149.4	147.1
HIST	History	217.9	220.6	196.5	205.8	190.1	189.2	203.3	219.0	209.7	195.3
JMC	Journalism & Mass Comm	78.9	84.8	104.5	105.9	106.9	111.3	104.6	111.3	115.0	112.6
MUS	Music	241.1	234.7	231.7	226.9	215.5	218.8	227.1	241.0	229.7	225.9
NAS	Native American Studies	63.5	60.8	60.6	72.3	75.0	77.0	81.3	77.9	82.9	82.8
PHIL	Philosophy	154.2	156.9	153.8	159.8	164.6	160.8	156.8	153.5	140.8	154.7
PSCI	Political Science	171.9	172.5	163.1	175.0	170.2	182.7	187.5	192.1	178.0	187.0
RS	Religious Studies	87.4	61.3	86.6	91.3	92.8	96.0	94.4	100.9	93.5	92.9
SOC	Sociology	200.1	183.0	167.1	176.3	164.3	189.3	198.5	207.1	187.5	175.3
THEA	Theater Arts	204.9	204.7	213.4	206.0	211.5	219.4	221.8	200.8	179.8	165.4
ES	Ethnic Studies.	39.3	30.3	24.0	40.5	48.0	49.2	56.5	59.6	63.9	68.7
FREN	French	31.7	37.4	31.2	28.8	35.0	30.8	36.9	42.2	41.8	39.1
GERM	German	30.1	28.4	29.0	25.8	24.9	26.6	36.5	43.3	36.6	44.4
INTL	International Studies							3.1	3.4	3.8	4.0
SPAN	Spanish	115.6	114.0	125.0	115.7	117.9	127.2	130.9	101.5	102.0	117.4
WLC	World Languages and Cultures	4.3	3.1	3.4	5.0	8.7	13.2	16.6	20.2	15.9	20.0
WS	Women's Studies	43.0	32.4	38.4	53.0	56.2	68.4	70.8	82.3	82.9	82.5
IS	Interdisciplinary Studies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
College of AHSS Totals:		2907.3	2862.7	2862.8	2899.2	2882.9	2962.0	3076.8	3063.0	2975.4	2934.0
College of Natural Resources & Sciences											
BIOL	Biology	221.8	213.8	197.1	190.4	176.3	170.2	188.4	189.8	198.2	201.9
BOT	Botany	155.7	140.8	134.2	119.2	119.9	117.4	129.1	121.3	134.9	116.9
ZOOL	Zoology	145.3	139.9	116.5	115.8	96.6	82.5	100.4	94.6	99.2	93.6
CHEM	Chemistry	181.2	166.0	173.1	165.8	165.1	169.5	175.8	180.8	194.3	187.7
CIS	Computer Info Systems	171.2	205.7	205.9	173.6	173.0	144.0	110.3	93.0	85.7	75.0
CS	Computer Science	3.4	3.1	1.5	2.6	5.1	5.8	6.9	6.4	9.2	15.0
ENGR	Engineering	171.0	158.4	144.6	127.1	111.2	106.5	108.0	114.5	123.1	110.3
ENVS	Environmental Science		4.9	11.1	11.2	12.4	13.6	20.0	21.8	24.6	21.6
NR	Natural Resources	35.0	41.9	41.6	34.7	36.4	15.2	0.0	0.0	0.0	0.0

Historical Summary

Academic Year Average FTES by Subject

Subject	Description	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
NRPI	NR Planning & Interpretation	105.3	116.0	113.1	114.6	111.4	111.0	119.0	124.1	125.1	121.1
FISH	Fisheries	90.7	86.9	81.9	79.8	76.2	66.6	65.3	65.7	69.8	60.9
FOR	Forestry	119.7	120.9	110.9	113.5	94.5	91.5	93.2	105.0	96.2	88.6
WSDH	Watershed Management	14.0	16.1	14.7	16.2	15.5	15.2	19.0	20.8	14.2	12.3
GEOL	Geology	130.2	131.7	127.8	124.1	114.2	118.1	131.5	143.0	132.6	119.3
MATH	Mathematics	426.7	396.9	455.9	455.5	433.4	434.1	450.1	446.1	428.4	404.0
BIOM	Biometrics	21.9	25.2	49.2	53.2	53.3	57.4	55.9	60.7	49.6	48.9
STAT	Statistics	43.4	50.3	33.1	37.1	36.5	33.4	28.4	26.7	25.4	29.9
NURS	Nursing	83.1	88.4	87.9	86.8	88.5	82.1	95.5	97.7	104.2	109.2
OCN	Oceanography	66.7	64.7	60.4	57.6	62.3	55.9	54.1	45.2	49.1	40.5
PHSC	Physical Science	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHYX	Physics	112.6	106.8	103.3	96.1	93.7	110.1	101.1	90.6	105.2	92.1
PSYC	Psychology	357.6	348.5	347.8	349.1	366.0	354.6	356.8	368.8	346.4	348.1
RRS	Rangeland Resource Science	7.9	5.2	8.9	7.9	6.7	7.0	5.5	10.1	8.4	7.9
SOIL	Soils	21.1	25.5	25.2	25.3	18.6	19.4	19.1	23.8	22.2	20.6
SCI	Science	24.3	26.1	16.0	11.0	11.6	14.8	14.0	13.5	18.2	20.7
WLDF	Wildlife	139.4	121.2	113.3	108.1	109.0	111.4	116.2	114.1	102.3	98.5
College of NRS Totals:		2848.5	2804.4	2774.6	2675.7	2587.1	2506.8	2563.0	2577.4	2565.9	2443.9

College of Professional Studies

BA	Business Administration	201.5	192.0	191.7	209.5	183.6	168.3	167.6	173.5	164.6	182.2
ECON	Economics	81.2	84.2	79.4	89.5	88.3	92.2	91.5	101.1	91.0	84.5
MBA	Masters of Business Admin.	6.2	5.4	4.5	5.7	10.3	12.1	12.9	11.7	15.3	12.3
CD	Child Development	61.9	65.8	70.2	69.2	67.9	66.3	78.6	83.7	81.3	78.9
EDUC	Education			1.9	10.2	18.3	45.2	46.7	44.7	35.7	32.1
AS	Administrative Services	10.2	11.2	9.8	14.5	14.5	22.6	6.1	12.2	6.2	24.1
EED	Elementary Education	112.9	106.9	154.7	145.7	155.9	132.9	154.9	123.2	115.0	124.7
LSEE	Liberal Studies - Elementary Ed	29.9	27.4	32.1	25.1	19.5	24.2	22.7	26.5	22.3	13.3
SED	Secondary Education	89.7	71.0	102.9	114.2	99.3	80.6	88.6	96.5	71.6	87.2
SPED	Special Education	9.6	10.7	12.1	16.8	16.2	16.4	17.8	22.3	21.1	29.9
IT	Industrial Technology	41.5	44.4	48.5	51.3	33.6	26.1	33.2	42.2	43.3	50.2
HED	Health Education	68.4	68.1	65.7	59.9	59.8	51.6	64.1	48.8	34.2	47.4
KINS	Kinesiology	56.6	135.1	125.1	109.9	124.4	105.4	106.2	107.9	104.8	107.2
PE	Physical Education	450.7	378.2	377.2	358.6	323.0	309.0	314.9	323.5	312.6	285.5
REC	Recreation Administration	48.1	45.0	50.4	55.2	46.7	45.6	40.0	46.0	45.4	52.8
AIE	American Indian Education				7.2	11.0	13.0	12.1	15.8	13.7	9.6
LEAD	Leadership Studies						20.8	14.5	23.1	20.9	23.4
PS	Professional Studies	54.2	37.4	42.7	28.8	25.9	0.4	0.7	0.6	1.8	1.7
SPH	Speech & Hearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	Social Work	64.3	62.5	69.5	61.5	56.8	58.0	59.8	60.9	97.0	115.3

