

Purpose

This document summarizes other communities efforts to integrate nature into the urban fabric. Twelve cities and ten projects were evaluated in the United States and abroad.

How to Read the Document

Cities

The city is listed with its population. The first link is the name of the project, plan, policy, etc., and will send you to the corresponding website. The following bullet points list the eight criteria each plan was evaluated for.

- **Scale:** What is the scope? It ranges from neighborhoods to counties.
- **Purpose:** Why is it being done?
- **Target:** What are they focusing on to improve? It could be buildings, parks, streets, etc.
- **Wildlife:** Will they be monitoring any wildlife? If so, do they have a specific focus?
- **Nature Definition:** Did they define the term nature or use another term to represent it?
- **Guidelines:** This link will send you to the completed plan or guidelines published by the city. Additional bullet points highlight specifics that are particularly relevant or interesting.
- **Public Engagement:** What did they do to get public input?
- **Success:** How are they measuring success? Specifically in quantitative measures.

Projects

The company or organization is listed. As with the cities, the first link is the name of the project and the bullet points are described above.

Summaries of the Cities and Projects reviewed are listed on pages 17 and 21, respectively.

Executive Summary

Many cities and organizations are looking for ways to incorporate more “green” into the urban environment both in the public and private sectors. The methods used to accomplish this range from policies to guidelines to specific projects. The most common method cities seem to be employing is the idea of green streets and the dual benefit of beautification and stormwater filtering. Many of these cities did not make the list unless they did an outstanding job, e.g. [San Francisco](#).

Singapore, the “[City in a Garden](#)”, appears to be doing the best at adding nature to their city. Many departments, organizations, plans, policies and projects are all tackling the issue. Their [Development Control Parameters](#) (Land Use Code) encourage greenery on terraces on high-rise buildings and for developers to contribute to green buffers on their property. The [Sustainable Blueprint](#) highlights a few key goals for the city: adding 75 acres of skysrise greenery and tripling the length of park connectors by 2020, and adopting a landscape replacement policy that will require new developments to provide landscape areas equivalent to the overall development site area. They also have an independently managed [Garden City Fund](#) to raise money and fund projects that promote City in a Garden ideals and public engagement. The [NParks](#) department has multiple plans written that focus on conserving and increasing biodiversity in the city. Overall, Singapore seems to have the most comprehensive and extensive strategy to truly integrate nature into the city.

Chicago’s [Nature and Wildlife Plan](#) is the closest aligned with Nature in the City ecological goals. Many of their recommendations mirror our project’s goals, such as: “Create new programs

to work with large land owners to enhance the quality and biodiversity value of their lands; Increase native habitat within community managed-open spaces, schools and residential yards; Evaluate the biodiversity value of specific pieces of unprotected, unmanaged open spaces, including under power lines, along railroads, and in large vacant lots; Engage people in appreciating the aesthetics of native ecosystems.” Whether or not these recommendations have been completed yet is currently unknown.

Several cities performed some sort of biodiversity study: [District of Columbia](#), [Oslo](#), [New York City](#), [Chicago](#), [Singapore](#) and [San Francisco](#). The intensity of surveys varied. DC and Singapore are completing a full inventory of their cities; New York City, Chicago and Oslo are performing full inventories in natural areas/green space; and San Francisco has a targeted species for each green connection route. [Vancouver](#), the [District of Columbia](#) and [New York City](#) all have goals for 100% of their population to be within 5-10 min walk to a green space/park. [Oslo](#) uses a similar metric – proportion of population within 990 ft of green space. These cities primary focus for achieving their goal is through the acquisition of more land for parks, natural areas, etc.

[San Francisco](#) and [Larimer County](#) had the most extensive and diverse outreach plans. Both employed a variety of techniques such as interactive mapping, mailed surveys, open houses and engaging specific groups of stakeholders. San Francisco’s interactive mapping at [Sunday Streets](#) were hugely successful and would be easy to replicate for our project. During Sunday Streets, a stretch of road is blocked off to car traffic to allow for various activities. The Green Connections team laid down large posters of maps that citizens were encouraged to draw and write on to gather input on their project. Larimer County held their open houses at convenient locations like the library and provided free child services.

Of the projects reviewed, the Green City Guidelines (funded primarily by the Dutch Government) provides the most relevant and

helpful information for our efforts. It presents a multitude of techniques for greening the built environment while also discussing the benefits of each. Benefits were evaluated in six categories: economy, health, social interactions, ecology, water, climate and pollution.

After reviewing what other cities and projects are doing, it is apparent that Fort Collins approach is unique. Many are trying to achieve similar goals but their efforts are spread across multiple plans and departments. Our approach is based on the idea of a triple-bottom line. We will be gathering data on economic, social and environmental issues and questions. Our final strategic plan will then use this data to formulate actions regarding each bottom line. Another point that makes Nature in the City different is that the project is specifically concerned with access to nature, not just parks or green space. While our project may not be at the same scale as others cities (adding thousands of acres of green space), it better addresses issues a city our size faces.

Did we miss your City or Project?

Let us know!

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Check out our website!

www.fcgov.com/natureinthecity

SECTION 1

CITIES

Fort Collins, CO *pop. 148,612*

[Nature in the City](#)

<http://www.fcgov.com/natureinthecity.php>

- **Scale:** City-wide
- **Purpose:** Provide more access to nature within the urban environment
- **Target:** The main focus is on informal natural areas, but also interested in how any aspect of the built environment can be adapted to support nature
- **Wildlife:** A bird and vegetation inventory will be completed throughout the City
- **Nature Definition:** In progress
- **Guidelines:** In progress
- **Public Engagement:** Interactive mapping, open houses, more TBD
- **Success:** Population within a ten minute walk to nature



Figure 1. A protected wetland on private property.
www.fcgov.com/natureinthecity

[Certified Natural Areas](#)

<http://www.fcgov.com/naturalareas/certified.php>

- **Scale:** City-wide
- **Purpose:** Encourage site management practices that focus on protecting, restoring and enhancing native animal and plant communities.
- **Target:** Private lands
- **Wildlife:** Management plan needs to address local native species
- **Nature Definition:** Native animal and plant communities
- **Guidelines:** [Natural Areas Certification Program Guidelines](#)
 - Must write and implement a management plan
 - Applicants can get financial assistance for implementing their fund through the [Natural Areas Enhancement Fund](#).
- **Public Engagement:** Program educates the public about the values of natural areas, certified areas have to display at least one sign
- **Success:** Certification lasts five years. Re-certification is allowed if the management plan was successfully implemented.

