



URBAN FORESTS FOR PEOPLE AND BIRDS

For Seattle City Council Planning, Land Use, and Zoning
Committee Meeting 12/18/2019

Joshua Morris
Urban Conservation Manager at Seattle Audubon

Image credit: Mick Thompson.



THE URBAN FOREST PROVIDES BENEFITS TO THE CITY, ITS RESIDENTS, AND VISITORS

TYPE	SERVICE
PROVISIONING SERVICES	Food
	Fuel
	Mulch/wood products
REGULATING SERVICES	Carbon sequestration and storage
	Temperature regulation
	Stormwater regulation
	Air purification
	Noise mitigation
CULTURAL SERVICES	Health
	Nature and landscape connection
	Education and learning
	Economy and cultural significance

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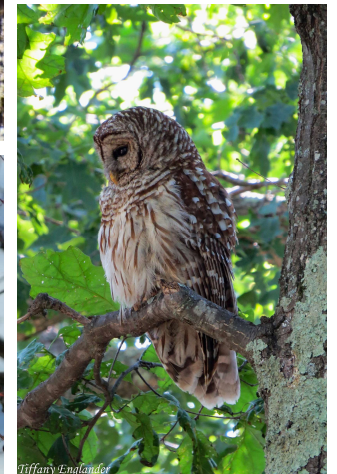
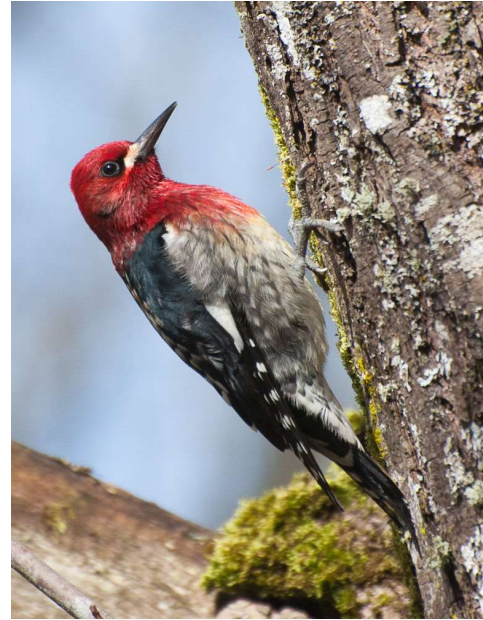
Seattle's urban forest saves the city **\$23 million** in carbon storage, pollution removal, and residential energy savings.*


It would cost **\$4.9 billion** to replace Seattle's trees.*

*Source: *Seattle's Urban Forest Ecosystem Values: Analysis of Structure, Function, and Economic Values*. August 2012. Green Cities Research Alliance.



OVER 100 BIRD SPECIES USE SEATTLE'S TREES



A large, detailed mosaic of a bird's face, likely a crow or raven, composed of thousands of small, square photographs. The mosaic is set against a dark background. The bird's eyes are prominent, with yellowish-gold irises and dark pupils. The overall effect is a complex, textured representation of the bird's features, where each small photo contributes to the larger image.

SPECIAL REPORT

BIRDS CAN'T FIGHT CLIMATE CHANGE. WE CAN.

389 bird species are at risk of extinction in a warming world. Many can still be protected—if we act now.

A large, detailed mosaic of a bird's face, likely an owl, composed of thousands of tiny, overlapping photographs of various bird species. The mosaic is set against a dark background. The bird's eyes are prominent, with bright yellow irises and dark pupils. The beak is a sharp, yellowish point. The overall effect is a complex, textured representation of the bird's features.

108 CLIMATE
THREATENED
BIRDS IN
KING
COUNTY

SPECIAL REPORT

BIRDS CAN'T FIGHT CLIMATE CHANGE. WE CAN.

389 bird species are at risk of extinction in a warming world. Many can still be protected—if we act now.

Our Urban Forest Can Help.