Historical Summary

Academic Year Average FTES by Subject

Subject	Description	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
College of PS Totals:		1386.4	1345.0	1438.1	1432.3	1354.5	1290.2	1334.6	1363.9	1297.6	1361.7
College of All University											
SP	Special Programs	15.8	18.5	16.1	12.5	14.0	16.5	17.8	26.0	20.2	21.1
College of AU Totals:		15.8	18.5	16.1	12.5	14.0	16.5	17.8	26.0	20.2	21.1
UNIVERSITY TOTALS		7158.0	7030.5	7091.5	7019.6	6838.5	6775.4	6992.1	7030.2	6859.0	6760.6

COLLEGE FTES SUMMARY

College of Arts, Humanities & Soc Science	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	
College of Natural Resources & Sciences	2907.3	2862.7	2862.8	2899.2	2882.9	2962.0	3076.8	3063.0	2975.4	2934.0	
College of Professional Studies	2848.5	2804.4	2774.6	2675.7	2587.1	2506.8	2563.0	2577.4	2565.9	2443.9	
College of All University	1386.4	1345.0	1438.1	1432.3	1354.5	1290.2	1334.6	1363.9	1297.6	1361.7	
UNIVERSITY TOTALS		7158.0	7030.5	7091.5	7019.6	6838.5	6775.4	6992.1	7030.2	6859.0	6760.6

NOTES: This data is based on census registration.
 Full-Time Equivalent Students (FTES) are total
 Student Credit Units divided by 15.

OTHER NOTES

Added Spring 98 NRS FTES and FTEF to ENVS since NRS only existed 1 term.
 SPED was LH prior to F97
 EED was TPMS prior to Fall 98
 SED was TPSS prior to Fall 98
 JMC was JN
 ML (Modern Lang) was FL
 Effective Fall 99, ACCT, FIN, MGMT, MKT, QM collapsed into BA
 Speech Communication renamed to Communication Fall 01
 Eff AY 02/03 Modern Languages Languages renamed to World Languages and Cultures.
 Soc Work moved from AHSS to PS Fall 04.

FINAL REPORT

PARKING AND MOBILITY STUDY
HUMBOLDT STATE UNIVERSITY

prepared for

Winzler & Kelly Consulting Engineers

**633 Third Street
Eureka, CA 95501**



ENGINEERS
PLANNERS
ECONOMISTS

Wilbur Smith Associates

HSU enrollment History
www.humboldt.edu/nanstud/reports/
OverallStats.pdf

April 27, 2005

PARKING UTILIZATION

Parking utilization data was collected over the course of four consecutive days (Monday-Thursday, April 12-15, 2004). City of Arcata on-street parking was surveyed in the proximity of the campus on Wednesday, April 14, 2004. The utilization survey included all of the parking spaces on campus and HSU staff surveyed the parking supply hourly (8:00 AM to 6:00 PM) recording whether or not a space was vacant.

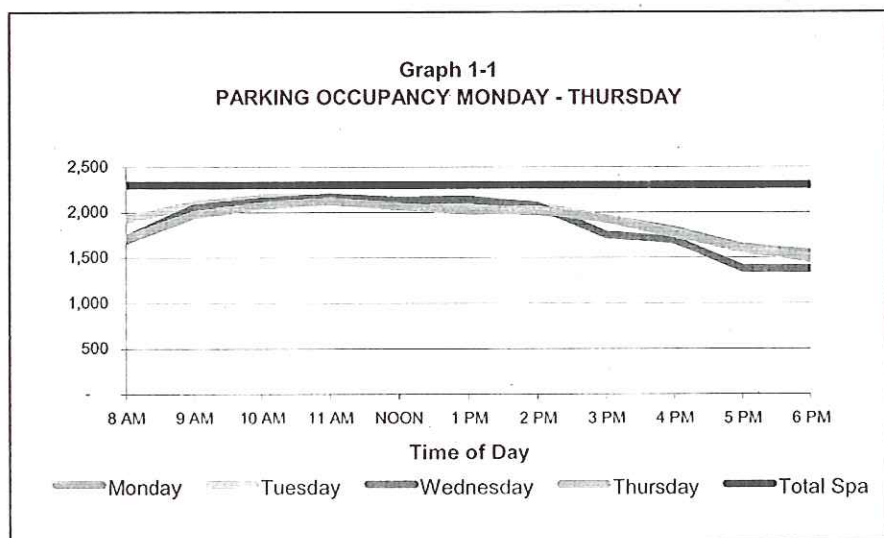
The overall daily utilization of on-campus parking is shown in Table 1-4. As shown, on-campus parking reaches 90 percent and higher utilization rates during weekdays typically by 9:00 AM and remains at this high level until well into 2:00 PM. This rate is for all 2,300 on-campus spaces and represents very high sustained supply utilization. It is generally accepted that a parking facility is considered at "practical capacity" when 90 percent of the stalls are occupied. Ten percent of the supply should be vacant to allow users to find a stall without excessive delay and to allow for parking maneuvers and circulation within the lots. The peak hour for on-campus parking occupancy occurs between 11:00 AM and noon on all four days and averages 94 percent occupancy of all on-campus spaces.

