

# Your Performative Landscapes:

## Building a City-Specific Landscape Management Plan

### *Presentation outline:*

- Current Efforts in Quantifying Landscape Value
- Challenges and Concerns
- Lesson learned and recommendations



**Chih-Wei G.V. Chang**

Director at GravityPraxis

Institute of Geography, University of Cologne

Former Co-chair at ASLA International PPN

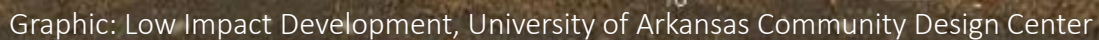
Lecturer at Beijing Urban Innovation Center



# WHY LANDSCAPE PERFORMANCE ?

- Urban Landscape is the Building Block of NbS, GI, and Urban Resiliency
- GRAY or GREEN? The Endless Debate
- Evidence-based Policy, Planning, Design, Construction, and Management

soft engineering



# MAJOR EFFORTS:

- American Society of Landscape Architects (ASLA): Resilient Design
- Landscape Architecture Foundation (LAF): Landscape Performance Series
- US Green Building Council: Sustainable Site Initiatives (SITES)





# Professional Practice

## RESILIENT DESIGN



### Find solutions for:

Biodiversity Loss

Drought

Extreme Heat

Fire

Flooding

Landslides

# LANDSCAPE PERFORMANCE SERIES

by the  
Landscape Architecture Foundation

Case Study Briefs

Fast Fact Library

Benefits Toolkit

Collections

Browse and Search hundreds of  
Landscape Performance Series  
Resources >

About Landscape Performance  
Blog  
Training  
Guide to Evaluate Performance  
Resources for Educators  
Contact



<https://www.landscapeperformance.org/>

**The Landscape Performance Series is the online set of resources to help designers, agencies, and advocates evaluate performance, show value and make the case for sustainable landscape solutions.**



Uptown Normal Circle



Klyde Warren Park

Health & Wellbeing >

Carbon & Climate >

Urban Agriculture >

Active Living >

Resilience >

Biodiversity >



Cherry Creek North

Revitalization >

Social Equity >

Water Management >



Doc Cavalliere Park



Teardrop Park

GRAVITY  
PRAXIS





## Advance your knowledge of sustainable landscapes.

A free webinar series by SITES provides more information about sustainable landscape design and development and why they matter, and tips to SITES certification:



Introduction to the SITES  
program



Understanding the SITES  
Rating System



Getting Started with the  
SITES Program

Review our free SITES Rating System and scorecard that provides you with a complete set of prerequisites and credits used for measuring site sustainability.

