JKRA	ΝΤ	RE	EE (
						17,850 96,968	Land Acres Residents
						URBAN TREE	CANOPY
					4	2011: 2019:	1,926 Acres 2,155 Acres
						Ecosystem I	Benefits
ne urban forest of nade. It creates me ommunity, valued arbon. To better unc	Yakima off aningful er at \$1 millic derstand th	fers a lot nvironme on/year in is essentia	more than ntal, econor addition to al infrastruc	greener views and p mic, and social benefi the over \$13 million ture, this assessment i	atches of ts for the in stored dentified	ANNUAL BENEFITS: STORED CARBON BENEFITS:	\$1,218,883 \$13,070,424
ouncil districts, zon esults, based on the JAIP) collected in 20 ee canopy. The ma	how they ing, U.S. c e most rec D19 and 201 ps and dat	are curre ensus blc cently ava II, will allo ca from th	ting area (F ntly distribu ocks, and bl iilable sourc w the city to nis assessme	PPA), and areas unsu ited throughout the (ock groups as well as a aerial imagery from previse existing strates ent will help concentra	City's complete s how their dis n the USDA's N gies and develo ate efforts in are	boundary, watershe tribution has chang National Agriculture op new ones to prote eas with the greates	eds, ZIP codes, city ged over time. The Imagery Program ect and expand the st need, where tree
Assessment	how they ing, U.S. c e most rec D19 and 201 ps and dat ilable, and UTC% in	are curre ensus blc cently ava II, will allo a from th where be PPA%	ting area (F ntly distribu ocks, and bl ilable source w the city to his assessme enefits can b	PPA), and areas unsu ited throughout the C ock groups as well as the aerial imagery from the revise existing strated ent will help concentra- be realized. 12%	City's complete s how their dis n the USDA's N gies and develo ate efforts in are 32%	boundary, watershe tribution has chang lational Agriculture op new ones to prote eas with the greates 56%	eds, ZIP codes, city ged over time. The Imagery Program ect and expand the st need, where tree +1%
Assessment Boundaries	how they ing, U.S. c e most rec D19 and 201 ps and dat ilable, and UTC% in 2019	are curre ensus blc cently ava II, will allo a from th where be PPA%	ting area (F ntly distribu ocks, and bl iilable source w the city to nis assessme enefits can b UTC % Change	PPA), and areas unsu uted throughout the C ock groups as well as the aerial imagery from previse existing strates ent will help concentrates the realized. 12% URBAN TREE CANOPY	City's complete s how their dis n the USDA's N gies and develo ate efforts in are 32% POSSIBLE PLANTING ARI	boundary, watershe tribution has chang National Agriculture op new ones to prote eas with the greates 56% UNSUITABLE AREAS	eds, ZIP codes, city ged over time. The Imagery Program ect and expand the st need, where tree +1% CANOPY CHANG 2011 - 2019
Assessment Boundaries	how they ing, U.S. c e most rec D19 and 201 ps and dat ilable, and UTC% in 2019 ouncil Dis	are curre ensus blc cently ava II, will allo a from th where be PPA% tricts	ting area (F ntly distribu ocks, and bl ilable source w the city to his assessme enefits can b Change	PPA), and areas unsu ited throughout the C ock groups as well as the aerial imagery from the revise existing strated ent will help concentration to realized. 12% URBAN TREE CANOPY	City's complete s how their dis n the USDA's N gies and develo ate efforts in are 32% POSSIBLE PLANTING AR	boundary, watershe tribution has chang lational Agriculture op new ones to prote eas with the greates 56% UNSUITABLE AREAS	eds, ZIP codes, city ged over time. The Imagery Program ect and expand the st need, where tree +1% CANOPY CHANG 2011 - 2019
uncil districts, zor ults, based on th AIP) collected in 20 e canopy. The ma nting space is ava Assessment Boundaries City C	how they ing, U.S. c e most rec D19 and 201 ps and dat ilable, and UTC% in 2019 ouncil Disc 10%	PPA%	ting area (F ntly distribu ocks, and bl iilable source w the city to nis assessme enefits can b Change 0%	PPA), and areas unsu uted throughout the C ock groups as well as the aerial imagery from previse existing strated ent will help concentrated be realized. 12% URBAN TREE CANOPY	City's complete s how their dis n the USDA's N gies and develo ate efforts in are 32% POSSIBLE PLANTING AR	boundary, watershe tribution has chang lational Agriculture op new ones to prote eas with the greates 56% UNSUITABLE AREAS	eds, ZIP codes, city ged over time. The Imagery Program ect and expand the st need, where tree +1% CANOPY CHANG 2011 - 2019
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AN ASSESSMENT OF EXISTING AND POTENTIAL

Report prepared for the Washington State Department of Natural Resources | Project conducted by PlanIT Geo, Inc. www.planitgeo.com | info@planitgeo.com

Trees are green infrastructure that, with proper care, appreciates in value over time.

A land cover map was created from 2019 aerial imagery to capture all of Yakima's urban tree canopy area, and values from <u>i-Tree</u> were used to quantify the benefits that those trees provide. Yakima's urban forest provides \$1.2M in annual benefits by removing air pollutants, reducing stormwater runoff, and sequestering carbon. The trees also store \$13M worth of carbon. In 2019, tree canopy constituted 12% of citywide land cover; non-canopy vegetation was 35%; soil/dry vegetation was 4%; impervious was 47%; and water was 1%. Yakima's UTC came from over 2,000 acres of healthy trees.



Next, tree canopy data were analyzed for several geographies, including Yakima's zoning and watershed boundaries, to see how the distribution of UTC compared at different scales. In 2019, the Lower Wide Hollow Creek contained approximately 11,711 land acres, 13% UTC or 72% of the citywide canopy, and 32% PPA (66% of all PPA citywide). In 2011, the same area contained 11% UTC, indicating a ~2% gain (~236 acres) in the canopy over the six-year time period. The Naches River watershed experienced the highest canopy loss at -4% (~28 acres). Single-Family Residential (R-1) zoning had the highest distribution of land area and contributed the greatest amounts of both UTC and PPA towards the citywide totals, making up 40% of the city's UTC and 39% of all PPA in Yakima. Two-Family Residential (R-2) , Right-of-Way (ROW), and Three-Family Residential (R-3) zoning districts had the next greatest amount of citywide PPA at 14%, and 11%, respectively. All residential zones had higher than the citywide average canopy cover. The City should focus on community outreach and education programs to better inform citizens of the environmental, health, social, and financial benefits that trees provide to help grow the tree canopy in the 3,000+ acres of plantable space and protect existing canopy in residential zones.



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