These two specific programs are just the tip of the iceberg of the City's commitment to protecting and promoting the environment in the City. The [Natural Areas Department](#) is funded through a citizen-initiated city and county sales tax and is dedicated to conserving and enhancing lands with existing or potential natural area values. The Parks Department is committed to providing sustainable parks and has received Sustainable Sites Certification for one of the parks. The City has [Low Impact Development \(LID\)](#) standards that require run-off from at least 50% of new impervious areas to be treated by LID techniques. The [Land Use Code](#) guides new development to protect and enhance natural resources through the development review process. Many more efforts are being led across the City by both employees and citizens.

San Francisco, CA *pop. 825,863*

[Green Connections project](#)

<http://www.sf-planning.org/index.aspx?page=3002>

- Scale: City-wide project
- Purpose: To create, protect and enhance a network of routes to encourage bike, pedestrian and wildlife movement to parks, open space and the waterfront.
- Target: Public streets
- Wildlife: Ecology Guide: Each route has a species or ecosystem that it is targeting to improve habitat for.
- Nature Definition: Landscaping and associated wildlife
- Guidelines: Design Toolkit
 - Each tool is rated on: active transportation to parks, urban ecology, neighborhood stewardship and placemaking, ability to implement and traffic and parking considerations.
- Public Engagement: Open house, on-line survey, walking tours, interactive mapping, “Sunday Streets”
- Success: Tentative ideas: miles completed, bike commuting numbers, stormwater standards and potentially some sort of monitoring program.

Larimer County, CO *pop. 310,487*

[Plug in to Nature](#)

<http://www.larimer.org/plugintonature/>

- Scale: County-wide
- Purpose: To determine effective ways to connect families and children to nature and the outdoors
- Target: Outdoor Programs, Improving accessibility and awareness
- Wildlife: N/A
- Nature Definition: “... [A] spectrum of outdoor places ranging from a child’s backyard to wilderness experiences.”
- Guidelines: Plug in to Nature Project Report
 - Improve safe access to parks and open space in urban places.
 - Explore “redeveloping” nature in urban areas surrounded by populations with limited access to nature
 - Transform existing properties to include nature play areas.
- Public Engagement: County-wide surveys, Community meetings, interviews, inventories and meetings with Youth and Family Program Providers and Nature Program Providers.
- Success: Time children spend outside, obesity rates, number of outdoor/nature programs, number of barriers preventing access, proximity to publicly accessible play space



Chicago, IL *pop. 2,715,000*

[Adding Green to Urban Design](http://www.cityofchicago.org/city/en/depts/dcd/supp_info/green_urban_design.html)

http://www.cityofchicago.org/city/en/depts/dcd/supp_info/green_urban_design.html

- **Scale:** City-wide project
- **Purpose:** “Maintain and improve Chicago’s urban design to optimize its environmental benefits for current and future generations.”
- **Target:** All exterior elements of the built environment
- **Wildlife:** Not focused on wildlife. Instead looked at: water, air, land, quality of life.
- **Nature Definition:** Green Space
- **Guidelines:** [Green Urban Design Booklet](#)
 - 21 Policies with specific implementation road maps.
- **Public Engagement:** N/A
- **Success:** No quantitative measures

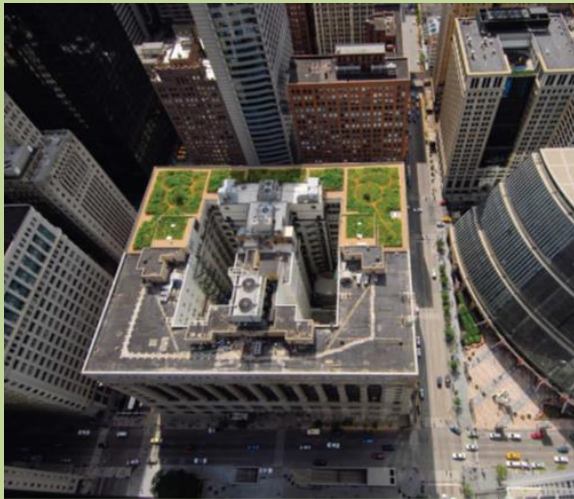


Figure 3. A roof top garden in Chicago.

http://www.cityofchicago.org/content/dam/city/depts/zlup/Sustainable_Development/Publications/Green_Urban_Design/GUD_booklet.pdf

[Nature and Wildlife Plan](http://www.cityofchicago.org/city/en/depts/dcd/supp_info/chicago_nature_andwildlifeplan.html)

http://www.cityofchicago.org/city/en/depts/dcd/supp_info/chicago_nature_andwildlifeplan.html