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

SITE SELECTION

ASSESSMENT

WATER

SOIL VEGETATION

MATERIAL

HEALTH

CONSTRUCTION

MAINTENANCE

MONITORING

# What are the Challenges?

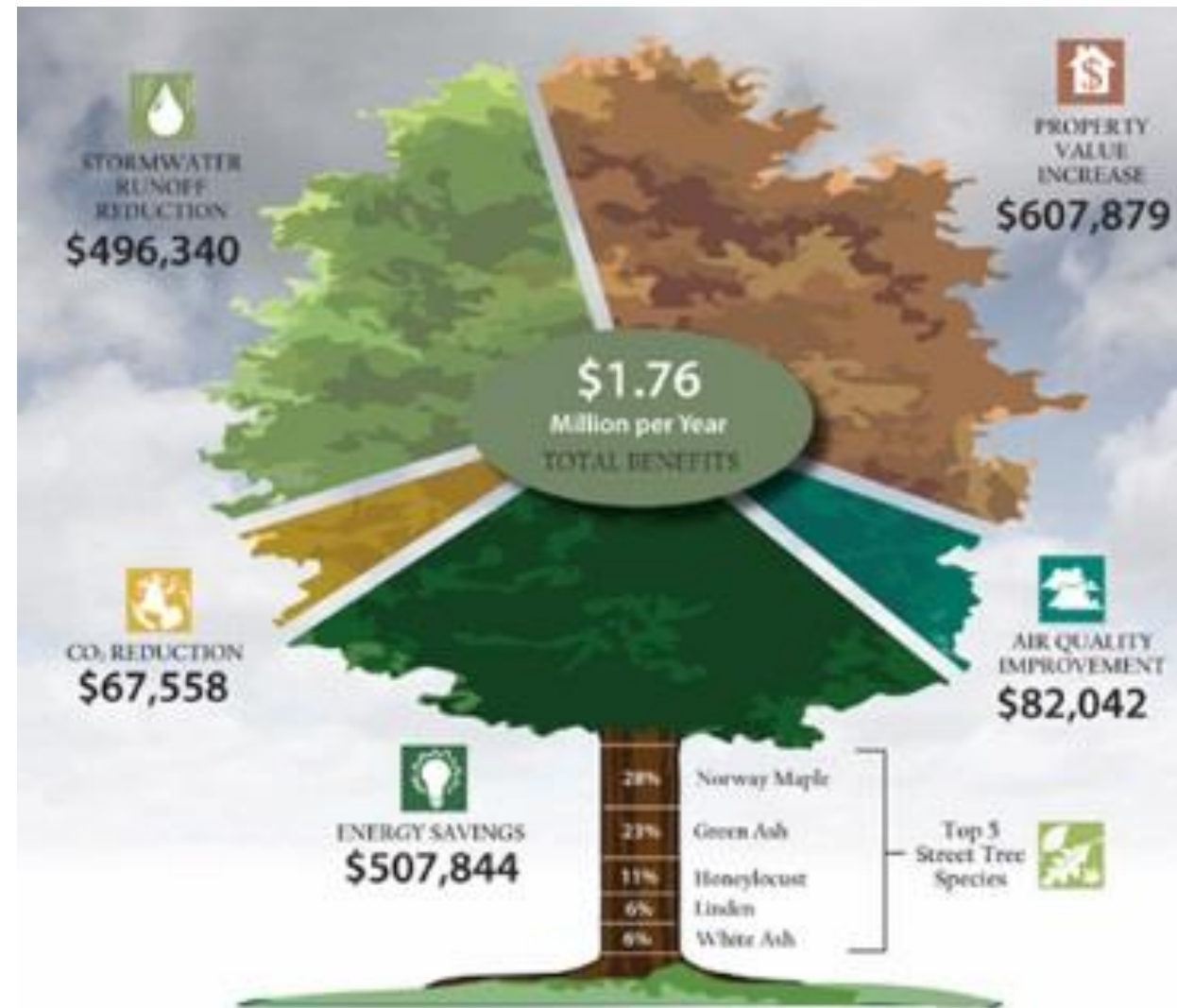
- Regional Differences with Non-Standard Conditions / Materials
- Dollar-value Viewpoints of Utilizing Eco-system Services
- Selection Bias: Who to Set the Goals? for Whom? Expectation Management







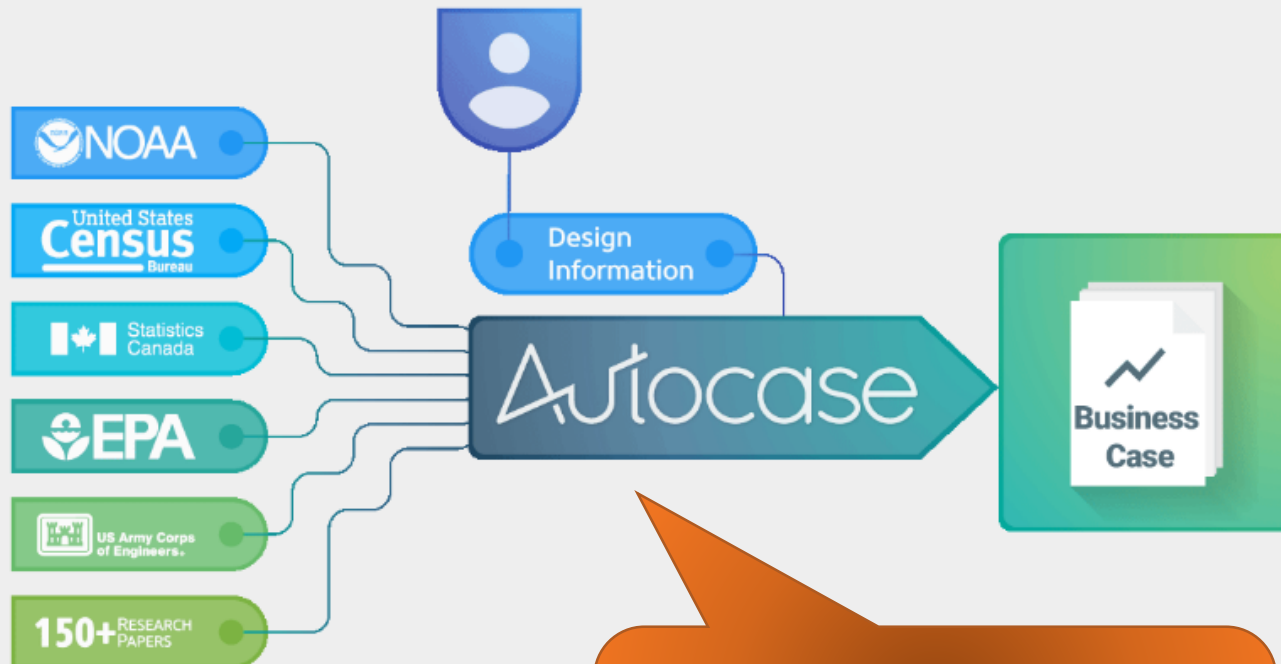
Ozone	
\$	g/m <sup>2</sup> /yr
90122.16	8.59
PM2.5	
\$	g/m <sup>2</sup> /yr
202948.10	0.42



Wisconsin DNR's Northeast Regional Analysis Project







## Automating the business case with Triple Bottom Line Cost Benefit Analysis (TBL-CBA)

Using economic analysis, Autocase combines project specifications with industry-validated data to measure the value of net financial, social and environmental impacts affecting all stakeholders.