**Table 1-4
Summary of Daily Parking Utilization - On Campus**

	8 AM	9 AM	10 AM	11 AM	Noon	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM
Monday											
Stalls Occupied	1,691	1,975	2,120	2,175	2,067	2,043	2,007	1,933	1,808	1,617	1,551
% of Total	73.5	85.8	92.1	94.5	89.8	88.8	87.2	84.0	78.6	70.3	67.4
Tuesday											
Stalls Occupied	1,928	2,086	2,161	2,171	2,124	2,101	2,075	1,930	1,783	1,587	1,500
% of Total	83.8	90.7	93.9	94.4	92.3	91.3	90.2	83.9	77.5	69.0	65.2
Wednesday											
Stalls Occupied	1,712	2,052	2,127	2,171	2,131	2,142	2,072	1,756	1,696	1,382	1,376
% of Total	74.4	89.2	92.4	94.4	92.6	93.1	90.0	76.3	73.7	60.1	59.8
Thursday											
Stalls Occupied	1,716	1,977	2,076	2,126	2,065	2,017	2,028	1,929	1,761	1,604	1,486
% of Total	74.6	85.9	90.2	92.4	89.7	87.7	88.1	83.8	76.5	69.7	64.6

Source: HSU Parking Utilization Surveys - April 12-15, 2004

The peak weekday for on-campus parking was identified as Tuesday with a daily average occupancy rate of 89.7 percent. This represents 1,283 parked vehicles. Graph 1-1 visually displays the weekday utilization patterns at HSU and indicates that there is little variation in demand from day to day. The graph shows that for each weekday, parking utilization for the entire campus exceeds 90 percent by 9:00



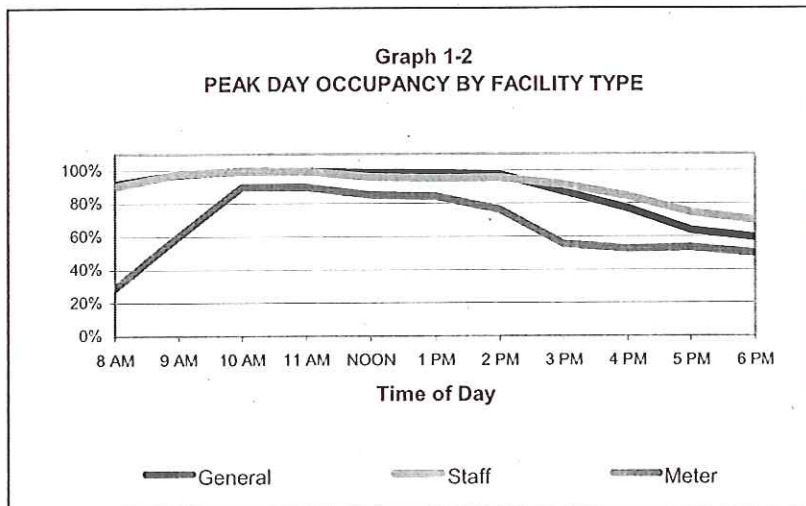
AM. This pattern of utilization holds as can be seen until after 2:00 PM. Utilization at this level can be termed the practicable capacity of the supply. After 2:00 PM, as students and others start to leave the campus, parking spaces become available, however it is noted that overall on-campus demand remains relatively high at around 1,500 occupied spaces on through 6:00 PM.

It is important to recognize that the effective parking supply on a university campus is less than the total parking supply. Generally on university campuses, changes in classes present a unique situation. Those looking for a space before class will be doing so before the hour, whereas those leaving campus after a class will be doing so generally after the hour. Also, because of the exact times of classes, there tends to be a sharp peak of parking users searching for a space prior to class changes creating high competition for available spaces.

Table 1-5 provides a summary of peak day parking utilization based on facility classification. Hourly occupancy rates for general student, staff and resident permit users and for metered spaces, ADA and others are shown in this table. As shown, both general and staff permit parking exceed practical capacity (95 percent occupancy) throughout much of the day. Resident permit parking is likewise at or near capacity and as expected showed very low space turn-over during the 11 hour survey period. Metered parking peaks between 10:00 AM and noon when both general and staff permit parking are at full capacity. Some metered parking is available throughout the day however the number of available metered spaces during the hours of 10:00 AM to 1:00 PM range between 15 to 20 spaces. Graph 1-2 shows peak day parking utilization patterns for general and staff permit parking and on-campus metered parking.

The utilization data for the 74 on-campus ADA spaces shows that less than half of these spaces are used on a daily basis. In general ADA guidelines require that institutions provide two percent of total parking supply (up to 1,000 spaces) as accessible parking. For facilities with more than 1,000 parking spaces the guidelines require that 20 accessible spaces be provided plus one accessible space for each 100 spaces over 1,000 spaces. Applying the ADA guidelines to the HSU parking supply results in a requirement for 33 accessible spaces. This number is very close to the peak hour of demand (35 spaces) for accessible parking on-campus. There are many factors which determine the number of accessible spaces needed to meet the

spirit of ADA requirements. A key factor for HSU is the distance and dispersal of facilities throughout the campus.



The remaining spaces classified as service, reserved, yellow zone, white zone and other total 145 stalls. These spaces are generally underutilized throughout the day, but like ADA accessible spaces there can be a number of factors other than utilization that determine the quantity and location of these stalls.

Table 1-6 shows peak day utilization for specific lots and facilities on-campus with 50 or more spaces. The table provides the facility location, the primary classification and the total number of facility spaces and a breakdown of hourly occupancy. As shown, many of the general and staff permit lots are near or at capacity throughout the day. The survey data indicates 100 percent occupancy at the North and South Mai Kai lots and at the Gist Hall lot for much of the day.

Table 1-5
Summary of Peak Day Utilization by Type of Space

Space Designation	Space Total	8 AM	9 AM	10 AM	11 AM	NOON	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM
General	Occupied	917	974	993	992	985	983	974	869	769	636	593
	% Total	91.9%	97.6%	99.5%	99.4%	98.7%	98.5%	97.6%	87.1%	77.1%	63.7%	59.4%
Staff	Occupied	472	512	520	520	502	498	500	478	442	390	365
	% Total	90.2%	97.9%	99.4%	99.4%	96.0%	95.2%	95.6%	91.4%	84.5%	74.6%	69.8%
Resident	Occupied	404	405	409	410	410	399	391	391	393	391	381
	% Total	97.8%	98.1%	99.0%	99.3%	99.3%	96.6%	94.7%	94.7%	95.2%	94.7%	92.3%
Meter	Occupied	43	89	133	133	126	125	113	82	78	79	74
	% Total	29.1%	60.1%	89.9%	89.9%	85.1%	84.5%	76.4%	55.4%	52.7%	53.4%	50.0%
ADA	Occupied	18	24	31	31	35	35	33	29	24	22	20
	% Total	24.3%	32.4%	41.9%	41.9%	47.3%	47.3%	44.6%	39.2%	32.4%	29.7%	27.0%
Service	Occupied	38	46	40	42	31	27	28	28	33	27	26
	% Total	54.3%	65.7%	57.1%	60.0%	44.3%	38.6%	40.0%	40.0%	47.1%	38.6%	37.1%
Reserved	Occupied	14	14	14	14	13	13	16	26	24	24	24
	% Total	40.0%	40.0%	40.0%	40.0%	37.1%	37.1%	45.7%	74.3%	68.6%	68.6%	68.6%
Yellow Zone	Occupied	9	9	11	13	7	7	9	15	10	8	7
	% Total	50.0%	50.0%	61.1%	72.2%	38.9%	38.9%	50.0%	83.3%	55.6%	44.4%	38.9%
White Zone	Occupied	5	6	2	6	5	5	4	5	2	2	2
	% Total	45.5%	54.5%	18.2%	54.5%	45.5%	45.5%	36.4%	45.5%	18.2%	18.2%	18.2%
Other	Occupied	8	7	8	10	10	9	7	7	8	8	8
	% Total	72.7%	63.6%	72.7%	90.9%	90.9%	81.8%	63.6%	63.6%	72.7%	72.7%	72.7%

