Title: *Bike Library Pilot Implementation*

Lead Investigator: *Destinee McGuire, HSU Student* **Affiliation**: *Transportation*

Purpose: *Decrease campus commutes to Humboldt State Campus in cars by increasing security, availability, and affordability of bikes to HSU Students*

Description: *An overarching goal of HSU is to reduce greenhouse gas emissions and increasing bike use on campus would assist in reductions from vehicle usage. HSU has already implemented new bike infrastructure to allow about 1500 bikes to be parked on campus (Gillingham et al., 2013). Furthermore, HSU in conjunction with Humboldt Transit Authority has created a friendly bike brochure to depict the correctly ride a bus with a bike (Humboldt Transit Authority, 2010). There is also a student ran bike group on campus that attempts to provide bike maintenance tips and use of tools. This group seems to also be helping with an off campus bike program located in Arcata. The City of Arcata is a huge supporter of bike usage and has even constructed the Bike Avenue to increase the safety of cyclists (Arcata, 2014). The City of Arcata did have a bike library program in place that allowed individuals to barrow a bike for up to six months and had only a $20 registration fee (City of Arcata, 2003). There has not be an official attempt to construct a bike share program on campus which could meet the needs to individuals that do not own a bike because of finical burdens or fear of theft.*

Recommendation:

In the Commuter survey conducted in 2014, 40% of the participants said they do not own a bike and 63% of participants would use a bike to commute short distances if they had access to a bike (Commuter Survey, 2014). A pilot bike share program could be the next move for HSU to reduce vehicle emissions associated with campus and show the need/demand on campus for this program. The upfront costs of the bikes, maintenance costs, and overseers of the program will need to be incorporated. There is already a check out system in the library for items other than books. The bikes could be another item checked out but the price for the checkout needs to be determined as either a grant or a part of the tuition fees.
The pilot could start with 4 bikes that vary in size (to fit riders) that could be checked out for a restricted period of time. This could vary depending on the individual's use needs. The longest time period could be 3 days to make sure that students have access on a regular basis. One set of bike tools can be kept with the checkout desk to use when the bikes are brought back in for regular maintenance needs. Each bike will have a bike lock and be stationed in from of the library. The key to the lock and a visual on the bike in the designated location will signify the return of the bike. A paid position amounting to about 2.5 hours a week would be needed to maintain the bikes. There would also need to be a few hours to allow for emergency maintenance, about 5 hours per semester. If this individual is paid minimum wage ($10 an hour in 2016) with the mandatory maintenance schedules once a week and a few hours available for emergency maintenance then that could be about 45 hours in the semester. The bikes would have a scheduled maintenance each week where the bike could not be checked out. This is a rough design that would need to be researched deeper to find other costs and what works best. This pilot program seems be the cheapest option to test the feasibility and need for a Bike Library on campus.

- **Scale and Scope** *campus-wide, targets students on campus*
- **Timing** *2 semesters in length and start in the Fall semester (beginning of school year)*
- **Key Participants** *Library, Office of Sustainability*

Summary of Estimated Costs, Benefits and other Impacts:

- *Costs*

Item	Bikes (x4)	Tools	Overseer Pay	Bike locks	Total
Costs	*$ 540*	*$60*	*$900*	*$80*	*$1580*

- *Estimated project lifetime: 2 semesters*
- *Initial, up-front project cost(s): bikes, bike tools, and bike locks*
- *Ongoing costs through lifetime of project: Overseers pay, replacement of worn out parts (varies and would only be included if pilot continued past the first year)*

- *Benefits*
  - *GHG reductions over lifetime of project (MTCO2e) because of reduction in car usage from students on campus*
  - *Student community building*
  - *Increase health benefits to individuals biking*

Impact	Estimated Resource Costs	Estimated Benefits
Economic	*$1580- $2000 to set up and sustain pilot for 2 semesters*	*Reduces vehicle activity which reduces need of maintenance on roadways*
Environmental	*Paper to document and use of computer to detail program progress*	*The carbon saved from students choosing to bike instead of drive*
Social	*Students concerned about fee increase (if fees used to fund project in long term)*	*Improve access to outdoors and other locations, health benefits to biking instead of using car, health benefit to not releasing carbon and other pollutants into the air*

GHG Reduction/dollar spent: *The pilot would reduce GHG only if individuals are choosing to bike instead of ride which could be asked to generate an estimate of how much is being reduced*

Assumptions:

- *The library system can be modified to include bikes in the check out system*
- *Prices estimated from estimates of online shops*

References:

"Arcata Bicycle Boulevard | Arcata, CA." *Arcata Bicycle Boulevard | Arcata, CA.* City of Arcata, California, 2014. Web. 05 Dec. 2015. <http://www.cityofarcata.org/298/Arcata-Bicycle-Boulevard>.

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Commuter Survey. 2014. Raw survey data processed into graphical form to interrupt. Humboldt State University, Arcata.

Gillingham, Paul, Katie Harris, and Derek Smith. *Bicycle Friendly University*. Arcata: Humboldt State University, 2013. Print.

Humboldt Transit Authority, comp. "Redwood Transit Bike and Ride." *How to Use the Exterior Bike Racks* (2010): n. 1-2. City of Arcata. Web. Oct. 2015. <http://www2.humboldt.edu/parking/sites/default/files/images/bike_ride.pdf>.