[READ MORE ON TBL-CBA](#)

**WHERE ARE  
THE PEOPLE?**

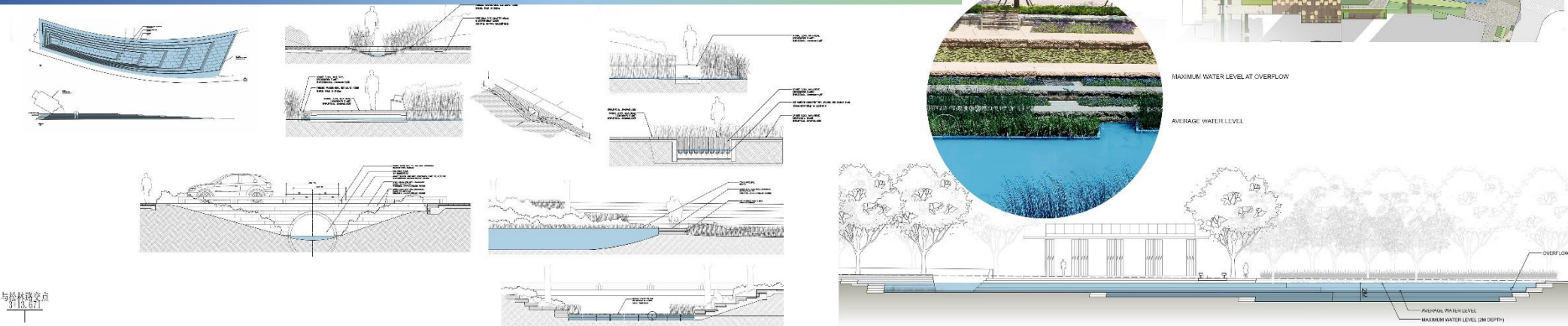


# Some Suggestions

- Design Redundancy for Risk Reduction / Design for Bio-diversity
- Co-creation process: Invest in pilot projects
- Post Occupancy Analysis and Feedback Loop
- Create a custom metric for your city, collaboratively (SF + NY)
- Smart Policy: Enabling and Allowing Room for Innovation

**PLAN FOR REDUNDANCY**

This aerial view shows a large green park area with a winding blue path. A central building is visible, surrounded by greenery. The plan includes various smaller structures and pathways, suggesting a complex and redundant design for the park.







