Off-Campus Park-and-Ride Lots and Shuttles

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Abstract: The off-campus park-and-ride lots and shuttles would reduce the greenhouse gas emissions from student and faculty commuting. The potential lots such as retail store parking lots (e.g., Target) would be connected to campus via third party shuttle or bus service (i.e., Humboldt Transit Agency) or the university's shuttle or bus service. The project could alleviate the campus parking supply issue and serve as an alternative transportation mode to further commit to the university's sustainability goals.

Project Description

The park-and-ride lots would achieve greenhouse gas emissions (GHG) abatement by reducing the total private vehicle miles driven by students and faculties. Almost half of all students not living on campus and three-quarters of all faculty and staff commute to campus via single-occupancy vehicles (Walker Consultants 2018). Walker Consultants recommended the park-and-ride lots and shuttles solution in the HSU Parking Market Demand Study as a way alleviate the parking supply issue on campus by providing direct shuttle connection between off-campus sites (i.e., Eureka and McKinleyville) and the campus (2018). Potential sites could include Target parking lot in Eureka and Kmart parking lot in McKinleyville; both are large and rarely filled. Off-campus park-and-ride lots could also serve as carpooling and vanpooling meeting places. Additionally, it would also alleviate the parking supply problem on the campus.

If the HEIF committee decides to pursue the idea, the HEIF funding would potentially be used for:

1) Feasibility study for the park-and-ride lots and shuttle program
2) The cost of park-and-ride lot agreements, if needed. No-cost options should be considered first. Retail parking lots may be open in the no-cost option as the commuters are also potential shoppers.
3) The cost for frequent and direct shuttle service either provided by a third-party (i.e., Humboldt Transit Authority [HTA]) or HSU
4) Depending on funding availability, procurement of the electric shuttle bus(es) with potential matching grants and funding from the State (could also be considered and pursued separately as a future project)

Need Statement

HEIF Missions and Campus Need: High Proportion of Campus Emissions from Commuting

Scope 3 emissions (i.e., business travel, student and faculty commute, and solid waste) is one-third of the total GHG emissions for HSU. Commuting emissions are approximately 81% of the scope three emissions in the HSU's climate action plan. Automobile emissions account for more than 90% of the GHG emissions within the commuting emissions. Note, the automobile emissions calculation in HSU's CAP assumed an average fuel efficiency that is likely higher than most college students' vehicles. Thus, the actual GHG emissions from automobile could be higher. The significant GHG emissions by automobile commuting demonstrate the need to address scope three emissions by tackling commuting behaviors.

HEIF Student Involvement Goal

Potential student involvement of the proposed project could expand beyond the project development process. As with all HEIF projects, the proposed project, if accepted, will be developed by students from diverse academic backgrounds and disciplines. Beyond the development, students could and should be involved in the park-and-ride and shuttle agreement drafting and be present at the negotiation table with all stakeholders (e.g., parking lot owners, HTA, etc.). The advocacy, community engagement, and policy design forms of student involvement differ from the majority of the HEIF projects which has traditionally been more technical and dominated by engineering students.

HEIF Accountability Goal

The project result could be measured by the shuttle usage data. Student involvement could be ensured and documented by creating a project task force between students, HEIF, Parking and Commuter Services, and Parking and Transportation Committee.

HEIF Outreach and Publicizing Goals

The project by nature would require reaching out to students and faculties to encourage the use of the park-and-ride lots and shuttles. The success could be broadcasted to a broader audience and showcase HSU's unique rural transportation solution.

Outcome

The tangible outcomes of the project include 1) The reduction in greenhouse gas emissions associated with vehicle miles driven for student and faculty commutes 2) The alleviation of the campus parking supply issue.

The student learning outcomes include 1) Advocacy, negotiation, and stakeholder engagement experience from the agreement drafting process with lot owners 2) Policy design experience from designing the park-and-ride and shuttle program.

The environmental and energy saving impacts could be ascertained by analyzing the shuttle ridership data, monitoring campus parking demand, and monitoring the parking permit sale.

