



# CTBUH Research Paper

[ctbuh.org/papers](http://ctbuh.org/papers)

---

**Title:** Chicago: Building a Green City

**Authors:** Richard Daley, Mayor, City of Chicago  
Sadhu Johnston, Chief Environmental Officer, City of Chicago

**Subjects:** Sustainability/Green/Energy  
Urban Design

**Keywords:** Infrastructure  
Landscape  
Sustainability  
Sustainability Certification

**Publication Date:** 2008

**Original Publication:** CTBUH 2008 8th World Congress, Dubai

**Paper Type:**

1. Book chapter/Part chapter
2. Journal paper
3. **Conference proceeding**
4. Unpublished conference paper
5. Magazine article
6. Unpublished

© Council on Tall Buildings and Urban Habitat / Richard Daley; Sadhu Johnston

---

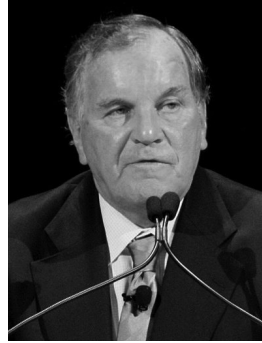
## Chicago: Building a Green City

Richard M. Daley<sup>1</sup> and Sadhu Johnston<sup>2</sup>

<sup>1</sup>Mayor, City of Chicago

<sup>2</sup>Chief Environmental Officer, Mayor's Office, City of Chicago

---



Richard M. Daley



Sadhu Johnston

### Richard M. Daley

Chicago Mayor Richard M. Daley has earned a national reputation for his innovative, community-based programs to address education, public safety, neighborhood development and other challenges facing American cities. Time magazine, in its April 25, 2005 issue, said Daley “is widely viewed as the nation’s top urban executive.”

A former state senator and county prosecutor, Daley was elected Mayor on April 4, 1989, to complete the term of the late Harold Washington, and was re-elected in 1991, 1995, 1999 and 2003 by overwhelming margins.

Daley said early in his administration he made a commitment to enhance the environment and make Chicago the most environmentally friendly city in the nation. He identified a few of the environmental projects the city has undertaken in recent years, including:

- Establishing a Green Business Strategy program which works with Chicago companies to help them save money by becoming more sensitive to the environment.
- Developing a Green Permit Program that expedites building permits and waives fees if developers use green techniques.
- Installing rooftop gardens on City buildings to collect rain water, lower temperatures in the summer and reduce the amount of energy needed to cool buildings. More than 300 gardens and green roofs have been constructed or are underway covering more than 4 million square feet on public and private buildings in Chicago.
- Planting more than 500,000 new trees around our city, creating 200 acres of new parks and open spaces and a city wide recycling plan.
- Incorporating environmentally-friendly initiatives into the city’s modernization of O’Hare International Airport. The OMP created a “Sustainable Design Manual” - a nationally-recognized document that allows O’Hare to evolve as the benchmark for environmental stewardship in design and construction for a civil project.
- Daley’s other achievements in urban design and building include Millennium Park, the LEED-Platinum Chicago Center for Green Technology, Greencorps Chicago and Northerly Island Park.

Daley has been named Municipal Leader of the Year by American City and County magazine; Public Official of the Year by Governing magazine; and Politician of the Year by Library Journal. In 1996 he headed the U.S. Conference of Mayors.

### Sadhu Johnston

As Mayor Richard M. Daley’s Chief Environmental Officer, Johnston is responsible for oversight of all City of Chicago environmental initiatives. Prior to serving in this capacity, Johnston served as the Commissioner of the City of Chicago Department of Environment (DOE). He was appointed by Mayor Richard M. Daley in July of 2005 after serving as the Assistant to the Mayor for Green Initiatives. His responsibilities as commissioner included the overall management of DOE, which administers programs to protect and restore Chicago’s natural resources, reduce waste, clean up brownfields, promote energy efficiency and reliability, educate the public about environmental issues, and enforce the City’s environmental protection laws. Prior to working for the City of Chicago, Sadhu served as the Executive Director of the Cleveland Green Building Coalition.

---

## Chicago: Building a Green City

Richard M. Daley<sup>1</sup> and Sadhu Johnston<sup>2</sup>

<sup>1</sup>Mayor, City of Chicago

<sup>2</sup>Chief Environmental Officer, Mayor's Office, City of Chicago

---

### Abstract

Chicago has a tradition of innovation in architecture from balloon-frame houses to steel skyscrapers to today's green buildings. Chicago was one of the first cities to adopt the U.S. Green Building Council's LEED certification system and today Chicago has almost 200 LEED certified and registered projects more than any other city. Public and private institutions throughout the Chicago area have adopted sustainable building practices that make urban spaces more environmentally responsible. Taken together, these green building projects are helping to further Mayor Daley's efforts to make Chicago the greenest city in the nation. The City is leading by example and encouraging businesses, organizations and residents in the city to embrace green building in many forms including new construction, renovations, site planning and more.