# PLAN FOR REDUNDANCY

Image: SWA Raycom City Green Street



● Fill

● Grading & Eco-filter

# PLAN FOR DIVERSITY

Bio-swale

Rain garden

Retention pond

Bio retention pond

Off-stream wetland

Marsh wetland

**VEGETATION** : native plantings cleanse water and create habitat

Native wetland grass at bioswale and rain garden

Riparian vegetation

Native species mixed forest



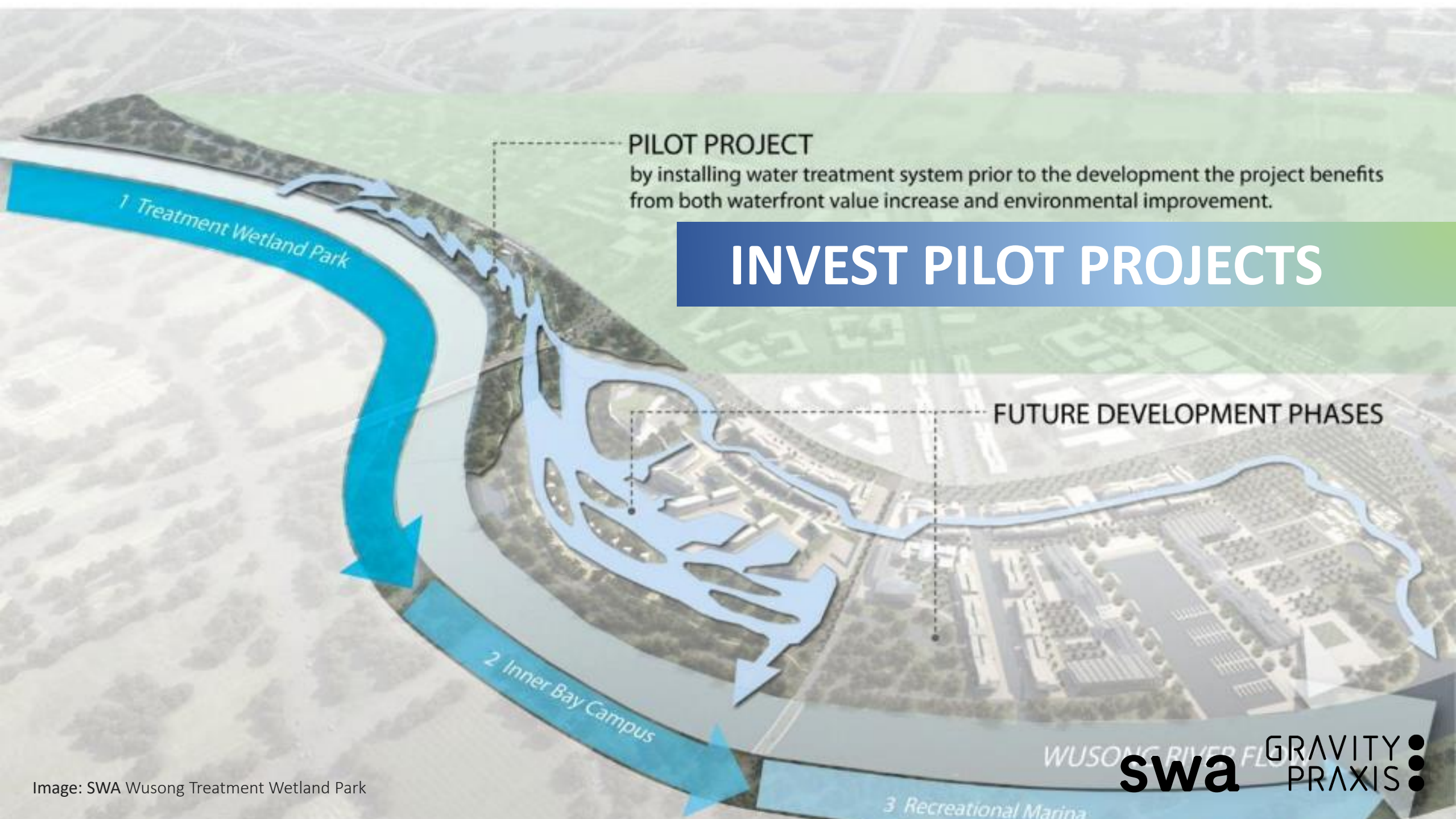
# PLAN FOR DIVERSITY



Image: SWA Ningbo Eco-corridor







## PILOT PROJECT

by installing water treatment system prior to the development the project benefits from both waterfront value increase and environmental improvement.

