21st Century Landscape Design Concepts

For 22nd CENTURY GARDENERS
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Terry Guen, FASLA
America in Bloom
October 4, 2019
Our 22nd CENTURY Needs Gardeners

• Ecological Design is key to Mitigating Global Climate Effects
• Chicago Design Projects Show Healthy Environments can be Built
• TGDA’s Design for Life Ethic begins at Home
Chicago Students Climate March, September 20, 2019
Prioritize Climate Safety

Urban Ecological Systems

PLANTS

GARDENERS

SITE

REGIONAL

MUNICIPAL

GLOBAL

SOCIAL

ECONOMIC

Shift to An Eco-System Economy

Terry Guen Design Associates, 2019
22nd Century “DESIGN FOR LIFE “ Gardening Ethic

- Improved Personal Wellness, Happiness, Safety, Quality of Life
- Increased Beauty, Habitat Quality & Resilience
- Increased Community Cohesion
- PLANT for Net Positive Energy

Terry Guen Design Associates, Chicago
Design for Life

Creates healthy, beautiful, ecological landscapes
Connects Communities with nature
Catalyzes life in your neighborhood
606,289 FT² OF PLANTING AREAS COLLECT STORMWATER RUN-OFF FROM THE FIRST 1" OF RAINFALL. UP TO 48,869,629 GALLONS IS MITIGATED NATURALLY BY PLANTING.

70 PERCENT
OF ALL WATER ACCUMULATED ON SITE IS RETAINED¹

74
OLYMPIC-SIZE POOLS OF STORMWATER CONSERVED ANNUALLY¹

26
ACRES OF GREEN ROOF

SAVING THE CITY OF CHICAGO $1,647,534 IN STORMWATER MGMT. COSTS

UPSTREAM DEVELOPMENT HAS CONTRIBUTED TO STREAM BANK MANAGEMENT AND FLOODING ISSUES WITHIN BUFFALO CREEK’S WATERSHED AREA. THE HERITAGE PARK FLOOD CONTROL FACILITY IS A JOINT EFFORT BETWEEN THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD), ARMY CORPS OF ENGINEERS, AND VILLAGE OF WHEELING ILLINOIS.

THE HERITAGE PARK FACILITY PROVIDES NEW VILLAGE RECREATIONAL OPPORTUNITIES, WHILE USING GREEN INFRASTRUCTURE TO CREATE COMPENSATORY FLOODWATER STORAGE FOR THE DOWNSTREAM FYFF 37 PROJECT.
THE VILLAGE OF WHEELING'S AND DOWNSTREAM FLOODING IS IN PART MANAGED BY HERITAGE PARK'S GREEN INFRASTRUCTURE LANDSCAPE SOLUTIONS.

186 TREES
26 ACRES PLANTING AREA

THIS STORMWATER MANAGEMENT FACILITY WILL REDUCE ANNUAL RUNOFF BY 90,700,000 GALLONS

THE HERITAGE PARK GREEN INFRASTRUCTURE STRATEGIES INCLUDE MOVING BUFFALO CREEK, RESHAPING ITS FLOODPLAIN, NEW CONTROL PUMPS AND WEIRS, PLANTING NATIVE VEGETATION IN THE FLOODWAY AND 6 BASINS. THIS EFFORT REDUCES EROSION, EXPANDS HABITAT AND IMPROVES WATER QUALITY, WHILE INCREASING INFILTRATION IN BUFFALO CREEK'S SOUTH WATERSHED.
HISTORIC RANGE OF THE PRAIRIE

Little remains east of the Mississippi, but some of the biggest and best of the surviving remnants are in the Chicago region.