Source: HSU Parking Staff - April 2004

Table 1-6
Summary of Peak Day Utilization On Campus Lots

Lot Location	Space Total	8 AM	9 AM	10 AM	11 AM	NOON	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM
Jolly Giant Resident	308	Occupied % of Total 98.1%	301 97.7%	301 97.7%	301 97.7%	300 97.4%	289 93.8%	282 91.6%	278 90.3%	281 91.2%	279 90.6%	271 88.0%
S Mai Kai General	229	Occupied % of Total 100.0%	229 100.0%	229 100.0%	229 100.0%	229 100.0%	228 99.6%	229 100.0%	226 98.7%	221 96.5%	220 96.1%	220 96.1%
Library Lot Staff	148	Occupied % of Total 89.2%	139 93.9%	142 95.9%	146 98.6%	141 95.3%	146 98.6%	141 95.3%	143 96.6%	126 85.1%	126 85.1%	126 85.1%
14th & Union General	148	Occupied % of Total 86.5%	128 86.5%	146 98.6%	146 98.6%	146 98.6%	146 98.6%	143 96.6%	93 62.8%	63 42.6%	22 14.9%	15 10.1%
Griffith Hall General	109	Occupied % of Total 99.1%	108 99.1%	108 99.1%	108 99.1%	108 99.1%	108 99.1%	108 99.1%	87 79.8%	65 59.6%	65 59.6%	65 59.6%
Gist Hall Staff	99	Occupied % of Total 99.0%	99 100.0%	99 100.0%	99 99.0%	98 99.0%	99 100.0%	99 100.0%	99 100.0%	99 100.0%	99 100.0%	99 100.0%
Creeksview Resident	85	Occupied % of Total 89.4%	79 92.9%	79 92.9%	81 95.3%	81 95.3%	81 95.3%	81 95.3%	82 96.5%	78 91.8%	78 91.8%	76 89.4%
N Mai Kai General	73	Occupied % of Total 100.0%	73 100.0%	73 100.0%	73 100.0%	73 100.0%	73 100.0%	73 100.0%	71 97.3%	72 98.6%	72 98.6%	72 98.6%
Karshner Lot General	68	Occupied % of Total 100.0%	67 98.5%	66 97.1%	65 95.6%	64 94.1%	63 92.6%	62 91.2%	61 89.7%	60 88.2%	59 86.8%	58 85.3%
Rossov St. Meter	67	Occupied % of Total 19.4%	32 47.8%	52 77.6%	57 85.1%	50 74.6%	48 71.6%	45 67.2%	23 34.3%	22 32.8%	22 32.8%	22 32.8%
14th & B St. General	63	Occupied % of Total 86.6%	62 92.5%	62 92.5%	61 91.0%	58 86.6%	62 92.5%	55 82.1%	47 70.1%	28 41.8%	14 20.9%	7 10.4%
Harpst St. Lot General	56	Occupied % of Total 79.1%	56 83.6%	56 83.6%	56 83.6%	56 83.6%	56 83.6%	53 79.1%	47 70.1%	37 55.2%	37 55.2%	37 55.2%
17th St. General	55	Occupied % of Total 80.6%	54 80.6%	54 80.6%	54 80.6%	53 79.1%	54 80.6%	54 80.6%	52 77.6%	50 74.6%	33 49.3%	32 47.8%
B St.-S of 17th	53	Occupied % of Total 71.6%	53 79.1%	53 79.1%	53 79.1%	53 79.1%	53 79.1%	53 79.1%	51 76.1%	49 73.1%	21 31.3%	16 23.9%

Source: HSU Parking Staff - April 2004

PARKING CONDITIONS OFF CAMPUS

On-street public parking conditions were surveyed to the south of the campus on Wednesday, April 14, 2004. The on-street area surveyed was generally bounded by 14th Street to the north, Spring Street to the east, 11th Street to the south and D Street to the west. The survey area on 14th Street extended west to G Street and on 11th Street extended west to F Street. Overall, approximately 400 on-street spaces were surveyed in this area. The spaces included parking meters, 2-hour and 4-hour restricted spaces, unrestricted parking and spaces reserved for residential parking permits.

The survey of public on-street parking was conducted by recording the last three digits of the license plates of all parked vehicles in the study area. Data was collected on a block by block basis for both sides of the street starting prior to 7:00 AM and again starting at 11:00 AM. The intent was to both count and identify early morning resident parkers and then to return once HSU classes were in session and determine the number of on-street parked vehicles that were likely associated with the university. It was assumed that the majority of vehicles parked on-street prior to 7:00 AM were residents or their guests.

Table 1-7 shows the number of on-street parked vehicles in the area at 7:00 AM and again at 11:00 AM. The net new number of parked vehicles was determined by comparing license numbers between morning and afternoon surveys for each block. A match between morning and 11:00 AM license plate numbers was assumed to indicate vehicles that were owned by neighborhood residents. Conversely, all new parked vehicles were assumed to be related to university activity including student, staff, visitor and other parking.

On-Street Location	Vehicles Parked 7:00 AM	Vehicles Parked 11:00 AM
14 th Street - (between Union & G Streets)	5	25
13 th Street - (between Spring & D Streets)	15	42
12 th Street - (between Spring & D Streets)	29	39
11 th Street - (between Spring & D Streets)	25	55
B Street - (between 11 th & 14 th Streets)	6	27
C Street - (between 11 th & 14 th Streets)	20	24
D Street - (between 8 th & 13 th Streets)	17	59
Spring Street - (between 11 th & 13 th Streets)	10	36
Union Street - (between 11 th & 14 th Streets)	2	36
Totals	129	343
Net New¹		271
¹ (minus matching license plates recorded at 7:00 AM)		

Table 1-7 shows that 271 net new parked vehicles were identified at 11:00 AM in the study area. Of the 343 parked vehicles surveyed at 11:00 AM there were 72 that had been parked since at least 7:00 AM. During the survey of on-street parking 42 (15 percent) of the net new parked vehicles were observed to have valid university parking permit stickers. These were primarily general parking permits although three resident parking permits were observed.