**Keywords:** Chicago, Green Buildings, Sustainability

---

### New Construction

In 2004, the City implemented a new set of green building standards for public buildings that ensure healthier indoor environments, reduced operating costs and energy conservation. It's called the Chicago Standard, and it is the city's commitment to build all city facilities to LEED certification standards. The City has already achieved LEED certification for several libraries and a police station and 35 other projects are underway.

To encourage private developers to use green technology, the City has created an expedited green building permit process. The Department of Construction and Permits has assigned one person to review all green building plans, resulting in a streamlined review process that takes less than 30 days. In addition, some fees can be waived for green buildings.

The city hosted a competition to design five affordable green homes and used these demonstration projects to influence the construction of subsidized affordable housing, including replacement residences for the public housing high-rises that we've torn down.

### Existing Buildings

One of our most successful building renovation projects is the Chicago Center for Green Technology, which opened in 2002. This was the first municipal building and the first building rehab in the nation to receive the LEED Platinum Rating, the highest possible LEED designation.

More than one-third of the building is made of recycled materials. A ground-source heat pump uses the temperature of the earth for heating and cooling while

natural daylighting reduces the need for electricity. Solar panels provide 20% of the power.

To showcase green residential projects, the City financed restoration of four model bungalows which use geo-thermal heating and cooling, insulation made from blue jeans and innovative ways of reusing rain water. In the first year, each home saved over \$700 in utility costs.

### Landscapes

Our public and private landscapes can serve multiple functions aesthetic and environmental. Environmental functions include stormwater management, habitat improvement, urban heat island mitigation and many other benefits that improve the quality of life for residents.

Trees, flowers, fountains and benches soften the city's rough edges and make people feel more at peace with the urban environment. In the last 17 years, the City has added more than 200 acres of parkland. The City has torn out asphalt parking lots at more than 100 schools and replaced them with green space and gardens which are natural gathering places, especially on hot summer days. More than a half-million trees have been planted which will help reduce the urban heat island.

Our Landscape Ordinance, adopted in 1991, requires development projects to install landscaping as part of their construction, repair or rehabilitation. And the city leads by example, making landscapes an important part of every new public building, including schools, libraries and police stations.

Chicago is a pioneer in rooftop gardens. We

---

installed one on top of City Hall seven years ago. Now, more than 250 gardens and green roofs covering 2.5 million square feet have been constructed or are planned -- on top of schools, parking garages, museums, and even retail establishments. These gardens lower temperatures in the summer, reduce the amount of energy needed to cool our buildings and make good use of stormwater.

### **Infrastructure**

Buildings also contribute to sustainability when builders and developers pay attention to the demands placed on the water supply, water treatment and transportation infrastructures that support them.

Stormwater, once considered a deficit, with flooded basements and combined sewer overflows dumping into the river, is now becoming an asset in the minds of Chicago's residents as they harvest the water for their gardens and other uses. A stormwater management ordinance, passed by City Council last fall, will require developments to manage the volume and rate of stormwater entering the city's sewers through various Best Management Practices, while achieving aesthetic and habitat benefits.

Biking and walking are important parts of green city infrastructure. A comprehensive bike infrastructure program includes ten thousand bike racks installed across the city and 160 miles of bike lanes and paths. Millennium Park features a Bicycle Station, the first of its kind in the Midwest and one of the biggest in the nation, with more than 300 bicycle parking spaces, spacious locker rooms with showers, bike repair and rental facilities.

### **Habitat and Wildlife**

Green building can assist birds that migrate through the city. The City encourages building managers to join the Lights Out program and to turn out decorative lights during the spring and fall migrations when birds can be disoriented by exterior lighting. Bird-friendly design guidelines can reduce bird collisions with glass windows and doors. Birds don't see glass and collide with it when they see sky and vegetation reflected there. Green buildings can make the city more suitable habitat for birds that pass through here.

### **Brownfields**

Chicago has created the most aggressive program in the nation to transform brownfields into new industrial facilities, green spaces, affordable housing and technological manufacturing centers. Since its inception, our Brownfields Initiative has helped the City increase its tax base by more than \$1 million dollar annually, and create and retain more than 3,000 jobs.

One of our biggest restoration projects is a 20-square mile area on the far Southeast Side of Chicago, where we're cleaning up polluted marshes and industrial sites and restoring natural habitat. The Calumet region is the largest collection of wetlands in the Midwest and home to a number of endangered species, including the bald eagle. The LEED platinum Ford Calumet Environmental Center will soon be built and will serve as a hub for research, stewardship and education about the coexistence of industrial, ecological and social efforts.

### **Continuous Learning**

This is an exciting time to be involved in green building with new technologies, more certification systems and better economic benefits developing all the time. Fortunately, there are many opportunities to continue learning. The recent Building Green Chicago conference organized by Index Publishing was a great opportunity to learn about the financial benefits of green design. Year-round, the Chicago Center for Green Technology offers classes and workshops on green building. The program changes every season, so check their website often to find out about new opportunities. In November 2007 Chicago hosted Greenbuild, the US Green Building Council's annual green building conference and expo. And, finally, the City of Chicago is immensely proud to be involved in the CTBUH 8<sup>th</sup> World Congress, on the very relevant topic of 'Tall & Green'.