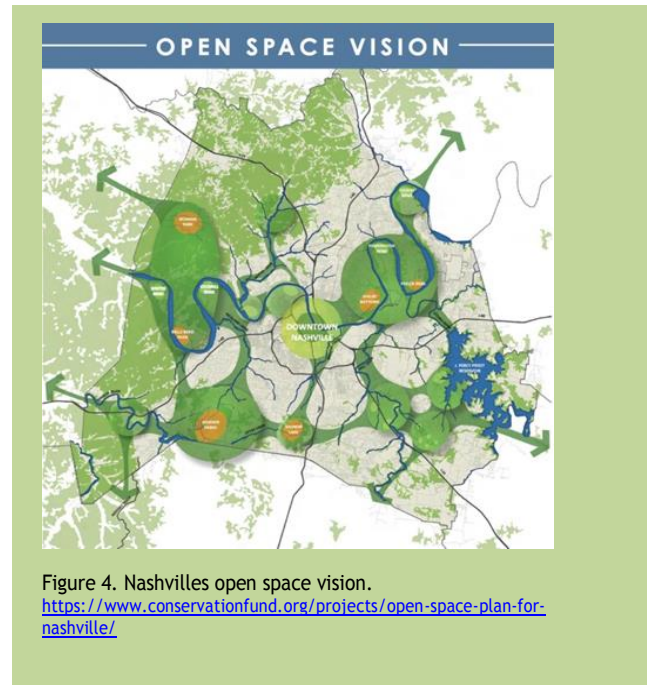
- **Scale:** City-wide
- **Purpose:** To protect natural habitat, manage existing open space, monitor sites and educate the public.
- **Target:** Natural areas, open space, private land
- **Wildlife:** Emphasis on birds and native vegetation but want a full inventory
- **Nature Definition:** Natural area: “managed open space dominated by native vegetation that supports wildlife and provides ecosystem services.”
- **Guidelines:** [Nature and Wildlife Plan and Update](#)
 - Create programs to work with large land owners to enhance the quality and biodiversity value of their lands.
 - Evaluate biodiversity value of unprotected, unmanaged space
 - [A habitat guide for Chicago land owners: enhancing your property for birds](#)
- **Public Engagement:** The 2006 plan had 40+ outside group contributors
- **Success:** N/A

Nashville, TN *pop. 609,644*

[Nashville Naturally](https://www.conservationfund.org/projects/open-space-plan-for-nashville/)

<https://www.conservationfund.org/projects/open-space-plan-for-nashville/>

- **Scale:** City-wide
- **Purpose:** Inventory, evaluate and develop an implementable vision for conserving and enhancing Nashville's lands and natural resources.
- **Target:** Open Space
- **Wildlife:** N/A
- **Nature Definition:** Nature is defined as open space- areas that support recreation, socialization, scenic beauty, habitat for plants and animals, water filtration, farming, and forests.
- **Guidelines:** [Nashville Naturally Open Space Plan](#)
 - Improve connectivity and create green corridors around and through downtown
 - Explore sustainable open space funding and incentive programs, such as a development project fee that could be offset by the creation of green space, including green roofs in dense urban areas.
- **Public Engagement:** 31-member advisory committee, blog site, public forums
- **Success:** Add 6000 acres of both parkland and private green infrastructure by 2035, transition 20% of impervious surfaces to pervious in downtown, double the amount of local food produced in the county, protect 10,000 acres of sensitive natural areas via regulations.



Christchurch, New Zealand

pop. 367,700

[Christchurch Central Recovery Plan](http://ccdu.govt.nz/the-plan)

<http://ccdu.govt.nz/the-plan>

- **Scale:** City-wide
- **Purpose:** To re-build the city with the “green” mindset the citizens envision.
- **Target:** Parks and urban landscape
- **Wildlife:** N/A
- **Nature Definition:** N/A
- **Guidelines:** [Anchor Project Overview](#)
- **Public Engagement:** The plan was developed around key areas that citizens deemed the most important
- **Success:** N/A



Figure 5. Christchurch’s concept for incorporating green space into their city after the earthquake.

<https://ccdu.govt.nz/sites/ccdu.govt.nz/files/documents/the-blueprint-plan-A3.pdf>

Vancouver, BC pop. 603,502

[Greenest City 2020 Action Plan](#) (access to nature section)

<http://vancouver.ca/files/cov/greenest-city-2020-action-plan-2012-2013-implementation-update.pdf>

- **Scale:** City-wide
- **Purpose:** “Ensure every person lives within a five minute walk of a park, greenway or other green space by 2020”
- **Target:** Green Space
- **Wildlife:** N/A
- **Nature Definition:** Green Space - parks and fields, greenways, the seawall, street mini-parks, natural green spaces, as well as park-like spaces such as the grounds around institutional buildings like City Hall, hospitals, and schools.
- **Guidelines:** Access to nature [Website](#) or [PDF](#)
 - Create 4-6 new mini-parks by converting street right-of-ways.
 - Work with the community to decide where new green space will go.
 - Current targets don’t address the quality of green space. City staff are working with local environmental groups to develop a proposed biodiversity target
- **Public Engagement:** [Treekeepers program](#); [neighborhood greenways](#) are initiated by residents
- **Success:** Population is within a five minute walk to green space, plant 150,000 new trees by 2020

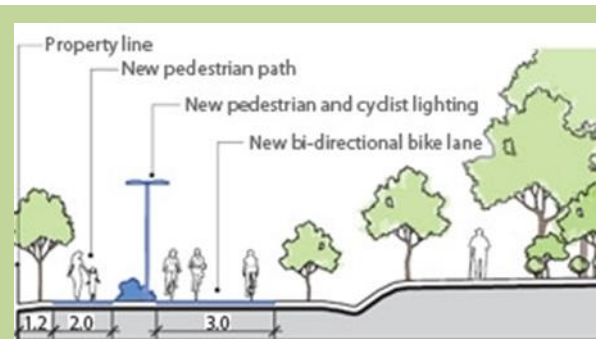


Figure 6. A street cross section in Vancouver.

<http://vancouver.ca/streets-transportation/point-grey-cornwall.aspx>

District of Columbia *pop. 632,323*

[Sustainable DC](#)

<http://www.sustainabledc.org/>

- **Scale:** City
- **Purpose:** To restore impaired ecosystems for the benefit of biodiversity, environmental quality, climate resilience and recreation.
- **Target:** Green recreational space, the trail system and river ways
- **Wildlife:** Their Division of Wildlife and Fisheries is doing an inventory of all mammal, invertebrate, amphibian and avian species
- **Nature Definition:** Parks and natural resources
- **Guidelines:** [Sustainable DC](#) (nature section p72)
 - Prepare an open space plan to increase residential connections to green space and the rivers
 - Require trees and green space on all new development sites
 - Create a connectivity map to guide development of habitats throughout the District
- **Public Engagement:** Three community action plans: DC summer youth employment program; Public Design competition for parklets; wetland restoration tours
- **Success:** By 2032 provide parkland or natural space within a 10-minute walk of all residents, increase wetland acreage by 50% and tree canopy cover to 40%.