Estimate of University Off-Campus Parking

The on-street survey did not capture the full extent of the daily off-campus parking associated with HSU. Further observations and spot surveys conducted outside of the 12 block study area indicate that on-street parking related to the university occurs in the areas west of Highway 101 (roughly between 16th and 5th Streets, and F and H Streets. On-street parking related to the university was also identified to the north of the campus, California Street was observed to have a number of parked vehicles with valid university general parking permits. Overall, it is estimated that between 400 and 450 vehicles related to the university park on city streets during a weekday when the university is in session. This estimate is based on survey findings, observations related to mid morning curbside utilization and the number of City streets controlled by the residential preferred parking program.

The estimate of on-street university generated parking should be viewed as a dynamic process. While a significant portion of on-street parking can be characterized as long-term (five plus hours) a number of on-street vehicles park for shorter durations (under four hours). Therefore, it would be unusual to find the daily total estimate of 450 vehicles parked at one time for an extended period. The use of City streets for university parking is significant in that it accounts for almost 20 percent (at 450 vehicles) of the total daily supply of parking utilized by the university.

CURRENT PARKING AND COMMUTER PROGRAM

Campus parking management and enforcement is under the auspices of Parking & Commuter Services, University Police Department. Parking on campus requires a valid permit. Parking is available on a 'first come, first serve' basis. Possession of a permit does not guarantee the availability of a space. Most areas are marked with posted signs as to the type of permit required (general, staff and student resident). If spaces are not marked, any permit is acceptable. Permits can be purchased by the semester or on a daily basis. Reduced rate permits are available for evening-only, summer session and motorcycle parking. Permit rates are shown in Table 1-8.

Permit Type	Semester Fee
Residential / General Permit - Semester	\$67.50
Summer Session	\$45.00
Summer Weekly	\$4.50
Motorcycle Semester	\$17.00
Evening Semester	\$25.00
Daily Rate	\$2.00

In addition to permit parking, parking meters are available on campus at the rate of \$0.75/hour. Meter requirements are in effect 7:00 AM to 10:00 PM, Monday through Thursday, and 7:00 AM to 5:00 PM on Friday. These spaces are open to all vehicles. Parking fees can be paid in coin at the meter or with the use of a debit card purchased on campus. Permits are not valid payment for these spaces.

Parking regulations are in effect 24 hours a day, 365 days a year. The following restricted zones are enforced at all times:

- Black & White - Service vehicles
- Blue - Disabled
- Yellow - Loading
- White - Passenger loading or mail drop



Parking meter and permits requirements are in effect from 7:00 AM-10:00 PM, Monday through Thursday and from 7:00 AM to 5:00 PM on Friday. Finals week and summer session are included in these restrictions. Residential permits are required in residential parking areas except after 5:00 PM on Friday and all day Saturday and Sunday. Daily permits are valid only for the day purchased and may be used in staff lots after 5:00 PM.

Carpool Priority

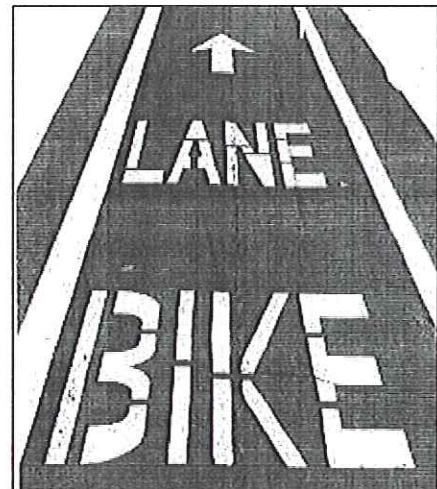
Parking & Community Services offers tips for carpooling and park-and-ride facilities. In addition, a free ride matching service for one trip or on-going trips is available. Carpool priority parking is available to vehicles with three or more occupants unless the car's capacity is less. The carpool vehicle is required to stop by the parking office to verify the number of occupants. The driver is issued a permit which will allow them to park for the day in a reserved metered space without paying the meter fee. The carpool vehicle must have a valid HSU permit of some type in addition to the carpool permit. Reserved carpool spaces (eight marked spaces) are located at the north end of Rossow Street and are generally considered to be in the core campus area.

Motorcycles/Mopeds

Parking permits for motorcycles and moped cost one-fourth that of auto permits. They can park on any unmarked legal street space on campus and in 15 designated motorcycle zones throughout campus with a valid permit.

Bicycles

Bike racks are located throughout campus for use by students, staff, faculty and visitors. Currently, public bicycle parking facilities include about 1,100 spaces. In addition, resident student bike storage rooms are available at most of the residence halls. Bicycle storage spaces for resident students number 360 spaces. For assistance with repairing and maintaining of bicycles, the Bicycle Learning Center on campus provides tools for bike repair and volunteers to teach repair and maintenance. The University Police provide free bicycle licensing as well as tips for bicycle theft prevention.



Currently there are no bicycle lanes on campus. However, the City of Arcata has installed bike lanes on some roadways leading to campus. A more comprehensive bikeway network has been identified for future implementation. The existing bike lanes available in proximity to HSU are:

- L.K. Wood Boulevard from Redwood Avenue to 14th Street;
- 14th Street from F Street to L.K. Wood Boulevard;
- G Street from Sunset Avenue to Front Street;
- H Street from Sunset Avenue to Samoa Boulevard;
- 7th Street from L Street to Union Street;
- Bayside Road from Union Street to Buttermilk Lane; and
- Sunset Avenue from H Street to L.K. Wood Boulevard (over crossing of U.S. 101).

Existing Parking Geometries / Dimensions

Observations of the larger on-campus permit parking lots indicate that the existing parking areas are being fully utilized. The potential for changes in parking dimensions and parking lot layouts appear limited. The general permit lots, South Mai Kai (230 spaces), 14th / Union Streets (148 spaces), Griffith Hall (109 spaces) and North Mai Kai (73 spaces) all operate at or near full capacity during the peak period. At all of these lots stall and aisle widths were found to be tight. Attempting to develop additional stalls on these existing sites could result in a worsening of circulation and an increase in on campus vehicle activity. Under current conditions the opportunity to expand the number of stalls at existing facilities is limited.

