How much of the City of Goodyear is covered by trees?

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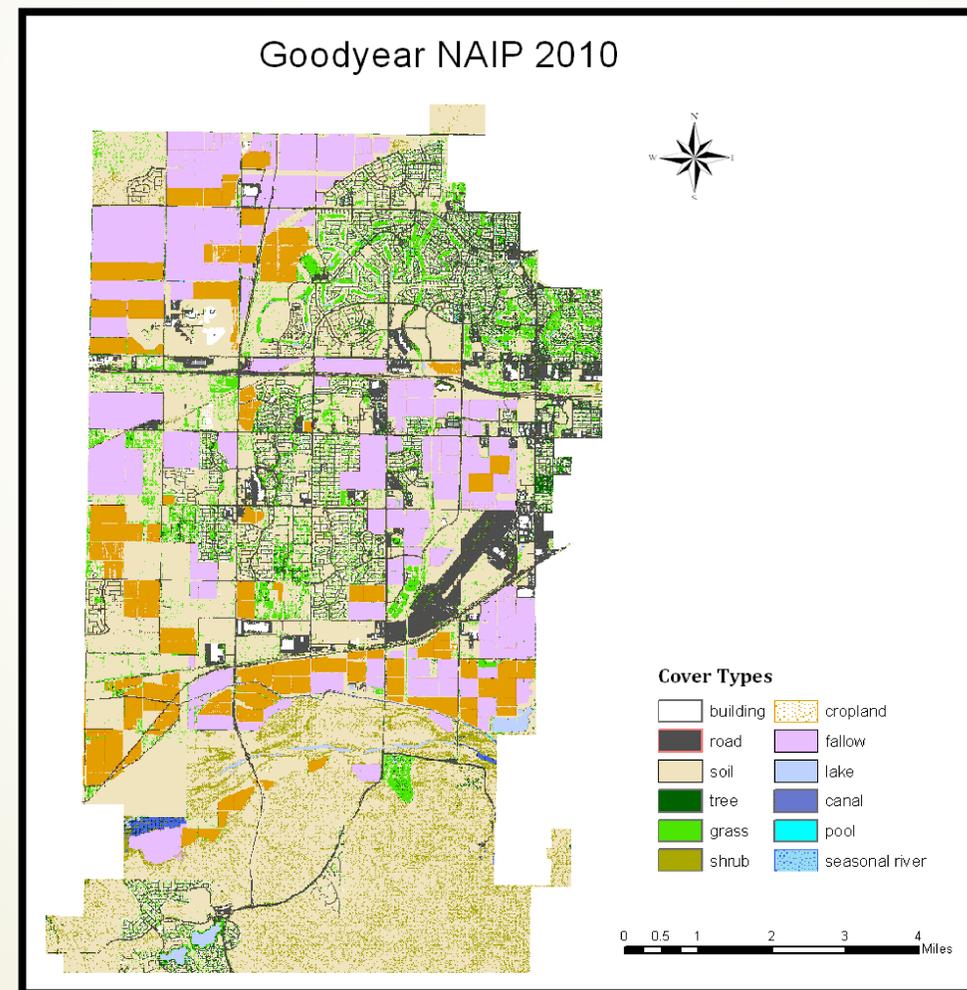Arizona State University

Compiling a tree inventory

NAIP GIS data was used to determine how much of Goodyear is covered by trees, and iTree software was utilized to determine appropriate **tree species** for the City to plant.

NAIP image of a Goodyear neighborhood

Creating a preliminary tree plan

The City of Goodyear requested a tree plan to beautify their city, minimize water use, and mitigate the urban heat island effect.

Strategically planting and maintaining trees has the potential to diminish the urban heat island effect

Many cities have exchanged their natural vegetative coverings for **low-albedo materials** such as asphalt, which can lead to significantly higher temperatures. Trees planted to create maximum shade mitigate this effect, reducing temperatures and improving quality of life.

Goodyear NAIP 2010

Cover Types

building	cropland
road	fallow
soil	lake
tree	canal
grass	pool
shrub	seasonal river

NAIP image clipped to Goodyear's boundaries

Urban trees provide a wide variety of benefits

Trees determined to be ideal provide significant shade and consume minimal water, allowing Goodyear to **reduce energy and water use** while buffering heat.

Goodyear has 1.4% tree cover, contributing to its 16.6% total vegetation cover

Arizona sycamores, acacias, and cascalotes are ideal trees to add to this percentage because of their **low water use and large shade areas**, providing optimal benefit at low cost.

This tree will give

$ 55.62

worth of environmental & aesthetic benefits over the next year

City of Phoenix tree "price tag" demonstrates the economic value of trees to local residents

Goodyear's next steps

This information will guide the next phase of **tree planning** and other cities will follow. Adopting a tree plan sooner rather than later will provide Goodyear with maximum benefit.