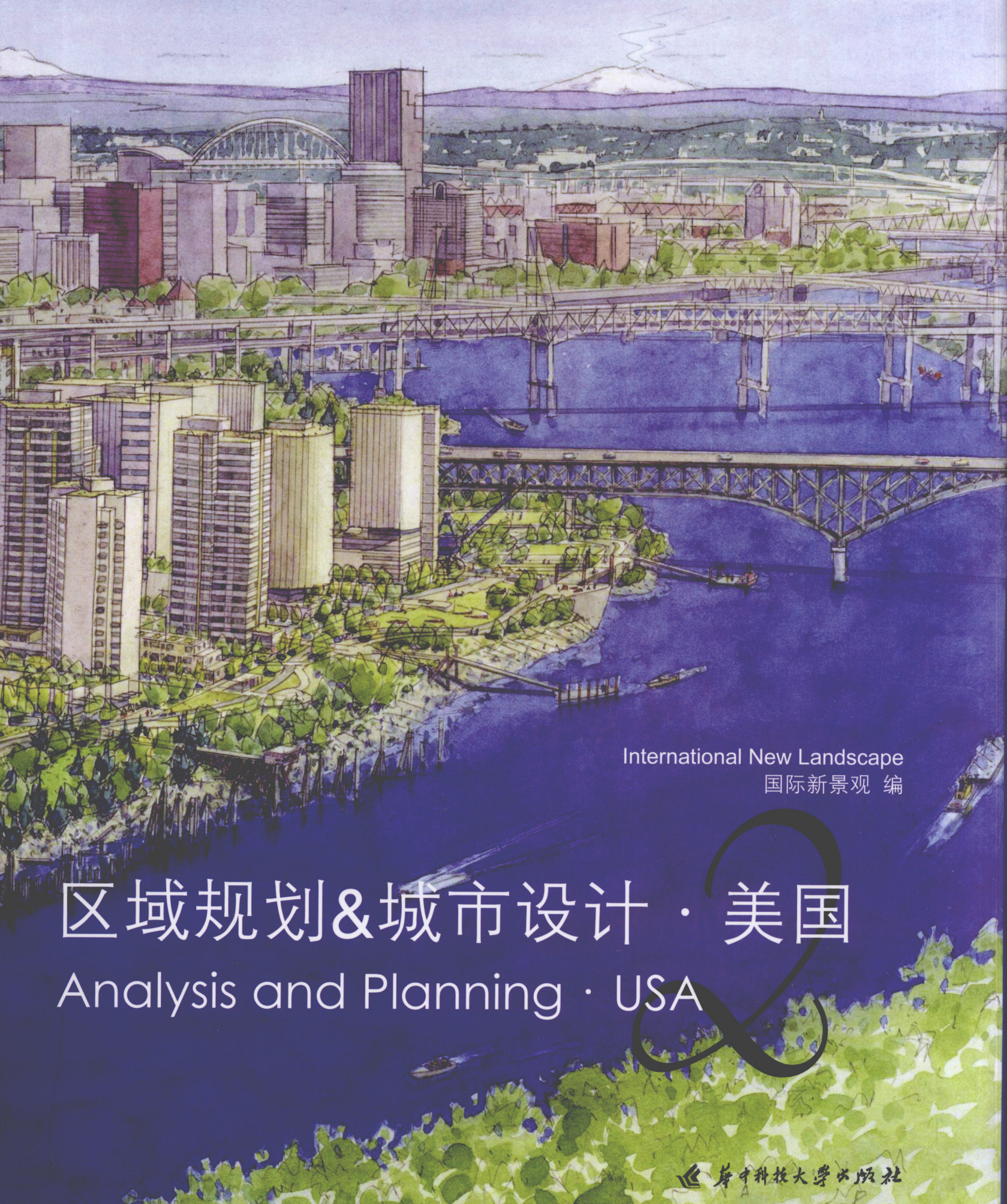




美国规划师协会 推荐



International New Landscape
国际新景观 编

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Analysis and Planning·USA

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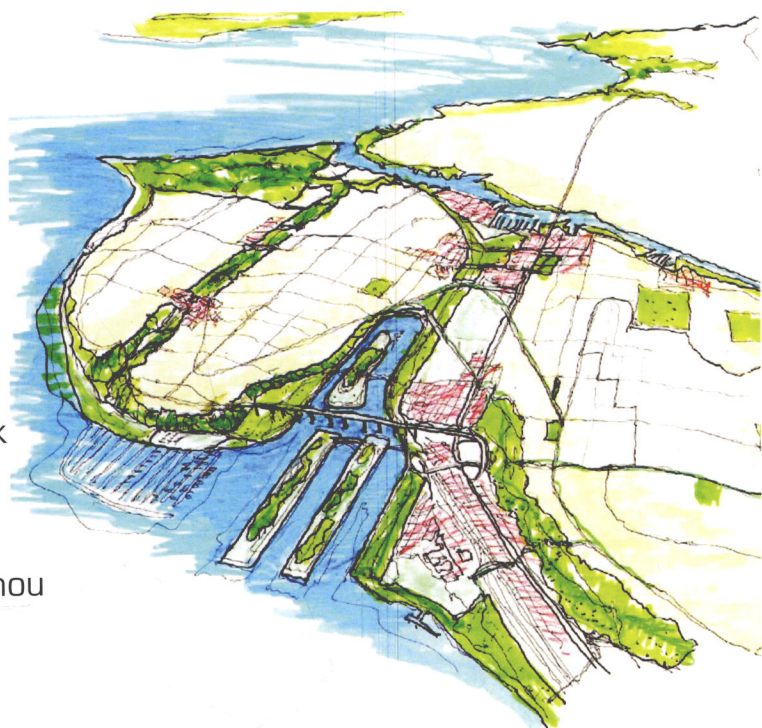
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2100西雅图开放空间—— 下世纪西雅图绿色空间结构远景规划

Open Space Seattle 2100 Envisioning Seattle's Green Infrastructure for the Next Century, Seattle, Washington

Department of Landscape Architecture, University of Washington,
and the Open Space Seattle 2100 Coalition, Seattle, Washington