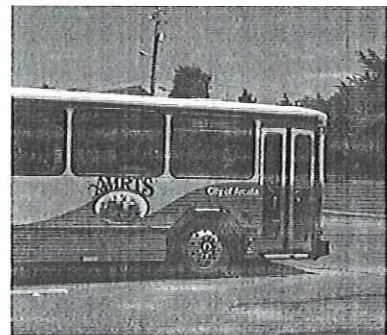
The current HSU parking management program operates under conditions of high demand coupled with a constrained on-site supply. On average, two permits are issued for each space requiring a permit. Over issuing permits by as much as 40 to 50 percent is not unusual at many university campuses and institutions. It is understood that parking demand varies hour to hour and day to day and issuing more permits than spaces ensures an efficient use of parking capacity. HSU however is close to over issuing permits by 100 percent of the permit parking supply. This condition results in periods of poor on campus vehicle circulation, the interference with other modes of mobility on campus, and a high level of frustration on the part of those looking for a parking space and those who must negotiate vehicle congestion on foot or a bicycle. The issues and potential solutions related to constrained parking conditions and the affects on overall campus mobility are at the core of this report and will be addressed in detail in subsequent chapters.

CURRENT TRANSIT SERVICE

Transit service to HSU is available from both the Arcata & Mad River Transit System (A&MRTS) and the Redwood Transit System (RTS). Eureka Transit passengers may access the campus through connection to RTS. Bus stops are located at both the HSU Library and 14th and B Streets in the southern part of campus. Fares for HSU students, faculty and staff on A&MRTS and RTS are subsidized by the University through collected parking fines.

A&MRTS operates two routes which operate within ¼ mile of most Arcata residents: the Gold Route which serves northern Arcata and HSU and the Red Route which provides connection between southern Arcata and HSU. Both routes stop on campus at the HSU Library. In addition, the Red Route also has a stop at 14th and B Streets. Service is free for HSU students, faculty and staff with presentation of a valid ID card; A&MRTS provides approximately 130,000 HSU rides a year for students, faculty and staff accounting for 75 percent of total ridership.

Service hours for A&MRTS vary based on the HSU calendar. During the fall and spring semesters, service runs hourly during weekdays from 7:00 AM to 10:00 PM. On Saturdays service is provided every two hours between 9:00 AM and 5:00 PM. Summer and winter hours follow the same weekday and Saturday schedule with the exception of shorter weekday hours with service ending at 7:00 PM. No service is provided on Sundays and holidays.



The service area for Redwood Transit System (RTS) extends from Trinidad to Scotia. In addition to connections with Eureka Transit System, RTS also services park-and-ride lots along U.S. 101 at Kenmar Road in Fortuna, Elk River/Herrick exit in Eureka and at the Trinidad exit. All buses are currently outfitted with bike racks. Bus frequency varies throughout the day and is dependent upon time of day as well as point of origin/destination. In general, service extends from 6:00 AM-10:00 PM on weekdays and 8:00 AM-7:00 PM on Saturdays. There is no service on Sundays. Discounted 10-ride ticket books are

available at the campus ticket office for HSU students, faculty, and staff with valid ID. RTS provides approximately 26,000 HSU student, faculty and staff rides per year.

Chapter 3

TRAVEL CHARACTERISTICS AND COMMUTE OPTIONS

TRAVEL CHARACTERISTICS

An on-campus access and parking survey was conducted of HSU students, faculty and staff to obtain information on existing commuting patterns, to gauge satisfaction with current parking facilities, to assess the potential for alternative mode use and solicit opinions of potential future parking and access programs. A questionnaire was developed with input from University staff and included questions on the following topics:

- User group
- Origin of trip
- Mode of transportation
- Arrival and departure time
- Commute time and distance
- Reasons for non using alternative modes
- Parking location on campus
- Convenience of parking
- Willingness to pay for more convenient parking
- Reactions to increased parking fees
- Suggestions for parking and access improvements

The survey was conducted via the internet. Each HSU student, faculty and staff member was notified of the survey by e-mail and asked to fill out the questionnaire. The survey period began on April 29, 2004; responses were solicited until May 24, 2004. A total of 1,730 valid responses were collected. In addition to the survey questions listed above, almost 1,100 respondents offered comments on ways to improve parking facilities and transit and non-motorized access to campus. The following discussion summarizes the findings of the survey. The questionnaire, as presented to HSU respondents, can be found in Appendix C.

Response Rate and Type of Respondent

Of the total campus population, more than 19 percent responded to the questionnaire. Although the response rate is lower than anticipated, it is higher than experienced on many other transportation surveys conducted by WSA. As such, the responses might not fully represent the views and travel habits of the entire campus population, but they provide insight into the commute habits and opinions of the respondents and possibly others on campus. As shown in Table 3-1, campus staff, as a group, was most responsive, followed closely by faculty members. Although undergraduate students completed 64 percent of the questionnaires, this response accounted for only 17 percent of their total population.

Respondent Type	Total	# Responses	% of Total	% of Responses
Undergraduate Students	6,682	1,115	16.7%	64.5%
Graduate Students	1,043	156	15.0%	9.0%
Faculty	489	160	32.7%	9.2%
Staff	789	290	36.8%	16.8%
Other/Non-responsive	n/a	9	n/a	0.5%
Totals	9,003	1,730	19.2%	100%

Considering that the tenure of faculty and staff will most likely exceed the four years expected of an undergraduate student, it is reasonable that faculty and staff may have more interest in issues affecting access to campus. In addition, many students live on-campus and so are less directly impacted by these same issues.

Commute Distance and Mode Choice

Almost 92 percent of responses indicated that they lived off-campus, with 40 percent indicating they live in Arcata, 19 percent in Eureka and 15 percent in McKinleyville. The commute distance is a major factor in determining mode choice. Of the 1,587 respondents who live off-campus, the majority reported less than a five mile commute one-way to campus. Almost 80 percent live within 10 miles or less from campus. The commute distance breakdown is found in Table 3-2.

	Number	% of Respondents
Less than 5 miles	701	44.2%
5 to 10 miles	564	35.5%
10+ to 20 miles	205	12.9%
More than 20 miles	97	6.1%
No Response	20	1.3%

Source: WSA/HSU 2004 Access Parking Survey

Respondents were asked to select their primary mode of transportation to campus. As expected from observed commute patterns and parking use, the majority indicated that they drive to campus, either alone or by carpool. Almost 60 percent purchased a parking permit. Walking and bicycling are the next most popular modes. Transit use accounts for approximately 5 percent of respondents.