[Green Area Ratio \(GAR\)](#)

<http://ddoe.dc.gov/GAR>

- **Scale:** All new buildings requiring a Certificate of Occupancy and major building renovations
- **Purpose:** Set standards for landscape and site design to reduce stormwater runoff, improve air quality and reduce the urban heat island effect
- **Target:** External elements of private buildings
- **Wildlife:** N/A
- **Nature Definition:** Landscaping
- **Guidelines:** The GAR Guidebook and Landscape Checklist are under development
- **Public Engagement:** Training seminars
- **Success:** New development achieving the required GAR score

New York City, NY *pop. 8,336,697*

[PlaNYC: Parks and Public Spaces](#)

<http://www.nyc.gov/html/planyc2030/html/theplan/public-spaces.shtml>

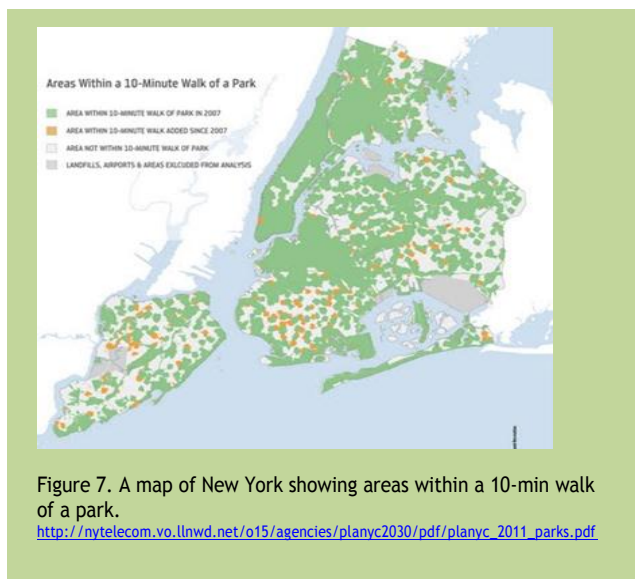
- **Scale:** City-wide
- **Purpose:** “Ensure all New Yorkers live within a ten-minute walk of a park”
- **Target:** Parks and Public Space
- **Wildlife:** Performing a biodiversity study in natural areas
 - [Natural Areas Conservancy](#)
- **Nature Definition:** Parks and Public Space
- **Guidelines:** [Parks and Public Space](#)
 - Re-imagine the public realm – activate streetscapes and create a network of green corridors
 - Support ecological connectivity
- **Public Engagement:** [Million TreesNYC](#), [Love Your Block](#), [CoolRoofs](#)
 - [Public Engagement](#) for entire PlaNYC
- **Success:** Population is within a 10 minute walk of a park

Seattle, WA *pop. 634,535*

[Green Factor](#)

<http://www.seattle.gov/dpd/cityplanning/completeprojectslist/greenfactor/whatwhy/>

- **Scale:** Specific zone districts
- **Purpose:** Increase the amount and improve the quality of landscaping in new development
- **Target:** External elements of private buildings
- **Wildlife:** N/A
- **Nature Definition:** Landscaping
- **Guidelines:** [Six case studies](#) and [other documents](#)
- **Public Engagement:** Series of workshops
- **Success:** New development achieving the required green factor score



Singapore *pop. 5,312,000*

Urban Redevelopment Authority

<http://www.ura.gov.sg/uol/>

- Scale: City wide
- Purpose: This how they regulate development
- Target: Development
- Wildlife: N/A
- Nature Definition: N/A
- Guidelines: **Development Control Parameters**
 - Promote “lush greening” on sky terraces and roof top greenery
 - Private developers are encouraged to contribute to the greening of green buffers on their property
- Public Engagement: N/A
- Success: N/A

Sustainable Singapore

<http://app.mewr.gov.sg/web/Contents/ContentsSSS.aspx?ContId=1034>

- Scale: City wide
- Purpose: Protecting and enhancing our biodiversity to conserve our natural heritage for all to enjoy (Ch.6)
- Target: Parks, Private buildings, waterways
- Wildlife: Protect and enhance biodiversity
- Nature Definition: N/A
- Guidelines: **Sustainable Blueprint**
 - Co-funding for green roofs in the Central Business District and Orchard Road area
 - Develop a City Biodiversity Index and implement a National Biodiversity Strategy and Action Plan
 - Transform drains, canals and reservoirs to support recreational use
- Public Engagement: N/A
- Success: Add 75 acres of skysrise greenery, 2225 acres of green park space and 162 mi of park connectors by 2020. Provide 2 acres of park land per 1000 persons by 2030.



Figure 8. A canopy walk in Singapore.

http://www.nparks.gov.sg/cms/index.php?option=com_visitorsguide&task=attractions&id=64&Itemid=73

Green Mark

http://www.bca.gov.sg/greenmark/green_mark_buildings.html

- Scale: City wide
- Purpose: A scoring system that helps, “...to establish environmentally friendly practices for the planning, design and construction of buildings, which would help to mitigate the environmental impact of built structures.”
- Target: New Buildings
- Wildlife: N/A
- Nature Definition: N/A
- Guidelines: **Certification Standards**
 - Part 3 – Environmental Protection
- Public Engagement: N/A
- Success: All new buildings getting Green Mark certified

Oslo, Norway *pop. 593,045*

Urban Ecology Programme 2011 – 2026

http://www.oslo.kommune.no/english/environment/environmental_policies/urban_ecology_programme/