Maintain and enhance:

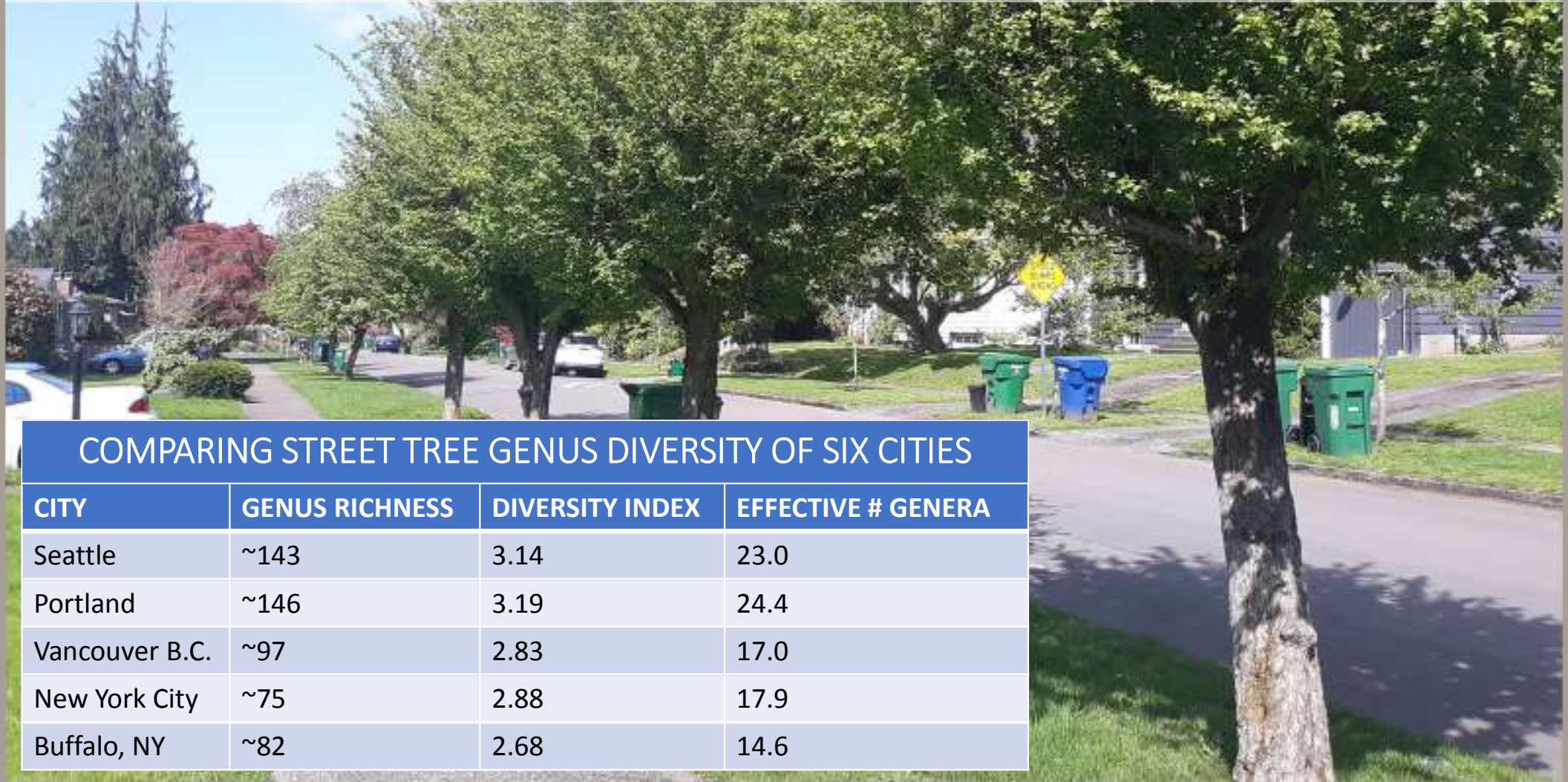
- Diversity
- Structure
- Connectivity
- Distribution



SEATTLE'S URBAN FOREST IS AMONG MOST DIVERSE

COMPARING STREET TREE GENUS DIVERSITY OF SIX CITIES

CITY	GENUS RICHNESS	DIVERSITY INDEX	EFFECTIVE # GENERA
Seattle	~143	3.14	23.0
Portland	~146	3.19	24.4
Vancouver B.C.	~97	2.83	17.0
New York City	~75	2.88	17.9
Buffalo, NY	~82	2.68	14.6

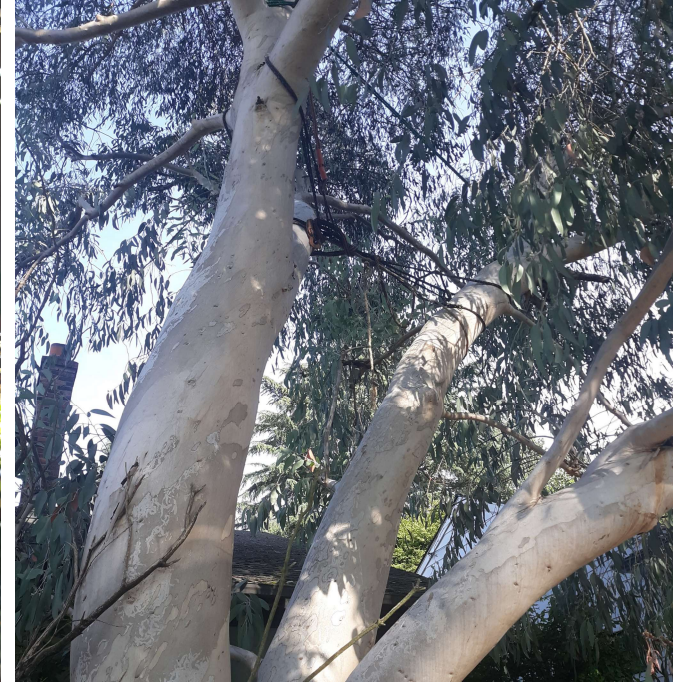




Deodar Cedar
Western Himalayas



Monkey Puzzle Tree
Chile/Argentina



Eucalyptus sp.
Australia

SPECIES FROM EVERY TREE-BEARING CONTINENT

Source: Washington Dept. of Fish and Wildlife

Flycatcher
Crossbills
Swallows
Hawks
Band-tailed pigeons
Siskins

Overstory Canopy

Owls
Jays
Kiglets
Woodpeckers
Chickadees
Nuthatches

Understory Canopy

Flycatcher
Goldfinches
Juncos
Hummingbirds
Bushtits

Shrub Layer

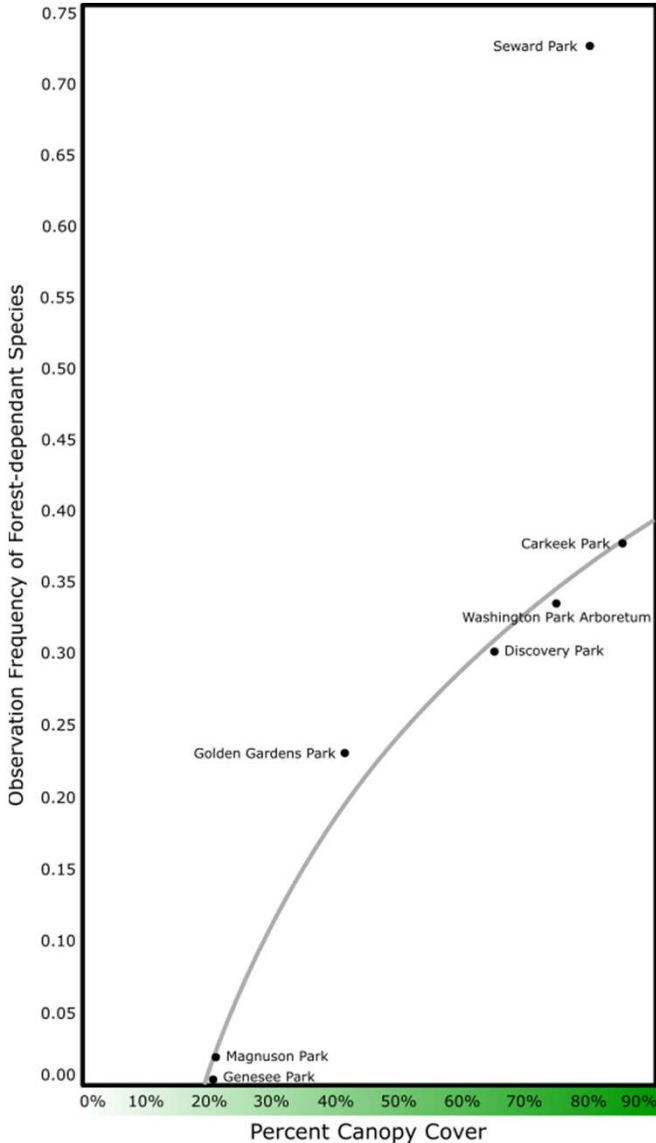
Thrushes Wrens
Towhees
Song sparrows

Ground Layer



WE TEND TO SEE FOREST-DEPENDENT SPECIES MORE OFTEN IN PARKS WITH GREATER CANOPY COVER.

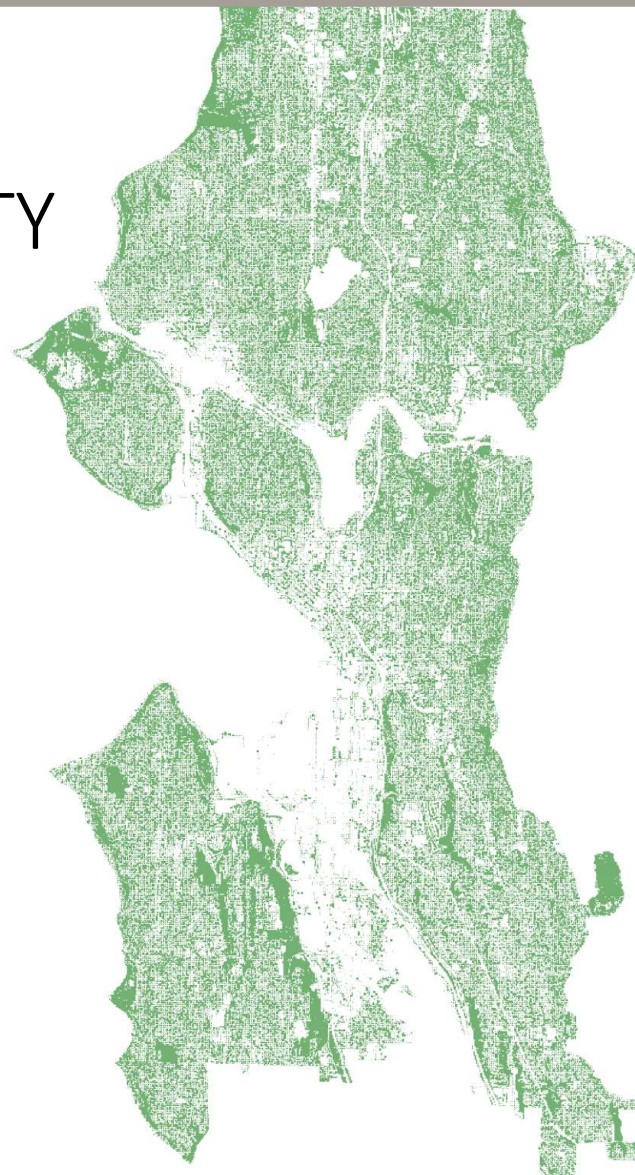
Data from Seattle Audubon NBP, 2016 Lidar Canopy Cover Assessment, and Seattle Parks and Recreation Park Boundaries.



CANOPY COVER AS AN INDICATOR OF CONNECTIVITY



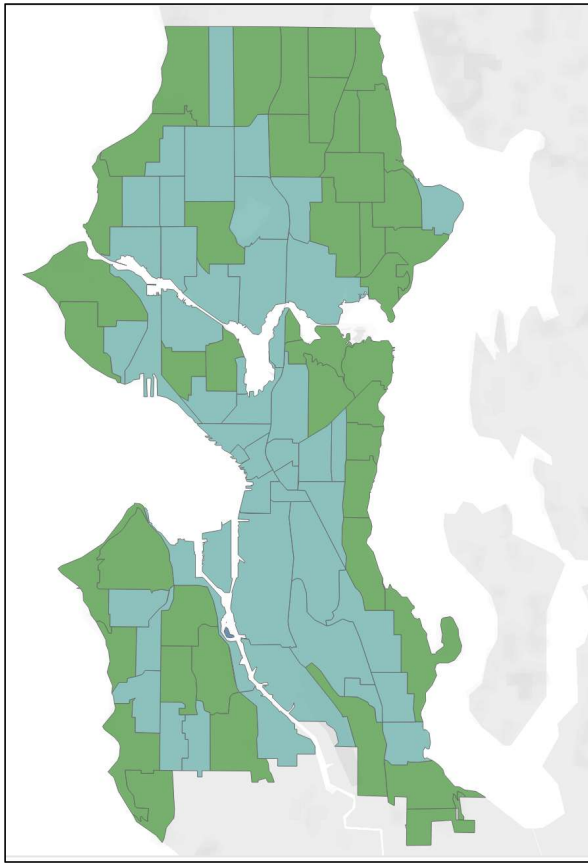
Cooper's Hawk. Image credit: Robert Martin/Audubon Photography Awards



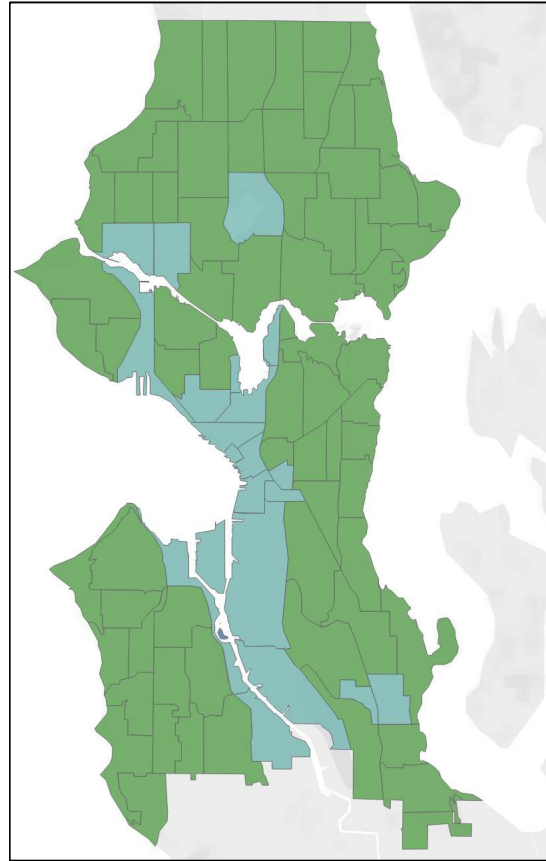
SEATTLE
AUDUBON



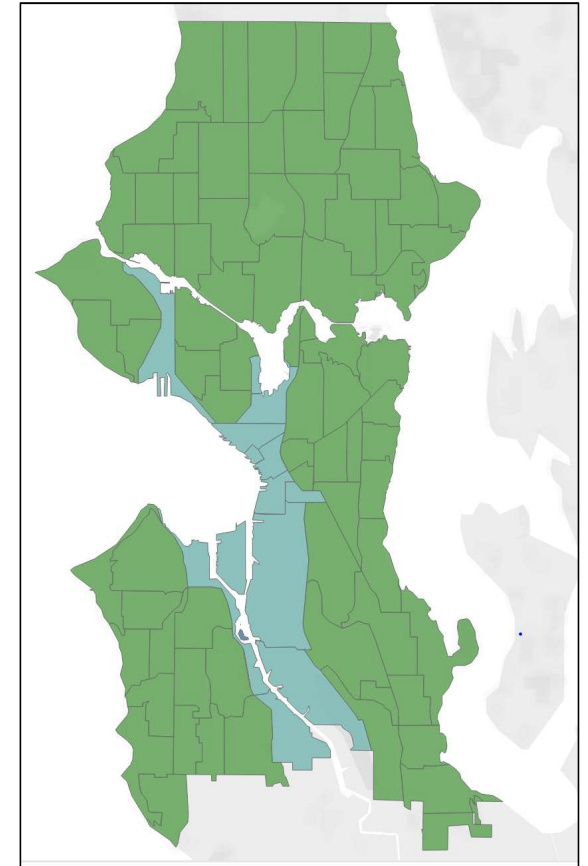
2016 CANOPY COVER BY NEIGHBORHOOD



Green $\geq 28\%$



Green $\geq 20\%$



Green $\geq 15\%$



THE MOST
IMPORTANT
THING WE CAN
DO FOR THE
URBAN FOREST
IS TO PROTECT
THE TREES WE
ALREADY HAVE.

SEATTLE
AUDUBON





SEATTLE
AUDUBON



THANK YOU

Image credits:

Golden-crowned Kinglet: Nick Saunders/Great Backyard Bird Count
Red-breasted Sapsucker: Heather Roskelley/Audubon Photography Awards
Barred Owl: Tiffany Englander/Audubon Photography Awards
Bald Eagles: Floyd Cantrell/Audubon Photography Awards
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All tree photos: Joshua Morris