“整个规划非常的高明且富有成效，是社区讨论的重要主题。同时也是对尺度的一次完美诠释，从小尺度到大尺度的空间设计，非常全面透彻。这确实令人震撼。”

——ASLA专业奖评语

"Extremely smart and effective and an important topic for every community. This is an excellent approach to scale, from large to small and is so comprehensive and thorough. It will have a real impact!"

——ASLA Professional Awards Jury Comments

Project 项目简介 Statement

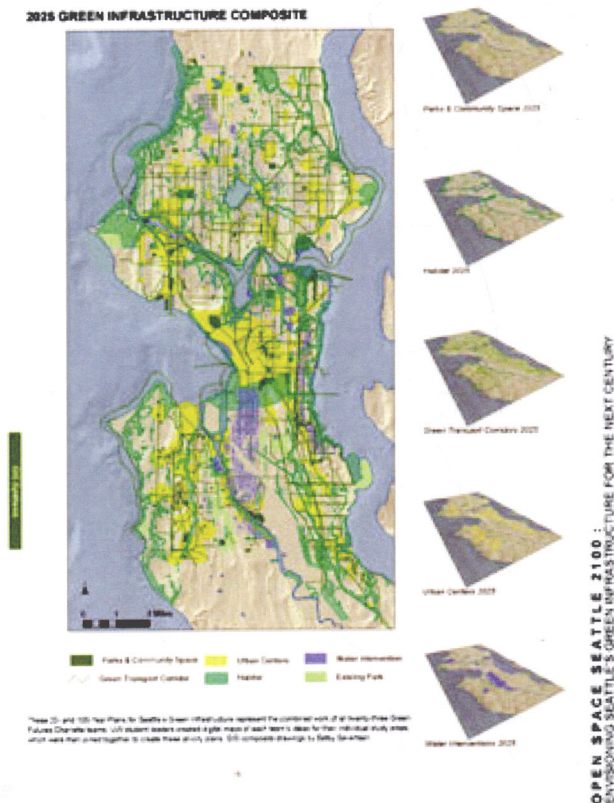
项目概况

由景观设计师发起的对西雅图绿色空间结构的规划，吸引了大批不同学科的专业人士的积极参与到长期规划中来。从长远角度进行分析，该项目对城市中按流域划分的规划单位进行了革新，描绘出了未来的远景图画，并且吸引了大量的投资。设计师在GIS地图中描绘出了全面的灵活多