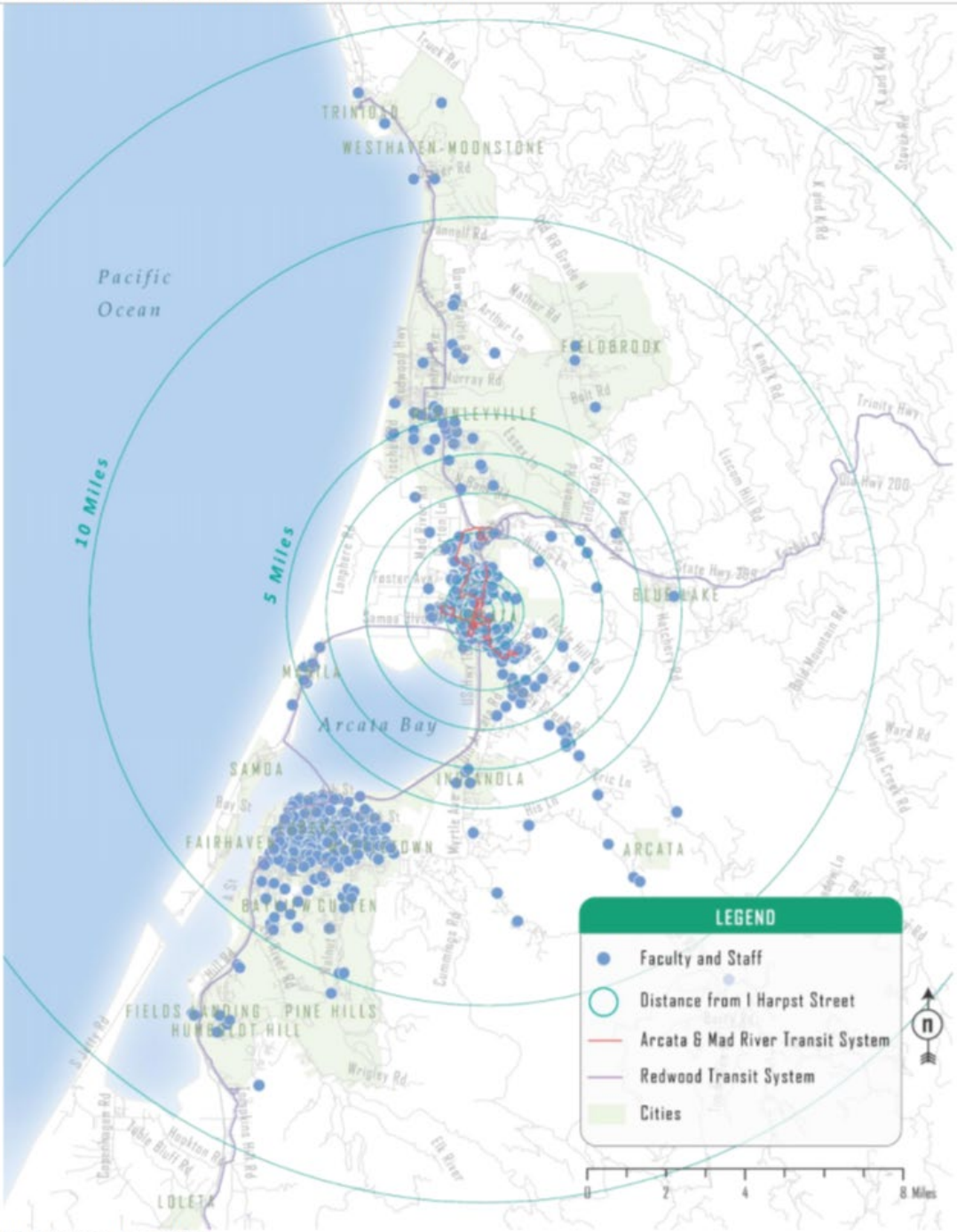
Partners

Parking and Commuter Services: If HSU and Parking and Commuter Services are already actively pursuing a project similar to the park-and-ride lots and shuttles proposal, HEIF funding could be used as additional project funding to "go above and beyond minimum [project] requirements" as stated in the idea paper solicitation. Examples for the funding usage could include providing better and more frequent shuttle service or incorporating electric or alternative fuel shuttle buses.