- Scale: City
- Purpose: (Section 5) Maintain and strengthen the blue-green infrastructure (waterways and greenery).
- Target: Forest zone, outdoor rec. areas, green spaces, areas of natural environment
- Wildlife: Between 2002-2007 all green areas were surveyed for biological diversity by biologist. They identified 1558 valuable natural habitats and 344 locations with threatened species. Two areas have been protected; zoning plans for 12 more.
- Nature Definition: Green Space – “public parks, gardens, churchyards and similar, exclusively for the purposes of walking and cycling, plus outdoor sports facilities and private green spaces available free of charge to the public.”
- Guidelines:
 - Target 5.2: 5.2.1 – 5.2.7 –Valuable unregulated areas of natural environment will be safeguarded by zoning.
 - Target 5.6: 5.6.1-5.6.2 - Safeguarded through active management by the city, the private sector and voluntary organizations.
- Public Engagement: N/A
- Success: Proportion of population who live within 330yd of green space; Area of designated outdoor recreation areas and green spaces with public access; Area of school gardens and allotments in m²; Number of children and adults who use school gardens and allotments

SECTION 2 PROJECTS

AECOM

[Landscape Biodiversity Planning and Design System](http://www.aecom.com/deployedfiles/Internet/Capabilities/Design%20and%20Planning/_documents/130403_LandscapeBiodiversitySystem_TM.pdf)

http://www.aecom.com/deployedfiles/Internet/Capabilities/Design%20and%20Planning/_documents/130403_LandscapeBiodiversitySystem_TM.pdf

- **Scale:** Site specific
- **Purpose:** Use a quantitative measurement of biodiversity at a site to compare different planning alternatives
- **Target:** Landscaping and layout
- **Wildlife:** Local Target Species
- **Nature Definition:** N/A
- **Guidelines:** [Landscape Biodiversity Planning and Design System](#)
 - Scoring system tracks performance of multiple indicators of landscape biodiversity such as priority species, habitat quality, connectivity, and total habitat area.
- **Public Engagement:** N/A
- **Success:** Increasing the Landscape Biodiversity Index score

International Council for Local Environmental Initiatives (iclei)

[Local Biodiversity Strategy and Action Plan](http://www.cbd.int/en/subnational/guidelines)

<http://www.cbd.int/en/subnational/guidelines>

- **Scale:** City or smaller
- **Purpose:** assist local governments in making a start with, or improvements to, their biodiversity planning processes
- **Target:** Policy
- **Wildlife:** Varies on biodiversity index used. Ex) [City Biodiversity Index](#)
- **Nature Definition:** N/A
- **Guidelines:** [Local Biodiversity Strategy and Action Plan Guidelines](#)
 - Lays out information, resources and actions needed for a city to create its own biodiversity strategy and action plan.
- **Public Engagement:** Varies, but participation is a large theme
- **Success:** N/A

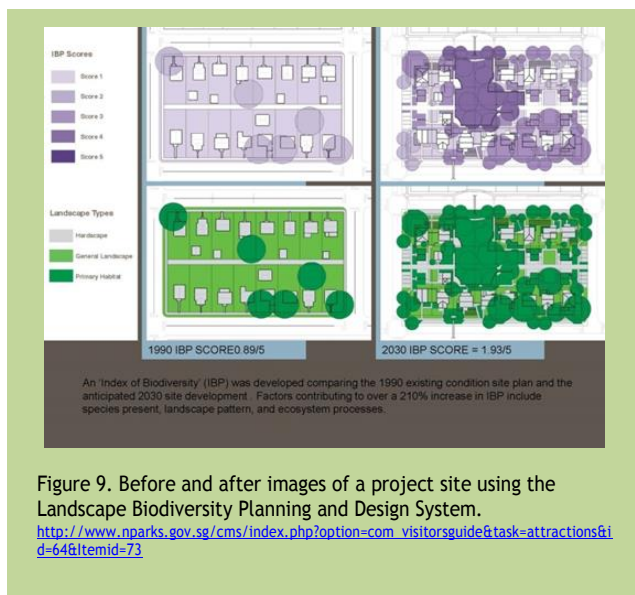


Figure 9. Before and after images of a project site using the Landscape Biodiversity Planning and Design System.
http://www.nparks.gov.sg/cms/index.php?option=com_visitorsguide&task=attractions&id=64&Itemid=73

The Green City Campaign

The Green City Guidelines

http://www.thegreencity.com/Highlights/The_Green_City_Guidelines

- **Scale:** City, neighborhood, streets and building
- **Purpose:** To provide facts, figures, examples and references on how Green Infrastructure contributes to the livability of urban places.
- **Target:** Green infrastructure
- **Wildlife:** N/A
- **Nature Definition:** N/A
- **Guidelines:** [Green City Guidelines](#) click the “learn more” link at the bottom to download the PDF
 - Covers thirty different topics related to “greening”; providing explanations, benefits, facts and examples, e.g. how trees reduce air pollution.
- **Public Engagement:** N/A
- **Success:** N/A

Biophilic Cities

Biophilic Cities Project

<http://biophiliccities.org/the-biophilic-cities-project/>

- **Scale:** City
- **Purpose:** To advance the theory and practice of planning for biophilic cities, through a combination of collaborative research, teaching, dialogue and exchange.
- **Target:** All aspects of a city
- **Wildlife:** Depends on city
- **Nature Definition:** “Biophilia...is the innately emotional affiliation of human beings to other living organisms.”
- **Guidelines:** No definition or criteria for what a biophilic city is. A few key qualities are laid out [here](#).
 - Nine partner cities are identified, along with the associated qualities that make them biophilic
- **Public Engagement:** The project will periodically convene researchers, publish working papers, reports and other publications that spread the findings of the project work the message about biophilic cities.
- **Success:** N/A



Figure 10. An image of the Green City Guidelines.
http://www.thegreencity.com/Highlights/The_Green_City_Guidelines

Stanford

[City Nature](http://citynature.stanford.edu/)

<http://citynature.stanford.edu/>

- Scale: Neighborhood, City, Metropolitan area
- Purpose: Explore why nature is unevenly distributed in and across cities
- Target: N/A
- Wildlife: N/A
- Nature Definition: They acknowledge that there are many definitions and forms of nature while never actually defining nature
- Guidelines: No guidelines but a significant amount of [data](#)
- Public Engagement: N/A
- Success: N/A

From LANDSAT data (greenness band) they found an average pixel value for parks in a specific city. Then they identified all pixels in the city area that were \geq to the average pixel value. For arid regions where everything isn't green, they looked at "pavedness". From the 2006 NLCD "Percent Developed Impervious" data they determined an average pixel value of 0.25 for designated park and open space areas and then identified all pixels with \leq 0.25 impervious surface. A single pixel appears to be about the size of two lots with a house on them.