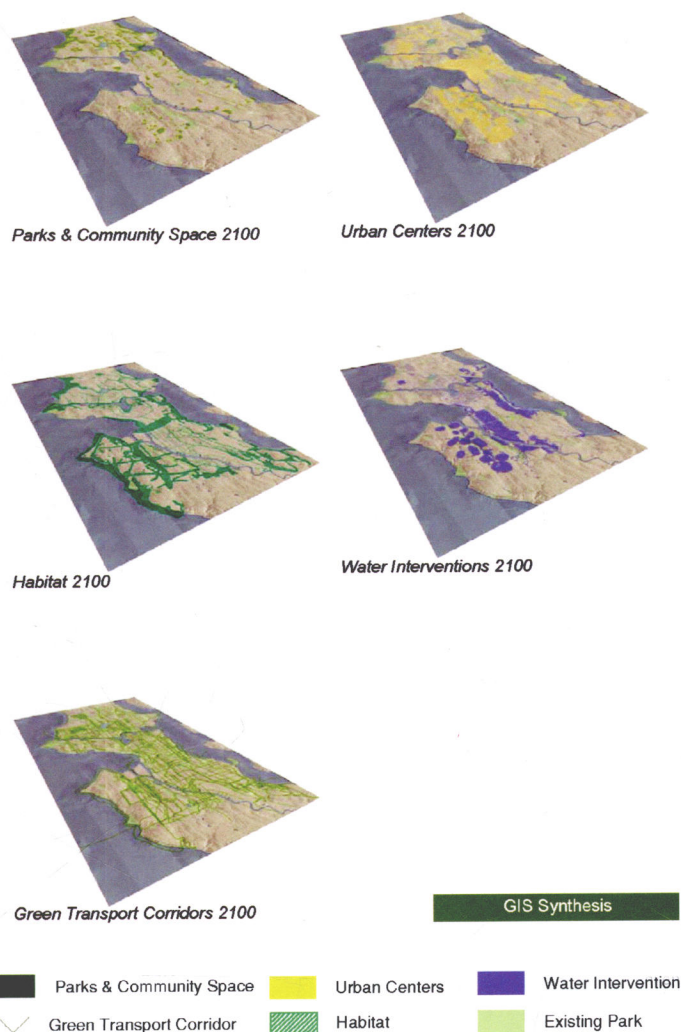
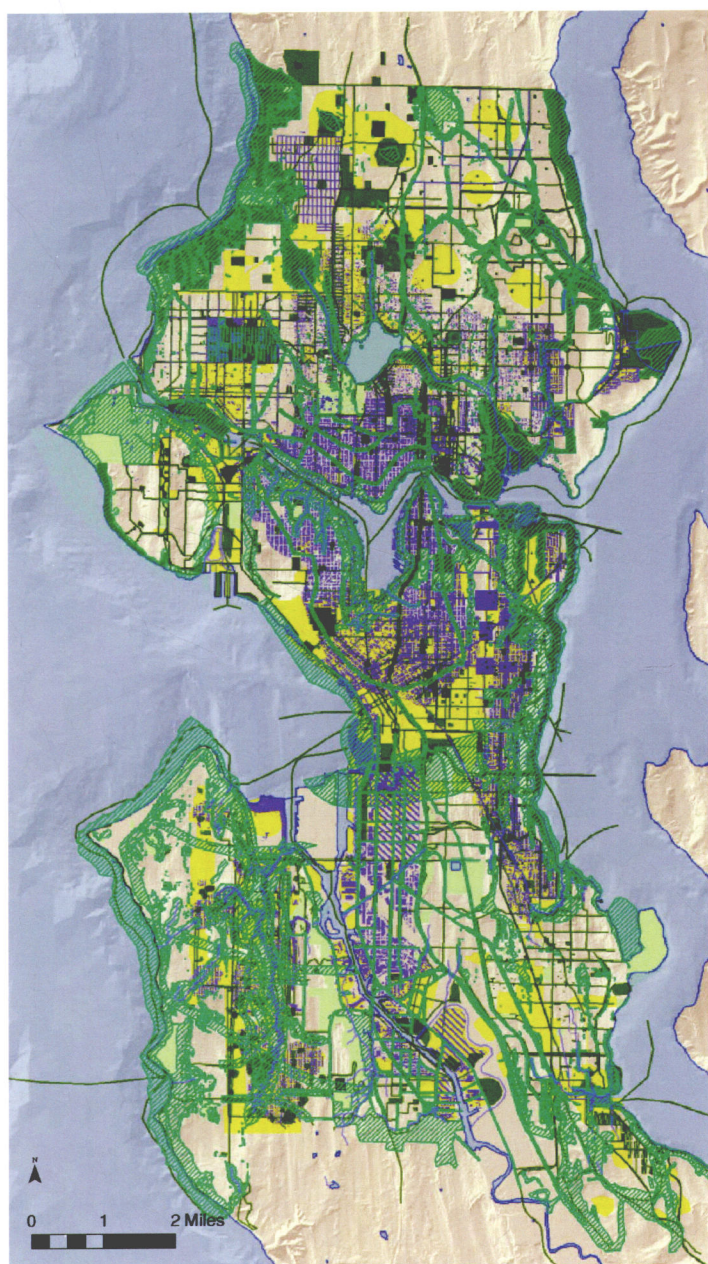
Project Statement