# INVEST PILOT PROJECTS

## FUTURE DEVELOPMENT PHASES

WUSONG RIVER FLOW

**swa** GRAVITY PRAXIS





# INVEST PILOT PROJECTS





# INVEST PILOT PROJECTS



Image: SWA Wusong Treatment Wetland Park

**swa**

GRAVITY  
PRAXIS

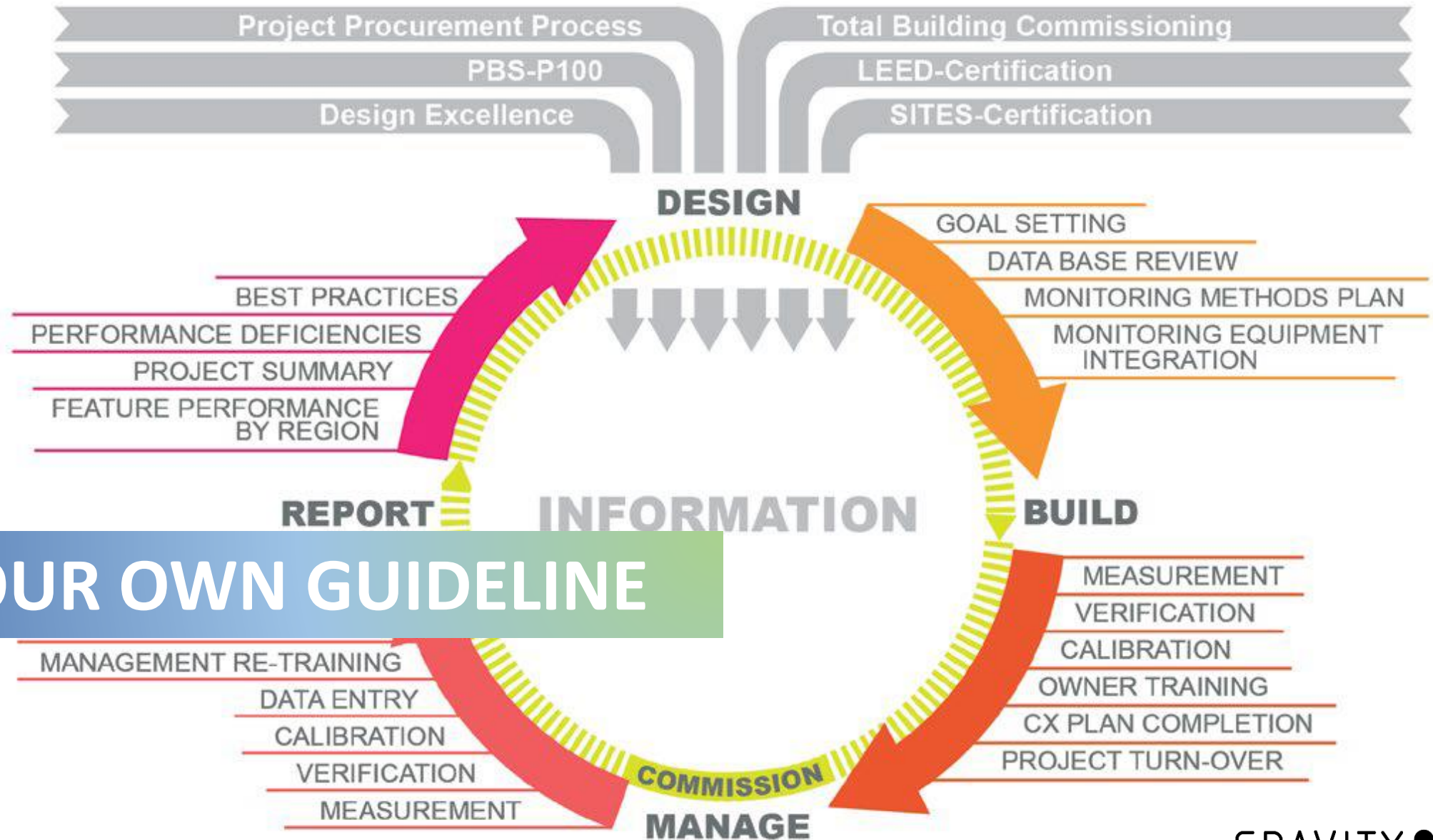




# Post Occupancy Assessment









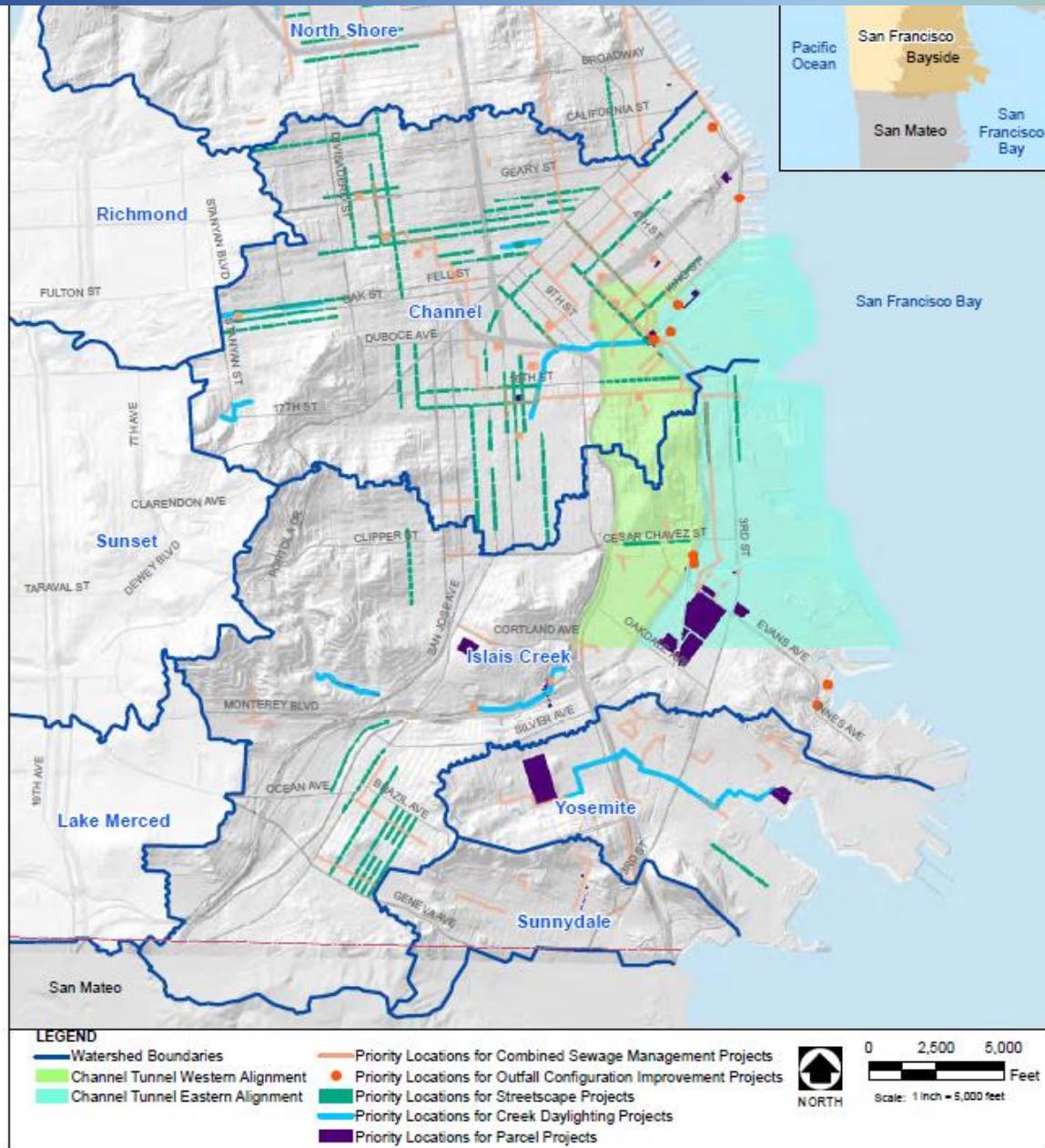
# BUILD YOUR OWN GUIDELINE



GRAVITY  
PRAXIS



# BUILD YOUR OWN GUIDELINE





# BUILD YOUR OWN GUIDELINE

DESIGN TRUST  
FOR PUBLIC SPACECity of New York  
 Tax Map No. 200-0000000000

These guidelines have guided the development of this resource. They represent the values of the team and fully informed by Pacific University. They are essential to the Institute's vision, mission, the work of leadership, living of academic excellence, the work of the John W. Alden Philanthropic Center at the University of Saint Andrews, and the United States Branch Campus.

## 1. INTRODUCTION

- **Chronic fatigue** is an exhaustion or fatigue lasting a fairly indefinite time and may include:
  - Irritability and/or depression
  - Loss of interest in usual activities
  - Sleep disturbance (not just that the individual sleeps, rather than that sleeping is sufficient)
  - Loss of appetite
  - Loss of libido
  - Headaches
  - General symptoms that are difficult to describe and may be associated by people with different ideas

1. **INDEX**

- **Graphic notes** is a series of drawings (100)
- **What is a drawing of some biological or chemical processes?** (e.g. cell division, photosynthesis)
- **Do not have the language of the ideas**

STUDY OF THE GFT CONJECTURE

- Individualized the learning goals and activities to meet the needs of each student.
- Individualized the content and delivery to meet the needs of each student.