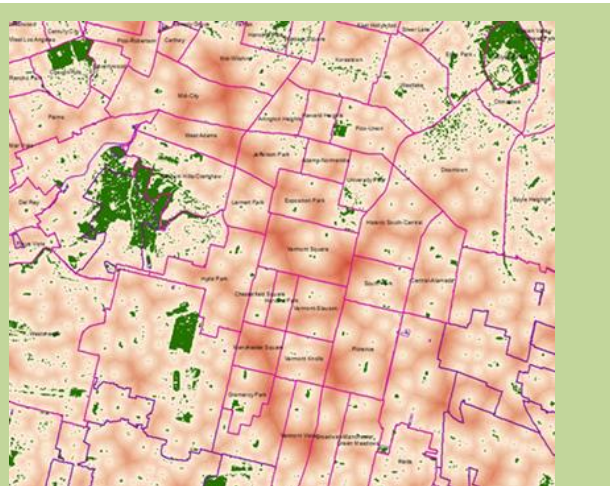


Figure 11. LA with distance shown to "park-like-greenness".

<http://citynature.stanford.edu/naturehoods/index.html#>

Portland Sustainability Institute

[EcoDistricts](http://ecodistricts.org/)

<http://ecodistricts.org/>

- Scale: Neighborhoods
- Purpose: To create sustainable cities from the neighborhood up through community and individual action
- Target: Determined by group
- Wildlife: N/A
- Nature Definition: N/A
- Guidelines: [The EcoDistricts Framework](#)
 - Provides a road map of how to organize, develop, implement and monitor an EcoDistrict project
 - Has eight performance areas: Equitable development, health & well-being, community identity, access & mobility, energy, water, habitat & ecosystem function and materials management.
- Public Engagement: EcoDistrict teams are composed of neighbors, community institutions, businesses, city staff and utility providers.
- Success: Monitoring is performed and data collected from the EcoDistrict performance standards

USDA Forest Service

[i-Tree](http://www.itreetools.org/)

<http://www.itreetools.org/>

- **Scale:** Individual trees, parcels, neighborhoods, cities, states
- **Purpose:** Quantifying the environmental services that trees provide and the structure of the urban forest
- **Target:** Trees
- **Wildlife:** N/A
- **Nature Definition:** N/A
- **Guidelines:** There are nine different i-Tree tools that have an associated manual or guiding document. Each tool provides a wealth of information, including monetary estimates.
- **Public Engagement:** The software is peer-reviewed. Collaborators include: Forest Service, Davey Tree Expert Company, National Arbor Day Foundation, Society of Municipal Arborists, International Society of Arboriculture and Casey Trees
- **Success:** N/A

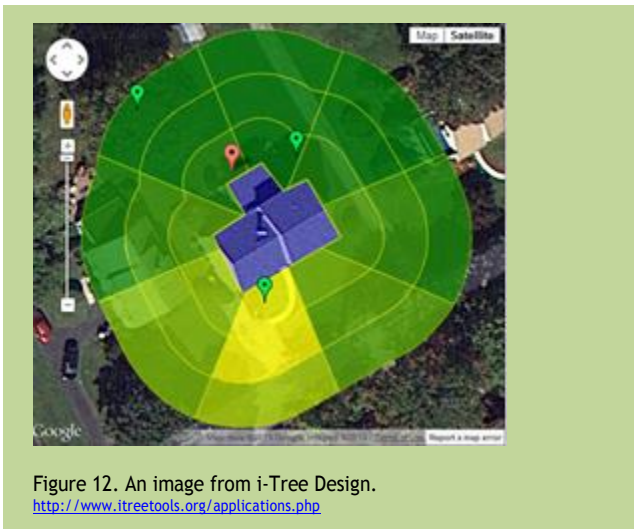


Figure 12. An image from i-Tree Design.
<http://www.itreetools.org/applications.php>

National Center for Ecological Analysis and Synthesis

[Comparative Ecology of Cities](http://www.nceas.ucsb.edu/featured/aronson)

<http://www.nceas.ucsb.edu/featured/aronson>

- **Scale:** City-wide
- **Purpose:** To answer two main questions, “What makes an urban biota ‘urban’?” and “Are the patterns of urban biota and the processes that shape them the same across the world’s cities?”
- **Target:** N/A
- **Wildlife:** Using existing bird and vegetation databases
- **Nature Definition:** N/A
- **Guidelines:** Using several factors to determine species distribution
 - Regional scale biogeographic context
 - Metropolitan scale urban intensification
 - Local scale socio-economic/cultural factors
- **Public Engagement:** Had three working groups sessions with participants from many universities around the world
- **Success:** Four goals
 - Compile and synthesize larger datasets of flora and avifauna of cities around the world
 - Compare patterns and ecological responses of birds and plants in urban habitats
 - Understand the social constraints on biodiversity in cities
 - Develop recommendations for monitoring biodiversity in urban areas

International Living Future Institute

[Living Building Challenge](http://living-future.org/lbc/about)

<http://living-future.org/lbc/about>

- **Scale:** Building
- **Purpose:** Mission – “To encourage the creation of Living Buildings, Landscapes and Neighborhoods in countries around the world while inspiring, educating and motivating a global audience about the need for fundamental and transformative change.”
- **Target:** All aspects of building and site design
- **Wildlife:** N/A
- **Nature Definition:** No specific definition but discuss it in broad terms from energy to ecosystems
- **Guidelines:** [Living Building Challenge 2.1](#); Considered the most stringent green building certification; Based on seven performance areas
 - Site, Water, Energy, Health, Materials, Equity and Beauty
- **Public Engagement:** N/A
- **Success:** All criteria must be met for certification. Each criterion has specific standards. See above guidelines for more information.