Led by landscape architects, this grassroots collaborative planning process directly engaged hundreds of multidisciplinary professionals and citizens to create long-term plans for Seattle's interconnected "green infrastructure." Both visionary and analytical, the project innovated urban watershed-based planning units, calculated long-term future scenarios, and incorporated diverse stakeholder input. The resulting plans depict comprehensive 20- and 100-year green infrastructure

这些分别长达20年和100年的西雅图城市绿色空间结构规划是23个绿色景观研讨小组的共同努力。UW工作室的负责人分别为各个小组制作他们的研究区域规划概念图，所有概念图叠加在一起就是总体规划图。These 20 and 100-year plans for Seattle's Green Infrastructure represent the combined work of all twenty-three Green Futures Charrette teams. UW studio leaders created digital maps of each team's ideas for their individual study areas, which were then joined together to create these all-city plans (Betsy Severtsen, GIS and Drawing)



2100 GREEN INFRASTRUCTURE COMPOSITE



◀ 为了体现项目的公众基础和生态性，100年远景规划被称为：“生活的格子：社区系统”
Reflecting its community roots and green intentions, the 100-year vision is called *The Living Lattice: A Network of Neighborhoods* (Betsy Severtsen, GIS and Drawing)

REFLECTING ITS COMMUNITY ROOTS AND GREEN INTENTIONS, THE 100-YEAR VISION IS CALLED *THE LIVING LATTICE: A NETWORK OF NEIGHBORSHEDS*.

层次的规划图，及20至100年之间的绿色空间结构网络，还提出了被采纳的可转换为近期策略所用的框架图。

项目说明

项目背景、项目目标

2003年西雅图奥姆斯德规划实施一百年的庆典后，市民们开始怀疑：“西雅图开放空间的未来在哪里？”尽管公众有这样的疑问，但是城市居民和政府都没有办法回答这个问题。在没有资金，没有客户和任何委托的情况下，2100西雅图公共空间远景规划（OSS2100）在设计/规划的专业方面起到了对公众的教育和鼓励作用。为了填补公共空

networks in flexible, layered GIS maps and propose an illustrated framework of transferable near-term strategies adopted by the City.