- Individualized the learning goals and activities to meet the needs of each student.
- Individualized the learning goals and activities to meet the needs of each student.

© 1997 by Blackwell Science Ltd, *Journal of Internal Medicine* 241: 399–407

- The index for the benefit of insurance is another key parameter, as is the percentage of total pay.
- Insurance cost is a significant factor in the overall compensation structure.

- © 2000 The McGraw-Hill Companies. All rights reserved. Printed in the United States of America. This publication is protected by copyright. Any unauthorized distribution or reproduction of this work is prohibited. All trademarks are the property of their respective owners.

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 111–118

- Aumento del costo de la energía eléctrica, agua, gas, etc.
- Aumento de los costos de transporte y de otros insumos básicos
- Cambio tecnológico, cambios en el nivel de actividad económica, etc.

8. 100% 100%

- **What is a mutation?** A change affecting an organism's DNA, causing some modification
- **What is a mutation?** A change affecting an organism's DNA, causing some modification

## COLLABORATION: J. C. TAYLOR, MATHIAS

- Increase the size of the jury pool and increase representation throughout the State Department and within the USFCA; for example, increase the number of women in the State Department and within the USFCA
- Increase the number of women in the State Department and within the USFCA; for example, increase the number of women in the State Department and within the USFCA
- Increase the number of women in the State Department and within the USFCA; for example, increase the number of women in the State Department and within the USFCA

8. 1000 5.40 10.00

- Order your new magazine order including 1st issues for each of the 12 issues.

