iCAP Team Recommendation

Name of iCAP Team: Land & Water

iCAP Team Chair and Vice-Chair: Carmen Ugarte and Jonathon Mosley

Date submitted to iWG: 4/10/23

Recommendation title: Permeable Pavers at State Farm Center (LW005)

For internal use only: Date reviewed by iCAP Working Group:

Specific actions/policy recommendation:
The Land and Water iCAP team recommends the installation of a permeable paver system to replace the asphalt parking lots surrounding the State Farm Center. Currently, permeable asphalt is already installed in the NorthEast lot off of Kirby Avenue. In support of the Campus Landscape Master Plan and the Green Sports Alliance membership, we propose that the remaining Northwest, SouthWest, and SouthEast parking lots of the State Farm Center are converted to permeable pavement.

We understand that in recent years, the NorthEast lot was converted to permeable asphalt in accordance with University standards. In this recommendation, we are urging the DIA to go above the minimum standard and install permeable pavers at all lots surrounding the State Farm Center.

Suggested unit/department to address implementation:
State Farm Center, Student Affairs, and DIA.

Rationale for recommendation:
Excessive rainwater and flooding of impervious parking lots are an ongoing issue on campus. At the State Farm Center parking lots, rainwater flows from South to North. Pooling forms at Kirby Avenue, just south of Memorial Stadium. Because the flowing water is not being caught, an area of high foot and vehicle traffic is experiencing flooding on a regular basis. In support of the Campus Landscape Master Plan and its proposal of permeable pavers in the Athletics District, we formally recommend the installation of a permeable paver system at the parking lots surrounding State Farm Center.

This recommendation will address rainwater issues on both the environmental and socio-cultural front. Implementing this design will promote a culture of sustainability by showcasing sustainable design in one of the most visible areas on campus. Additionally, the completion of this recommendation in conjunction with the Zero Waste iCAP team's 22-23FY recommendations will promote a stronger relationship between iSEE and the DIA. Touching on Athletics in the Land & Water department while Zero Waste makes strides with the DIA will allow us to utilize the connections already made this year within the iCAP family. Just this year, the Engagement iCAP team successfully renewed the University of Illinois' membership in the Green Sports Alliance. In accordance with this global membership, a permeable pavement system will adhere to the commitment which was made and showcase the University as leaders in sustainability.

Permeable pavers at the State Farm Center lots will address environmental issues by reducing flooding occurrences. The water captured will be restored to the soil and aquifer, as it would in a natural system. This evades consequences associated with stormwater runoff, contributing to both the quality and quantity of the water source.

Connection to iCAP goals:
LW005 will address the following objective found in Chapter 4 of the iCAP 2020: 4.2.3 Double the number of on-campus green infrastructure installations from 24 to 48 by FY24. Permeable pavers are considered green infrastructure because they reduce stormwater volume and replenish the groundwater through their water absorbent design. Additionally, this project will abide by Objective 4.2: Implement the Resilient Landscape Strategy recommendations by FY24 in regard to resilient rainwater management.

Perceived challenges:
The construction will need to be scheduled during the summer months, a smaller portion of the year. This is to avoid times of the year with high presence of crowds and cars, which usually align with sports season. Planning early will alleviate these associated challenges.

Anticipated timeline of implementation:
We anticipate that the actual construction will take a few weeks or up to 2 months, which is why we will have to wait until summer break, when students are home. Ideally, we would want to install permeable pavers at one lot each year.

Anticipated budget (identify if cost is up-front or continuous):
To identify a cost estimate, we reviewed a permeable pavement project around the Alma Mater that took place in 2021. The Alma Mater project involved the installation of 14 inch pavers with aggregate on top, which is similar to the profile we would like at the

State Farm Center. The cost of the Alma Mater pavement was close to 37 dollars per square foot. A project as large as the State Farm Center lots will require forklift machinery as opposed to the hand labor used at Alma Mater. Ultimately, a larger project like this will increase efficiencies, and improve economies of scale. Because we are drawing from a case that occurred in 2021, we estimate that we should factor in 30% to account for inflation and cost of materials.

To provide a range, we estimate a cost of 37-48 dollars per square foot installed.

Individual comments are required from each SWATeam member (one or two sentences):

Team Member Name	Team Member's Comments
Nikki Palella	I support this recommendation because it upholds the Campus Landscape Master Plan + the Green Sports Alliance and will resolve flooding issues in our most visible area on campus.
Therese Egner	I support this recommendation because the SFC is a popular place on campus which will successfully display the university's efforts for sustainability and it will help resolve flooding issues.
Carmen Ugarte	I support this initiative to improve rainwater infiltration at the State Farm Center. This is in line with campus sustainability efforts and should also contribute to maintaining the vegetation in the area.
Jonathon Mosley	I support this recommendation.
Brent Lewis	As a major event center on the campus and hosting large numbers of visitors each year, the SFC is in a unique position to showcase the university's commitment to sustainability. Being surrounded by vast impervious surfaces that contribute to regional flooding and increase the local heat island effect, the SFC is poised to be a leader in water resources and sustainable design. I highly support this recommendation and encourage SFC to go above and beyond university standards.

Betsy Liggett Richardson	I support this recommendation and its alignment with the University iCAP green stormwater infrastructure goals.
Mickey Castigador	I support this recommendation as it helps Campus Athletics participate in sustainable ventures.
Kavya Mula	I support this recommendation as it pushes forward our green infrastructure goals while strengthening our sustainable work and relationship with the Athletics Division
Maria Chu	I support this recommendation. Permeable pavers allow infiltration of water resulting in less surface runoff.
Emily Heaton	I support this recommendation.

Further explanation and background (can be supplied in an attachment):

Comments from consultation group (if any; these can be anonymous):