Royal Horticultural Society

[It's Your Neighborhood](http://www.rhs.org.uk/Gardening/Community-gardening/Its-Your-Neighbourhood)

<http://www.rhs.org.uk/Gardening/Community-gardening/Its-Your-Neighbourhood>

- **Scale:** Country
- **Purpose:** To support communities to improve their quality of life through gardening.
- **Target:** Gardening space – both pots and land
- **Wildlife:** [Wildlife and the gardener](#)
- **Nature Definition:** Gardens
- **Guidelines:** [Information Pack](#)
 - Each groups' goals need to revolve around the three core pillars: Community Participation, Environmental Responsibility and Gardening Achievement
 - [Britain in Bloom Impact Report](#) - discusses benefits of the Britain in Bloom and It's Your Neighborhood initiatives from a triple bottom line perspective
- **Public Engagement:** Each group is started by and made up of locals. “in Bloom” experts visit each group to provide feedback and advice
- **Success:** N/A



TABLE 1: SUMMARY OF CITIES EFFORTS TO INCORPORATE NATURE IN THE CITY

City	Population	Project	Scale	Purpose	Target	Wildlife	Nature	Guidelines	Public Engagement	Success
Fort Collins	148,612	Nature in the City	City	Provide more access to nature within the urban environment	The main focus is on informal natural areas, but also interested in how any aspect of the built environment can be adapted to support nature	A bird and vegetation inventory will be completed throughout the City	In progress	In progress	Interactive mapping, open houses, more TBD	Population within a ten minute walk to nature
		Certified Natural Areas	City	Encourage site management practices that focus on protecting, restoring and enhancing native animal and plant communities.	Private lands	Management plan needs to address local native species	Native animal and plant communities	Natural Areas Certification Program Guidelines	Program educates the public about the values of natural areas, certified areas have to display at least one sign	Certification lasts five years. Re-certification is allowed if the management plan was successfully implemented
San Francisco	825,863	Green Connections project	City	To create, protect and enhance a network of routes to encourage bike, pedestrian and wildlife movement to parks, open space and the waterfront.	Public Streets	Ecology Guide : Each route has a species or ecosystem that it is targeting to improve habitat for.	Landscaping and associated wildlife	Design Toolkit	Open house, on-line survey, walking tours, interactive mapping, "Sunday Streets"	Tentative: Miles completed, % of bike commutes, stormwater standards
Larimer County	310,487	Plug in to Nature	County	To determine effective ways to connect families and children to nature and the outdoors	Outdoor Programs, Improving accessibility and awareness	N/A	"... [A] spectrum of outdoor places ranging from a child's backyard to wilderness experiences."	Plug in to Nature Project Report	County-wide surveys, Community meetings, interviews, inventories and meetings with Youth and Family Program Providers and Nature Program Providers.	Time children spend outside, obesity rates, number of outdoor/nature programs, number of barriers preventing access, proximity to publicly accessible play space

City	Population	Project	Scale	Purpose	Target	Wildlife	Nature	Guidelines	Public Engagement	Success
Chicago	2,715,000	Adding Green to Urban Design	City	“Maintain and improve Chicago’s urban design to optimize its environmental benefits for current and future generations.”	All exterior elements of the built environment	N/A	Green Space	Green Urban Design Booklet	N/A	No quantitative measures
		Nature and Wildlife Plan	City	To protect natural habitat, manage existing open space, monitor sites and educate the public.	Natural areas, open space, private land	Emphasis on birds and native veg. but want a full inventory	Natural area: "managed open space dominated by native vegetation that supports wildlife and provides ecosystem services."	Nature and Wildlife Plan and Update	The 2006 plan had 40+ outside group contributors	N/A
Nashville	609,644	Nashville Naturally	City	Inventory, evaluate and develop an implementable vision for conserving and enhancing Nashville’s lands and natural resources.	Open Space	N/A	Open space: areas that support recreation, socialization, scenic beauty, habitat for plants and animals, water filtration, farming, and forests.	Nashville Naturally Open Space Plan	31-member advisory committee, blog site, public forums	Add 6000 acres of both parkland and private green infrastructure by 2035, transition 20% of impervious surfaces to pervious in downtown, double the amount of local food produced in the county, protect 10,000 acres of sensitive natural areas via regulatory innovations, etc
Cristchurch	367,700	Christchurch Central Recovery Plan	City	To re-build the city with the “green” mindset the citizens envision.	Parks and urban landscape	N/A	N/A	Anchor Project Overview	The plan was developed around key areas that citizens deemed the most important	N/A
Vancouver	603,502	Greenest City 2020 Action Plan	City	“Ensure every person lives within a five minute walk of a park, greenway or other green space by 2020”	Public Green Space	N/A	Green Space: parks and fields, greenways, the seawall, street mini-parks, natural green spaces, as well as park-like spaces such as the grounds around institutional buildings like City Hall, hospitals, and schools.	Access to nature	Treekeepers program; neighborhood greenways	Population is within a 10 minute walk to green space, plant 150,000 new trees by 2020

City	Population	Project	Scale	Purpose	Target	Wildlife	Nature	Guidelines	Public Engagement	Success
New York City	8,336,697	PlaNYC: Parks and Public Spaces	City	“Ensure all New Yorkers live within a ten-minute walk of a park”	Parks and Public Space	Performing a biodiversity study in natural areas – Natural Areas Conservancy	Parks and Public Space	Parks and Public Space	Public engagement plan pdf - Million TreesNYC, Love Your Block, CoolRoofs	New Yorkers live within a 10 minute walk of a park
DC	632,323	Sustainable DC	District	To restore impaired ecosystems for the benefit of biodiversity, environmental quality, climate resilience and recreation.	Green recreational spaces, trail system and river ways	Their Division of Wildlife and Fisheries is doing an inventory of all mammal, invertebrate, amphibian and avian species	Parks and Natural Resources	Sustainable DC (nature section p72)	Three community action plans: DC summer youth employment program; Public Design competition for parklets; wetland restoration tours	By 2032 provide parkland or natural space within a 10-minute walk of all residents, increase wetland acreage by 50% and tree canopy cover to 40%.
		Green Area Ratio	District	Set standards for landscape and site design to reduce stormwater runoff, improve air quality and reduce the urban heat island effect	All new buildings requiring a Certificate of Occupancy and major building renovations	N/A	Landscaping	The GAR Guidebook and Landscape Checklist are under development	Training seminars	Achieving the required GAR score
Seattle	634,535	Green Factor	Specific zone districts	Increase the amount and improve the quality of landscaping in new development	External elements of private buildings	N/A	Landscaping	Case Studies	Series of workshops	New development achieving the required green factor score