© 1998 Blackwell Science Ltd

- Bridges to shore, anchoring along the coast is a typical method of linking.
- These have advantages of low cost, easy access to the sea, and being

• **Threats to validity**

- *Not a violation if the person has a good reason to expect*

## PART IV: BEST PRACTICES IN SITE SYSTEMS SOILS

- 121. PERFORM COMPREHENSIVE SOIL TESTING AND ANALYSIS
- 122. MINIMIZE SOIL DISTURBANCE
- 123. PROVIDE 100% REVEGETATION OF EXISTING SOILS BEFORE IMPORTING NEW SOIL MATERIALS
- 124. USE COMPOST
- 125. TESTING, MONITORING AND PREVENTING FOR SITES WITH CONTAMINATED SOILS
- 126. USE ENGINEERED SOILS ON PRIORITY CRITICAL PROGRAMMABLE AREAS
- 127. PROVIDE ANGRIOLOGICAL SOIL VOLUMES AND REPORTS
- 128. PROVIDE SOIL PLACEMENT PHOTOS AND PHOTO OF CONTRACT DOCUMENTS

The Kallithea has two systems, one stone and one plastic. Many systems have been proven to be ineffective. There are devices that use air to create a vacuum and suck out the oil and grease. Unfortunately for a very long time, the only way to get rid of grease was to burn it and then use the ash as fertilizer. Burning the grease is a process in which the grease is heated to a temperature of 300 to 350 degrees Fahrenheit and then the oil is burned off. The ash is then used as fertilizer.

## PART IV: BEST PRACTICES IN SITE SYSTEMS WATER

- 162 PROTECT AND RESTORE NATURAL HYDROLOGY AND FLOOD PHASE  
165 SERVICE FLOW TO STREAM SEAWAYS  
168 LAND USE ALIGNMENT LANDSCAPES  
172 REGENERATION BEGS  
175 USE RAIN GARDENS & HABITAT  
178 USE STORMWATER PLANTED INDEX  
180 USE POROUS PAVEMENTS  
184 CREATING URBAN AND BLUE SCENES  
188 MANAGING URBAN RIVERS

The Waterbury laboratory system will allow and require the following research and development activities:

## PART IV: BEST PRACTICES IN SITE SYSTEMS VEGETATION

- 194 PORTUGUESE CRISTIANO RESTAURANT
- 198 VANDAGE LANSKOP SPECIES
- 200 POINTED AND JUMBOUS (ECOLOGICAL SUSTAINABILITY AND RESILIENCE)
- 202 DESIGN WORTH, EFFICIENT LANDSCAPES
- 204 DESIGN LOW IMPACT IRRIGATION SYSTEMS
- 206 RISE AN ECOLOGICAL APPROACH TO PLANNING
- 210 INCREASE CLARITY, SIMPLICITY AND HOMOGENY IN PLANTINGS
- 214 CROSS-BILITY CONTACTS WITH PLANTING AREAS
- 216 KINSHIP THERMOLOGY
- 218 IMPROVED STREET TREE HEALTH

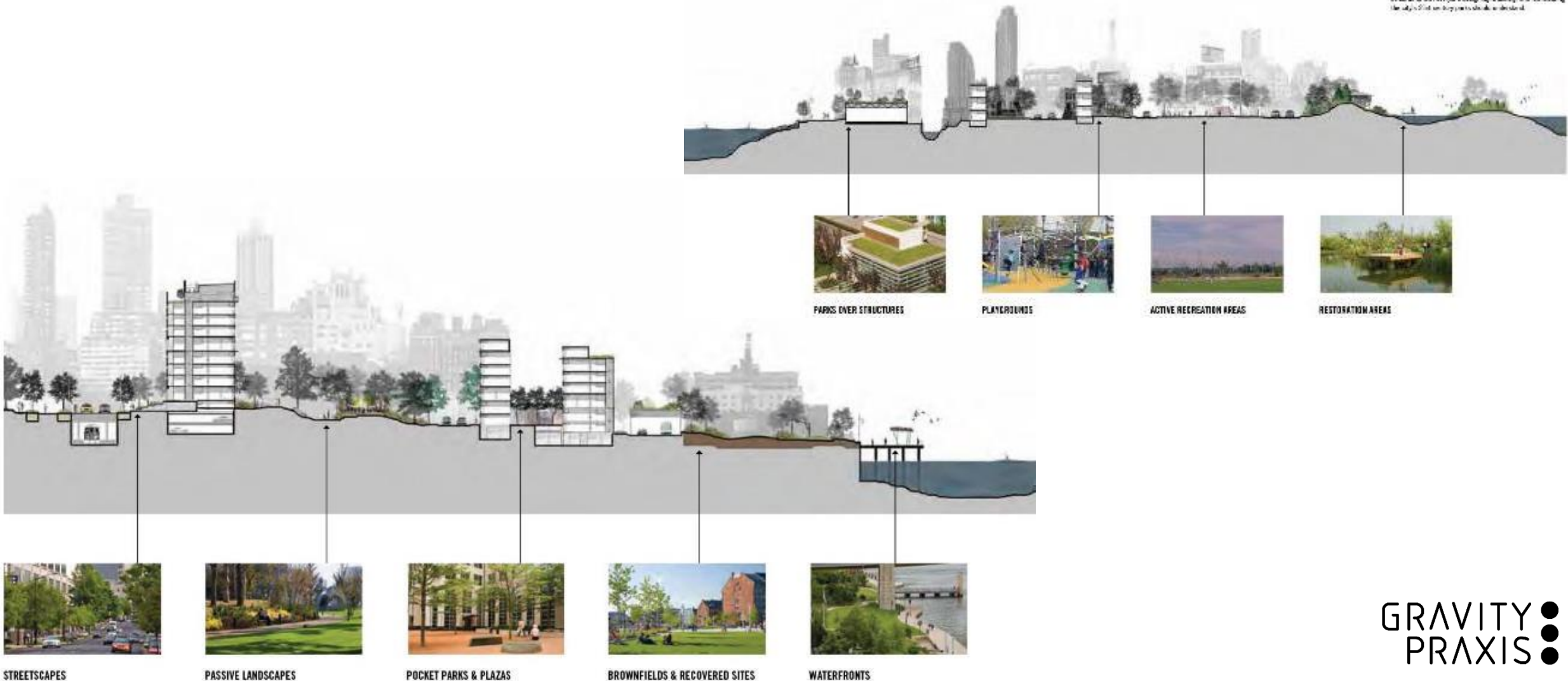
The Waterbury dye system and some of its variants. Dye systems such as this can be applied to many kinds of prints to make the original and background elements stand out. In this example, the original is a black and white photograph of a landscape. The original is placed on a white background and surrounded by a black border. The original is then placed on a white background and surrounded by a black border. The original is then placed on a white background and surrounded by a black border.

