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Penn research team awarded grant to assess Philly's green infrastructure

By Maria Zankey



Philadelphia has emerged as a national leader in green infrastructure.

The U.S. Environmental Protection Agency (EPA) recently announced that a group of <u>Penn</u> researchers is one of five teams to be awarded funds to study green infrastructure practices in urban areas.

The research team, led by the <u>School of Design</u> in collaboration with the <u>Wharton School</u> and the <u>Department of Earth & Environmental Science</u> in the <u>School of Arts & Sciences</u>, received a \$1 million award over two years to examine local policies and help the City of Philadelphia assess how to better approach and promote green infrastructure.

"The really exciting thing about this project is that Philadelphia has emerged as a national leader in green infrastructure," says <u>David Hsu</u>, an assistant professor of city and regional planning in PennDesign, who will lead the research team. "Philadelphia's 'Green City, Clean Waters' plan is both ambitious and relatively cost-effective, and we'll be able to do research immediately to see how the plan is going to work."

Hsu says the team has two goals for the project: to conduct academic research to understand how other cities like Philadelphia can transform themselves with green infrastructure, and to build a tool or information source to help build the market for green infrastructure as Philadelphia's "Green City, Clean Waters" is implemented.

"The issue with building green infrastructure is that people use their land differently depending on what kind of real estate owner you are. Information can affect what you can do," Hsu says. "It's entirely possible if you give people the right information and appeal to them in different ways, they'll react differently. We're going to study which social and economic factors dictate why people might be able to build green infrastructure."



PennDesign

David Hsu, an assistant professor of city and regional planning in PennDesign.

According to the EPA, water pollution has decreased since Congress passed the Clean Water Act in 1972, but 40 percent of U.S. bodies of water still remain polluted. Hsu says that by partnering with the EPA and the Philadelphia Water Department, the team can assess the city's policies to better understand how to further decrease the remaining percentage of water pollution.

"The reason we need green infrastructure is because the last 40 percent of water pollutants are mostly from runoff from cities—atmospheric pollutants, rubber, and oil from our cars, toxic chemicals that get deposited on our roads," Hsu says. "It's no longer factories spewing purple liquid—it's just from us, living in cities. If you can change policies and regulations, and grow a market [for green infrastructure] at the same time, then you can cost effectively reduce urban pollution."

Along with Hsu, the research team consists of co-principal investigator <u>John Landis</u>, chair of the <u>Department of City</u> and <u>Regional Planning</u> at PennDesign; <u>Tom Daniels</u>, a professor of city and regional planning at PennDesign; <u>Susan Wachter</u>, a professor of real estate and finance at Wharton; and <u>Mark Alan Hughes</u>, a professor of practice at PennDesign.

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