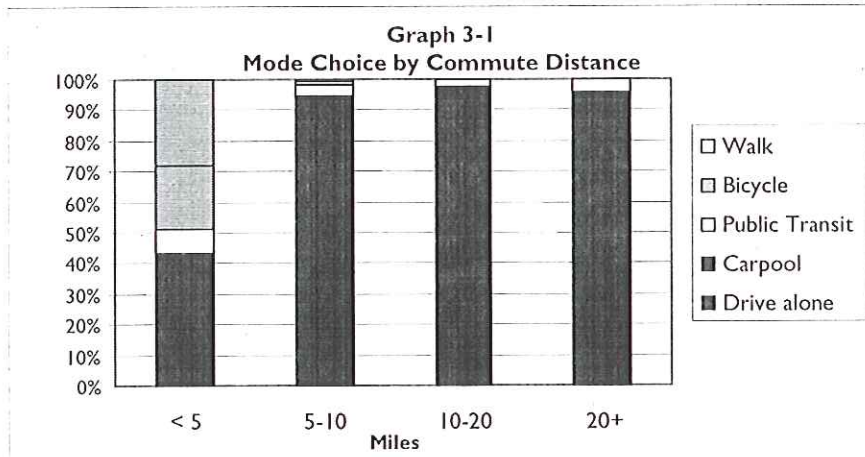
As previously mentioned, commute distance is a factor in determining mode choice. Bicycling is considered a more feasible mode for trips less than five miles while walking is suitable for trips less than one mile. The decision to take public transit is also affected by distance as longer bus trips may involve more stops and transfers. As shown in Graph 3-1, the majority of trips over 5 miles in length are by driving alone to campus. Trips over 20 miles in length are also primarily by car but with a greater share of carpool trips. For trips less than 5 miles in length, bicycling and walking are a greater portion of the mode choice. However, almost 40 percent of these trips are still made by driving alone. In fact, of the on-campus residents surveyed, 18 percent reported that driving alone was their primary mode of transportation to campus.

City	Number	Percent
Drive alone ✓	1030	59.5%
Carpool ✓	125	7.2%
Motorcycle/Scooter	9	0.5%
Public Transit ✓	90	5.2%
Bicycle	155	9.0%
Skateboard/Rollerblade	7	0.4%
Walk	270	15.6%
Other	12	0.7%
No Response	32	1.8%

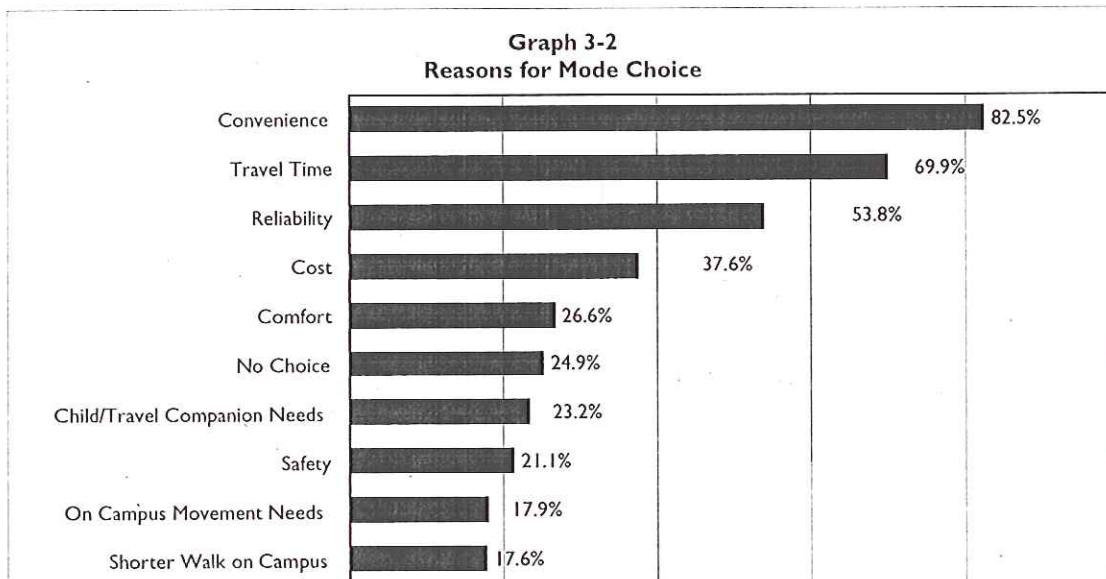
Source: WSA/HSU 2004 Access Parking Survey

Selection of Mode Choice

The reasons for selecting mode of travel to the campus are different for everyone although certain factors will be a consideration for most commuters. When asked for their reasons behind selecting a commute mode, respondents were primarily concerned with convenience, travel time and reliability. Cost played a part in the decision although almost 1/4 of respondents felt they had no choice in their mode choice. These mode choice responses are shown in Graph 3-2.



When asked why they didn't use an alternative mode such as transit, carpool, bicycle and walking, respondents overwhelmingly answered that alternative modes were a less attractive option because their arrival and departure times are too variable for carpools and transit, they have no convenient carpool or transit choices, and alternative modes take too much time.



Satisfaction with Current Commute

The survey included questions about commuter satisfaction with existing parking conditions on campus. Almost 60 percent of respondents did not believe that campus parking was convenient. More than 70 percent felt that additional parking was needed on campus. Those that currently drive to campus were asked if they would continue to do so if parking facilities were expanded and parking fees increased. More than 80 percent indicated that they would continue to drive. However, when asked if they would be willing to pay additional fees for a convenient parking space, more than 40 percent replied 'No'. This is an indication that although drivers would not be 'willing' to pay additional fees, they would do so if fees were raised to continue driving to campus.

The survey respondents were very vocal on the questionnaire with more than 60 percent including comments on their commute to campus and suggestions for needed improvements. The most discussed issue was the lack of adequate parking. Many respondents were angry over the fact that a parking permit does not guarantee a parking space but was only a 'license to hunt' for a space. They often had to circle the parking lots for up to 30 minutes to find a space and were consequently late to classes or missed them altogether. Others could find parking only at meters and were required to pay extra parking fees in addition to the cost of the permit. Many felt that too many permits were issued and that this number should be restricted to those that 'really need it'. It was suggested that permits be issued only to those living outside a certain radius of campus, not be made available to freshman or distributed by lottery. Remote parking lots with shuttles to campus were also common recommendations.

Although the majority of comments dealt with the lack of adequate parking, many respondents were concerned that additional parking would increase driving to campus. They recommended that more attention and money be paid to improve alternative commute options. These included transit, carpooling, bicycling and walking. Transit issues were related to better scheduling to meet class schedules, more frequent service and better coverage. Many respondents seemed unaware of transit subsidies available to students and employees of the campus. Potential carpoolers expressed difficulties in forming a carpool and were unaware of ride matching services available through the University. Bicyclists were primarily interested in more secure and protected bicycle parking and safer routes to the campus. Pedestrians had similar concerns over the safety of their routes to campus.

Key Survey Findings

Commute Mode

Respondents to the survey reported that 67 percent commuted to campus via private automobile, with the remainder divided between transit, walking and bicycling to campus. Single occupancy vehicle (SOV) commuting was highest for staff (83 percent) and faculty (75 percent). Students SOV commuting (46 percent) brought the total SOV percentage down to 59 percent. Seven percent of all respondents reported commuting with someone else in their car. Table 3-4 shows mode share percent for faculty/staff and students (campus resident/non-resident).