City	Population	Project	Scale	Purpose	Target	Wildlife	Nature	Guidelines	Public Engagement	Success
Oslo	593,045	Urban Ecology Programme	City	(Section 5) Maintain and strengthen the blue-green infrastructure	Forest zone, outdoor rec. areas, green spaces, areas of natural environment	Between 2002-2007 all green areas were surveyed for biological diversity by biologist. Identified 1558 valuable natural habitats and 344 locations with threatened species. Two areas have been protected; zoning plans for 12 more.	Green Space – “public parks, gardens, churchyards and similar, exclusively for the purposes of walking and cycling, plus outdoor sports facilities and private green spaces available free of charge to the public.”	Target 5.2 & 5.6	N/A	Proportion of population who live within 330yd of green space; Area of designated outdoor recreation areas and green spaces with public access; Area of school gardens and allotments in m ² ; Number of children and adults who use school gardens and allotments
Singapore	5,312,000	Green Mark	City	A scoring system that helps, “...to establish environmentally friendly practices for the planning, design and construction of buildings, which would help to mitigate the environmental impact of built structures.”	New Buildings	N/A	N/A	Certification Standards Part 3	N/A	All new buildings getting Green Mark certified
		Urban Redevelopment Authority	City	This is their "Land Use Code"	Development	N/A	N/A	Development Control Parameters	N/A	N/A
		Sustainable Singapore	City	Protecting and enhancing our biodiversity to conserve our natural heritage for all to enjoy (Ch.6)	Parks, Private buildings, Waterways	Protect and enhance biodiversity	N/A	Sustainable Blueprint Chapter 6	N/A	Add 75acres of skyrise greenery, 2225 acres of green park space and 162 mi of park connectors by 2020. Provide 2 acres of park land per 1000 persons by 2030.

Organization	Project	Scale	Purpose	Target	Wildlife	Nature	Guidelines	Public Engagement	Success
AECOM	Landscape Biodiversity Planning and Design System	Site	Use a quantitative measurement of biodiversity at a site to compare different planning alternatives	Landscaping and layout	Local Target Species	N/A	Landscape Biodiversity Planning and Design System	N/A	Increasing the Landscape Biodiversity Index score
International Council for Local Environmental Initiatives	Local Biodiversity Strategy and Action Plan	City or Smaller	Assist local governments in making a start with, or improvements to, their biodiversity planning processes	Policy	Varies on biodiversity index used	N/A	Local Biodiversity Strategy and Action Plan Guidelines	Varies, but participation is a large theme	N/A
The Green City Campaign	The Green City Guidelines	City, neighborhood, streets, building	To provide facts, figures, examples and references on how Green Infrastructure contributes to the livability of urban places	Green infrastructure	N/A	N/A	Green City Guidelines click the “learn more” link at the bottom to download the PDF	N/A	N/A
Portland Sustainability Institute	EcoDistricts	Neighborhoods	To create sustainable cities from the neighborhood up through community and individual action	Determined by group	N/A	N/A	The EcoDistricts Framework	EcoDistrict teams are composed of neighbors, community institutions, businesses, city staff and utility providers.	Monitoring is performed and data collected from the EcoDistrict performance standards
Stanford	City Nature	Neighborhoods, City, Metropolitan Area	Explore why nature is unevenly distributed in and across cities	N/A	N/A	They acknowledge that there are many definitions and forms of nature while never actually defining nature themselves	No guidelines but a significant amount of data	N/A	N/A
Biophilic Cities	Biophilic Cities Project	City	to advance the theory and practice of planning for biophilic cities, through a combination of collaborative research, teaching, dialogue and exchange.	All aspects of a city	Depends on city	“Biophilia...is the innately emotional affiliation of human beings to other living organisms.”	No definition or criteria for what a biophilic city is. A few key qualities are laid out here .	The project will periodically convene researchers, publish working papers, reports and other publications that spread the findings of the project work the message about biophilic cities.	N/A
USDA Forest Service	i-Tree	Individual trees, parcels, neighborhoods, cities, states	Quantifying the environmental services that trees provide and the structure of the urban forest	Trees	N/A	N/A	There are nine different i-Tree tools that have an associated manual or guiding document. Each tool provides a wealth of information, including monetary estimates.	The software is peer-reviewed. Collaborators include: Forest Service, Davey Tree Expert Company, National Arbor Day Foundation, Society of Municipal Arborists, International Society of	N/A

								Arboriculture and Casey Trees	
National Center for Ecological Analysis and Synthesis	Comparative Ecology of Cities	City	To answer two main questions, “What makes an urban biota ‘urban’?” and “Are the patterns of urban biota and the processes that shape them the same across the world’s cities?”	N/A	Using existing bird and vegetation databases	N/A	Using several factors to determine species distribution	Had three working groups sessions with participants from many universities around the world	Four Goals
International Living Future Institute	Living Building Challenge	Building	Mission – “To encourage the creation of Living Buildings, Landscapes and Neighborhoods in countries around the world while inspiring, educating and motivating a global audience about the need for fundamental and transformative change.”	All aspects of building and site design	N/A	No specific definition but discuss it in broad terms from energy to ecosystems	Living Building Challenge 2.1	N/A	All criteria must be met for certification. Each criterion has specific standards.
Royal Horticultural Society	It’s Your Neighborhood	Country	To support communities to improve their quality of life through gardening.	Gardening space – both pots and land	Wildlife and the gardener	Gardens	Britain in Bloom Impact Report	Each group is started by and made up of locals. “in Bloom” experts visit each group to provide feedback and advice	N/A