GRAVITY ●  
PRAXIS ●

# BUILD YOUR OWN GUIDELINE

## COMPOSITE SECTION SITE TYPES FOR NYC PARKS

New York City's urban landscape includes a composite of diverse site types, each characterized by different site conditions, history, and context along the city's waterfront. This composite section illustrates various site types, highlighting their unique characteristics, functions, and opportunities for park development. This section illustrates various site types, opportunities, and constraints for park design, building, and maintaining the city's diverse park system.





# References & Links

Sustainable Site Initiative:

[www.sustainablesites.org](http://www.sustainablesites.org)

LAF: Landscape Performance Series

[www.landscapperformance.org](http://www.landscapperformance.org)

Landscape Architecture Technical Information Series

<https://my.asla.org/My-ASLA/Store/StoreLayouts/Shop-LATIS.aspx>

University of Arkansas Community Design Center

<http://uacdc.uark.edu/>

AutoCase <https://autocase.com/>

I-Tree <https://www.itreetools.org/#benefits>

ASLA Resilient Design

<https://www.asla.org/resilientdesign.aspx>

ASLA Smart Policy for a Changing Climate

<https://www.asla.org/climatepolicies.aspx>

SF PUC Urban Watershed

<https://www.sfwater.org/index.aspx?page=615>

NY High Performance Landscape Guideline

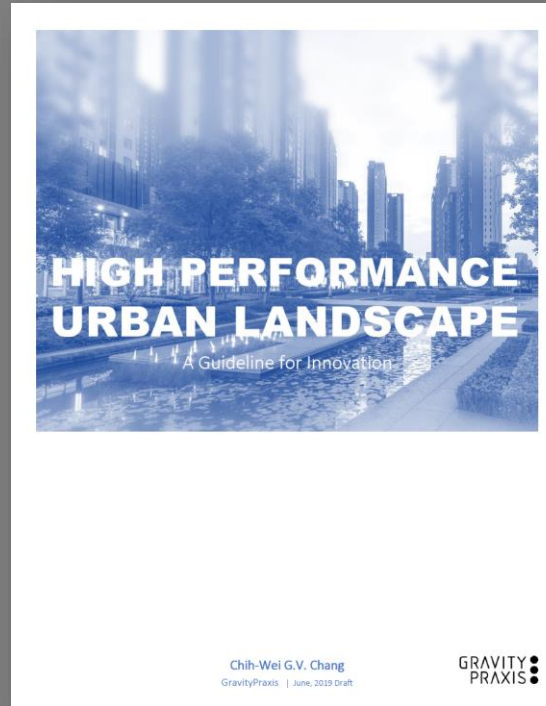
<https://www.nycgovparks.org/greening/sustainable-parks/landscape-guidelines>

SWA Group

[www.swagroup.com](http://www.swagroup.com)

GravityPraxis

[www.gravitypraxis.com](http://www.gravitypraxis.com)



# THANK YOU FOR YOUR ATTENTION!

Draft available for comments!  
[GravityPraxis.com/performance](http://GravityPraxis.com/performance)  
[GravityChang@gmail.com](mailto:GravityChang@gmail.com)

Chih-Wei G.V. Chang