Narrative Summary

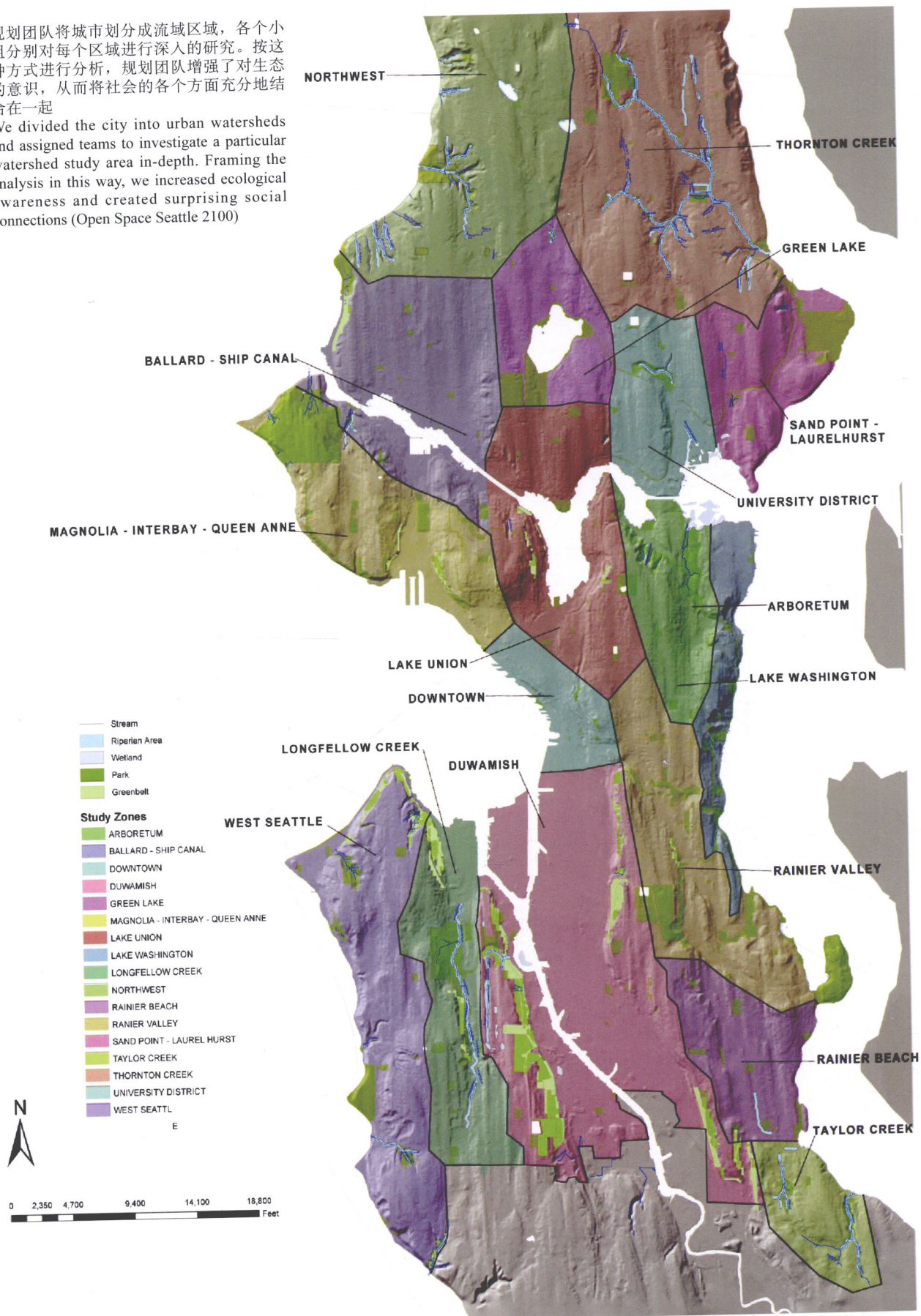
Project Background, