Denser and greener for all
Urban density has many benefits for sustainability.
Nature in cities is essential for human well-being

Wood et al. 2008
On average, denser cities have less urban nature but...
Density is not destiny. Many brightspot neighborhoods manage to be both dense and green.

San Francisco urbanized area brightspot (labeled with “D”) compared to a typical neighborhood (labeled with a “C”).

McDonald et al. (in press), People and Nature
Aim for density to make space for trees
Minimize building footprints **increase building height**

**Characteristics:**
- No surface parking
- Multi-family 14 story buildings
- Buildings nested in a densely forested park-like setting
- Trees along walkways and block perimeter
Design principles

If there is surface parking, plant trees overhanging.
Benefits of Urban Trees
Research has linked the presence of urban trees to...

PROTECTING BIODIVERSITY
including habitat for migrating birds and pollinators

REDUCING OBESITY LEVELS
by increasing physical activity including walking and cycling

MANAGING STORMWATER,
keeping pollutants out of waterways, and reducing urban flooding

INCREASING
neighborhood property values

REDUCING STRESS
by helping interrupt thought patterns that lead to anxiety and depression

FILTERING up to a third of fine particle pollutants within 300 yards of a tree

COOLING city streets by 2-4°F, reducing deaths from heat and cutting energy use

REDDUCING RATES
of cardiac disease, strokes, and asthma due to improved air quality

CA study: for every $1 spent on trees, $5.82 in benefits
A recent study shows that poor neighborhoods have less tree cover than rich neighborhoods in 92% of American communities.
To close this gap would require planting 62 million trees, which would require an investment of around $10/person over a decade.
Barriers to scaling up urban NBS

1. Lack of knowledge
2. Public concerns
3. Silos between agencies
4. Lack of financial resources
Recommendations

- Identify best-practice governance systems for planning, creating, and maintaining NbS that are consistent with dense urban design
- Target urban NbS to neighborhoods that currently do not have adequate urban nature
- Create financing and incentives that overcome the “wrong pocket problem”
Thank You