University of Arkansas Vehicle Research Project

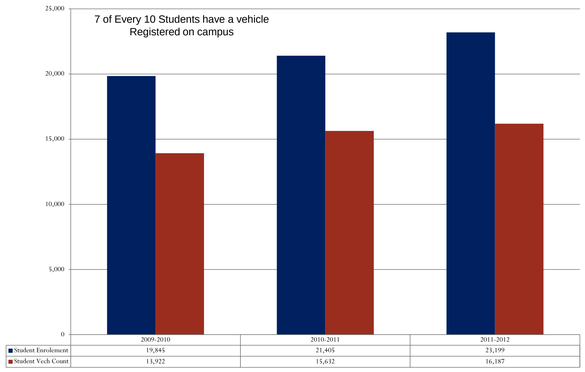
Clark Rogers
Capstone for Minor in Sustainability
Department of Agriculture, Food and Life Science

UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE

UNIVERSITY OF ARKANSAS DALE BUMPERS COLLEGE OF AGRICULTURAL, FOOD & LIFE SCIENCES

Parking on Campus

- I have gathered information from the UofA parking and transit facility of all vehicles registered on campus from the past 3 years.
- You will see that the student enrollment is continuously growing each year. Which means more traffic and more vehicles on campus.
- It is important to recognize that if enrollment continues to grow then we will not have enough space for students to park on campus.
- The graph below indicates that the student population and the student vehicle count is steadily increasing each year.

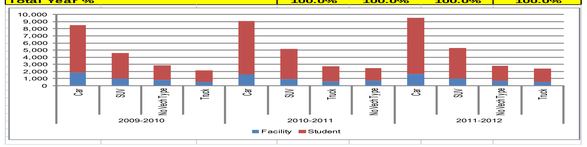


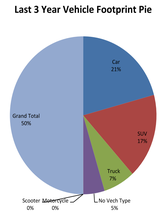
The Methodology

- Received an excel spreadsheet from the parking and transit facility of vehicles registered on campus from the past 3 years.
- Categorized each vehicle as either a Car, SUV, Truck or no vehicle type for both students and faculty.
- Started building charts in excel and comparing numbers of Cars, SUVs, Trucks and no vehicle types registered on campus.
- Began analyzing the numbers and realized how can the UofA reduce the amount of traffic on campus if the student vehicle count continues to rise each year.
- To become a more sustainable campus I believe the UofA in the future will have restrictions on who can park on campus.

The Outcome

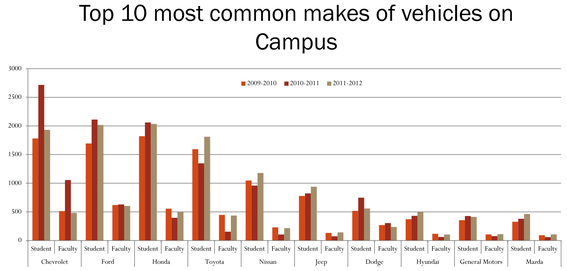
			Year			
Fayetteville	Car Type	Data	2009-2010	2010-2011	2011-2012	Grand Total
Student	Car	Vech Count	6,659	7,484	7,875	22,018
		Year %	36.8%	38.4%	39.3%	38.2%
	SUV	Vech Count	3,615	4,232	4,299	12,146
		Year %	20.0%	21.7%	21.4%	21.1%
	No Vech Type	Vech Count	2,023	1,751	2,167	5,941
Student Vehicle +16.7%		Year %	11.2%	9.0%	10.8%	10.3%
	Truck	Vech Count	1,615	2,149	1,825	5,589
		Year %	8.9%	11.0%	9.1%	9.7%
	Motorcycle	Vech Count	7	7	17	31
		Year %	0.0%	0.0%	0.1%	0.1%
	Scooter	Vech Count	3	9	4	16
		Year %	0.0%	0.0%	0.0%	0.0%
Student Vech Count			13,922	15,632	16,187	45,741
Student Year %			76.9%	80.3%	80.7%	79.4%
Faculty	Car	Vech Count	1,833	1,568	1,628	5,029
		Year %	10.1%	8.1%	8.1%	8.7%
	SUV	Vech Count	1,008	926	1,024	2,958
		Year %	5.6%	4.8%	5.1%	5.1%
	No Vech Type	Vech Count	807	745	649	2,201
Faculty Vehicle - 7.7%		Year %	4.5%	3.8%	3.2%	3.8%
	Truck	Vech Count	536	602	559	1,697
		Year %	3.0%	3.1%	2.8%	2.9%
	Motorcycle	Vech Count			6	6
		Year %	0.0%	0.0%	0.0%	0.0%
	Scooter	Vech Count	2			2
		Year %	0.0%	0.0%	0.0%	0.0%
Faculty Vech Count			4,187	3,841	3,866	11,894
Faculty Year %			23.1%	19.7%	19.3%	20.6%
Total Vech Count			18,109	19,473	20,053	57,635
Total Year %			100.0%	100.0%	100.0%	100.0%





- It is obvious that over the past 3 years the majority of students and faculty drive a car compared to a SUV or Truck.
- SUV's however are the second largest vehicle driven on campus by students and faculty.
- We are unaware of 5% of the vehicle models registered on campus.
- I believe that the number of motorcycles and scooters is extremely low due to students and faculty listing them by their make (ex. Honda, Yamaha, Kawasaki). What this means is that we are unable to identify whether or not it is a motorcycle or scooter. By all means I believe we have a lot more motorcycles and scooters compared to what the graph shows.
- The student vehicle count has increased 16.7% in 3 years. However, the faculty vehicle count has decreased by 7.7% in 3 years.

Outlook



- No matter the vehicle make, cars overall are the most fuel efficient.
- Gas mileage for SUVs and Trucks vary depending on the make and model.
- If gas prices continue to increase I am hoping to see more students and faculty driving cars.
- If campus were to have smaller parking spots it would allow more room for parking and also decrease our amount of SUVs and Trucks.

Sustainability

- Social Systems
  - People tend to buy vehicles based on looks or the size that best fits them.
  - Students and Faculty will now have different opinions of vehicles driven on campus.
  - Students and Faculty will think of taking different types of transportation.
  - People when purchasing a new vehicle will now hopefully choose one with great fuel efficiency.
  - Vehicle count on campus is likely to decrease due to the student enrollment population.
  - Restrictions on parking will be heavily enforced since enrollment is increasing.

Reflections

- I have realized not everyone is fortunate enough to pick any vehicle out they desire. Many students are handed down vehicles from brothers, sisters, parents and grandparents.
- Sustainability is a bold word. You do not become sustainable over one night. It takes time and development to becoming a sustainable community or person.
- By purchasing a vehicle with great fuel efficiency you will save money and reduce your carbon footprint.
- I have honestly enjoyed working on this project and have gained more skills to living my life sustainably.
- Within the last 2 years I have purchased a bicycle and chosen to take the public transit to class more often.
- Biking or public transit is fun and you are not worrying about finding a parking spot or awful traffic.