PRE-SETTLEMENT VEGETATION OF THE CHICAGO WILDERNESS REGION
ECOLOGICAL MASTER PLANNING

1. HERITAGE
   - Living History
   - Cultural Dynamic
   - Memory Points

2. BOUNDARIES
   - Quantify contiguous habitat areas, long-term responsibilities and goals
   - Protect boundaries through acquisition of easements
   - Visual filtration buffers

3. CRISIS
   - Stormwater management
   - Loss of hydrology, vegetation
   - No boundary protection
   - No immediate action by city and park district will result in permanent damage to core features

4. STEWARDSHIP
   - Removal and replanting
   - Perpetuate interaction and relationship with nature
   - Natural area protection and management
   - Least amount of resources

5. PROGRAMS
   - Nature Center Facility
   - Nature Pre-School
   - Children’s Garden
   - Bathhouse Hickory Creek
   - Connecting people to park

6. ECONOMY
   - A plan and a commitment
   - Public space operations
   - Staffing
   - New Programs
   - Public funds
   - Private endowment

Terry Guen Design Associates, 2012
Chicago Public School Green Roof as Play and Learning Environment

Terry Guen Design Associates, 2012
PLAN FOR CHICAGO
1908
Daniel Burnham:
Make No Small Plans
"Tiny City on edge of vast Prairie Sea"

URBS IN HORTO

Healthy Densification – Compact Chicago

1. **Green Capital Corridors** - Improvements which must be located as part of Natural Systems
2. **Synergistic Enterprise Zones** - Create “Green” Industrial Parks based on closed loop systems that situate like industries, creating job opportunities, reducing transportation, providing transit access to Parks. Industries may include farming of alternate energy, resource recovery, urban agriculture
3. **Legacy Open Spaces** - Places for the development of legacy greenspace, creating a permanent place that is accessible by surrounding neighborhoods, increasing living standards
4. **Climate-Mitigation Areas** - To improve city-wide permeability/water infiltration to groundwater table, increase tree canopy cover and/or reflective grassland benefits, utilizing variety of infiltration techniques and open space opportunities.
“Green Capital Corridors”: CHICAGO RIVER CATALYTIC SITES
Improvements which must be located as part of Natural Systems

Terry Guen Design Associates, IIT Studio 2011
South Lakeshore Drive - Jackson Park

Roadway Landscape Improvements: Sketch Plan

CHICAGO DEPARTMENT OF TRANSPORTATION

21 JUNE 2011
Replacement Poplar Trees at 59th Street Underpass
Ecological Plantings at 63rd Street Beach House
DESIGN for CLIMATE ADAPTATION & HABITAT
CONSTRUCTED URBAN LAKESHORE GRASSLAND: CLIMATE ADAPTIVE DESIGN
Filters Water & Infiltrates, Stabilizes Beachfront, 4 Season Appearance, Sequesters Carbon, Provides Wildlife Habitat & Access to Nature
Evapo Transpiration

Infiltration, Carbon Sequestration

Diurnal soil Moisture cycle

PLANTS, ROOTS, SOIL, WATER Comprise the Soil Moisture System

Image attributed JE Weaver
Urban Bio-Infiltration Garden with Dolomite Prairie Plants in 9” imported soil
Area D: Outdoor Venue and Lawn

The Venue acts as a web between the River and the City. It addresses and responds to both the urban city edge and the natural river edge with its architecture. It is being designed to attract the highest level performers with a high quality directional outdoor surround sound system and a unique architectural presence. It will hold 2000 people in fixed seats and another 4000 people on the gently sloped lawn.

The Venue is proposed to be placed in the flood plain. To achieve proper site lines, the flood plain must be elevated with fill. Compensation for this new fill is found by excavating adjacent river edges to form new wetlands. In this way the park is designed to be in balance with its site. Each design challenge such as this has been treated as an opportunity to create a new asset for the park. In this case new flood plain fill is compensated by restoration of a nearby wetland.

The architectural form is derived directly from the sound system requirements. A series of giant masts ring the seating area canting out toward the surrounding park and city. They will support a weave of steel cables which in turn support a sophisticated electronic sound delivery system.
North Avenue Beach, Chicago, IL

Terry Guen Design Associates Landscape Architect
“I know that I cannot make anything new.

To make a garden is to organize all the elements present and add fresh ones, but first of all, I must absorb as best I can all that I see, the sky and the skyline, the soil, the colour of the grass and shape and nature of the trees.

Each half-mile of countryside has its own nature and every few yards is a reinterpretation. Each stone where it lies says something of the earth’s underlying structure; and the plants growing there, whether native or exotic, will indicate the vegetable chemistry of that one place.”
Plants
Are our Friends

22nd Century Gardener Wisdom, Terry Guen: America In Bloom, 2019