Mode Choice	Faculty/Staff	Students	
		Residents	Off-Campus
Drive Alone	80.2%	22.2%	55.2%
Carpool	5.6%	4.6%	8.1%
Motorcycle	0.9%	0.0%	0.4%
Public Transit	2.0%	0.9%	6.8%
Bicycle	4.2%	4.6%	11.1%
Skateboard	0.0%	0.0%	0.5%
Walk	6.0%	65.7%	14.7%
Other	1.1%	1.9%	3.2%
Totals	100%	100%	100%

Source: WSA/HISU 2004 Access and Parking Survey.

Commute Times

Arrival and departure times to/from campus were relatively well distributed, with the highest hourly inbound commute (60 percent) occurring between 7:30 and 9:30 a.m. and the highest outbound commute (56%) occurring between 3:30 and 6:00 p.m. About two-thirds of staff respondents indicated that they had consistent work start and end times five days a week.

Public Transit Experience

Approximately 5 percent of respondents reported using transit at some time for their commute trip. Less than 1 percent of both faculty and staff respondents indicated that they had used public transit for their commute trip.

Mode Choice Factors

The principal reasons given for selecting their commute mode was schedule flexibility, followed by travel time and then reliability. Most survey respondents were private automobile commuters and it is difficult for other modes to compete with the automobile for flexibility, travel time and reliability. Cost was not reported to be a major factor. Many SOV commuters indicated that public transit travel times are too long and that service does not stop near their home. A number of respondents indicated that they were unfamiliar with service routes and schedules.

COMMUTE OPTIONS

College campuses are unique with distinct issues and concerns facing those responsible for maintaining a safe, convenient and pleasant learning environment. With HSU's ever changing population, irregular commute hours and limited parking, the task of getting students, faculty and staff to and from the campus can be a challenge. Although solo driving to campus is currently the most popular method of commuting, the resulting costs to the environment and the costs to the University to provide adequate parking, require consideration of alternative commute modes. Carpools, vanpools, transit, bicycles and walking can reduce traffic congestion and the demand for parking on campus. But these modes must provide a similar level of convenience or they will not be utilized. The following discussion describes commute programs at HSU and other colleges which are designed to improve alternative commute options and encourage their use.

Existing CSU Humboldt Commute Programs

Transportation to the HSU campus is coordinated through Parking & Commuter Services, comprised of employees and students interested in managing parking and transportation on campus. In addition to issuing parking permits and enforcing parking regulations, Parking & Commuter Services objectives are to develop and maintain commuter programs, promote transportation alternatives, mitigate traffic congestion and reduce parking demand on campus.

Parking permits are available to students, faculty and staff for use in permitted locations throughout the campus. These can be purchased for one or two semesters or for evening use only. To meet less frequent parking needs, daily permits can also be purchased or hourly parking is available at meters at various locations on campus.

Parking & Commuter Services also encourages alternatives to the solo driver for commuting to the HSU campus. Support services and incentives are provided for:

- Occasional parkers with parking meters which accept parking debit cards in addition to coins;
- Carpoolers with ridematching services and carpool preferential parking;

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Enrollment History Humboldt State University

Year	Headcount by Term			Annual Headcount			FTEs by Term			Annual FTE		
	Summer	Fall	Spring	AY*	CY**	AY*	CY**	Summer	Fall	Spring	AY*	CY**
1988-89	6724	6724	6780	6752	6752	6240.0	6240.0	6234.0	6246.0	6246.0	6240.0	6240.0
1989-90	7301	7301	7405	7353	7353	6741.2	6741.2	6741.2	6844.0	6844.0	6792.6	6792.6
1990-91	7654	7654	7647	7651	7651	7046.6	7046.6	7046.6	7160.7	7160.7	7103.7	7103.7
1991-92	7823	7823	7732	7778	7778	7167.7	7167.7	7167.7	7273.3	7273.3	7220.5	7220.5
1992-93	7850	7850	7391	7621	7621	7326.4	7326.4	7326.4	7105.0	7105.0	7215.7	7215.7
1993-94	7122	7122	6651	6887	6887	6604.3	6604.3	6604.3	6235.6	6235.6	6420.0	6420.0
1994-95	7049	7049	7011	7030	7030	6601.5	6601.5	6601.5	6652.5	6652.5	6627.0	6627.0
1995-96	7427	7427	7321	7374	7374	6983.4	6983.4	6983.4	6994.7	6994.7	6989.1	6989.1
1996-97	7686	7686	7403	7545	7545	7255.5	7255.5	7255.5	7060.4	7060.4	7158.0	7158.0
1997-98	7492	7492	7347	7420	7420	7071.4	7071.4	7071.4	6989.6	6989.6	7030.5	7030.5
1998-99	7475	7475	7342	7409	7409	7119.1	7119.1	7119.1	7063.9	7063.9	7091.5	7091.5
1999-00	7545	7545	7334	7440	7440	7060.4	7060.4	7060.4	6978.7	6978.7	7019.6	7019.6
2000-01	1294	7433	7192	7313	7960	6902.1	6902.1	6902.1	6774.8	6774.8	6838.5	7093.9
2001-02	1541	7382	7172	7277	8048	6841.9	6841.9	6841.9	6708.9	6708.9	6775.4	7102.5
2002-03	1478	7611	7494	7553	8292	7006.3	7006.3	7006.3	6977.7	6977.7	6992.0	7289.0
2003-04	1461	7725	7445	7585	8316	7092.4	7092.4	7092.4	6968.0	6968.0	7030.2	7329.0
2004-05	non-state	7550	7183	7367	7367	7030.3	7030.3	7030.3	6687.3	6687.3	6858.8	6858.8
2005-06	1215	7462	7176	7319	7927	6905.2	6905.2	6905.2	6615.4	6615.4	6760.3	7000.2

Historical data from 1935 to present: http://www.humboldt.edu/~anstud/reports/Overall_stats_allyears.pdf
 Chart: http://www.humboldt.edu/~anstud/reports/Overall_chart_allyears.pdf

Definitions:

Student counts include undergraduate, graduate, full-time, and part-time students, all counted equally.
 Student headcount and FTE credit units are determined at the official census date each term.
 FTES (Full-Time Equivalent Students) is determined by dividing the total Student Credit Units (SCUs) by 15.
 *AY (Academic Year) refers to Fall and Spring terms only. AY Averages are the sum of Fall and Spring divided by 2.
 **CY (College Year) refers to all state-supported terms. Summer is considered the leading term for a College Year.
 College Year averages are the sum of Summer, Fall, and Spring, divided by 2. Another way to look at this is that one-half of Summer FTES is added to the Academic Year average to obtain College Year averages.

*Bus Efficiency:
www.nrel.gov/docs/ty00/ost/26758.pdf