Appendix

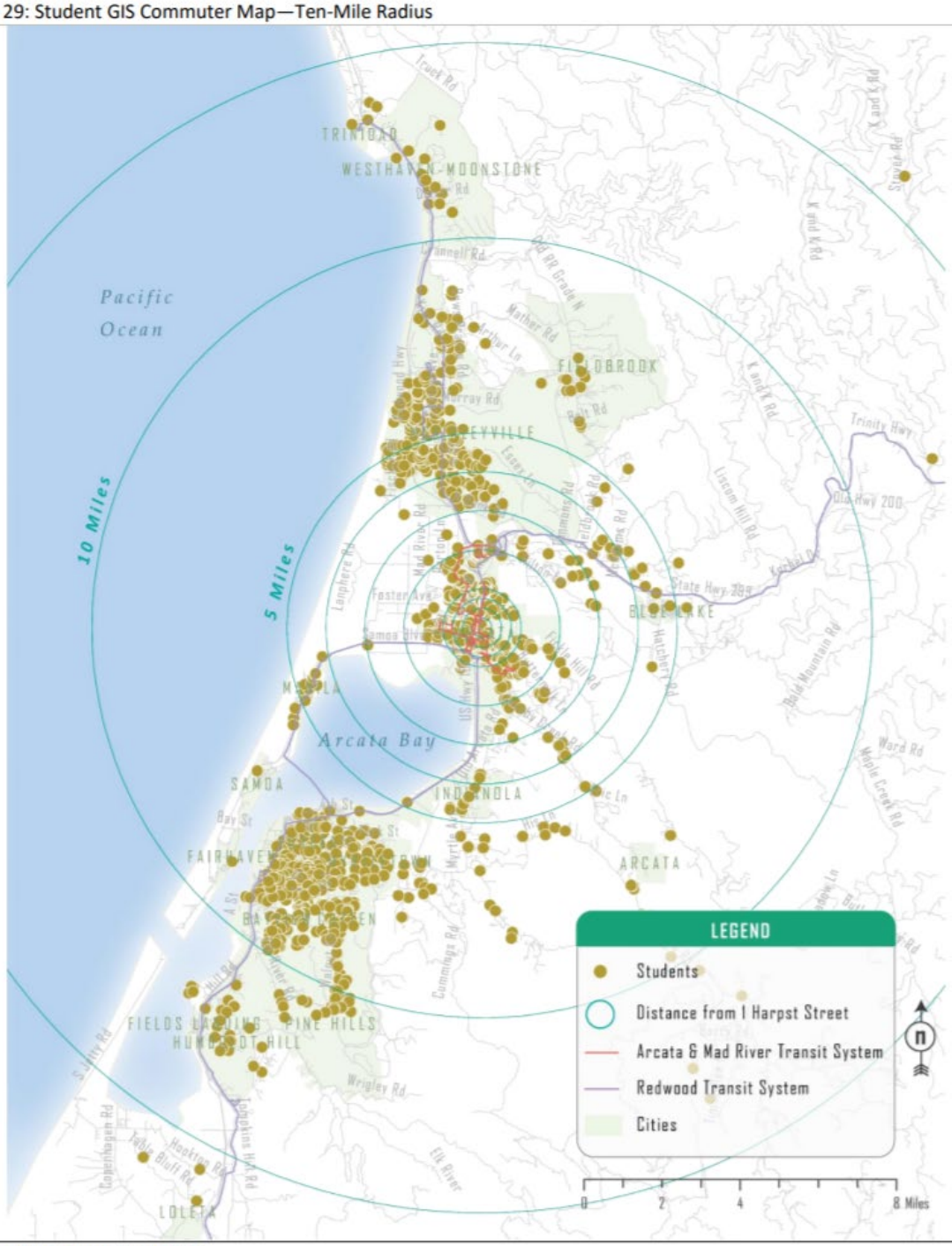
Walker Consultants. (2018) HSU Parking Market Demand Study.
http://www2.humboldt.edu/portalgraphics/HSU_FINALReport.pdf

Figure 25: Faculty/Staff GIS Commuter Map—Ten-Mile Radius



Source: Walker Consultants, 2018

Figure 29: Student GIS Commuter Map—Ten-Mile Radius



Source: Walker Consultants, 2018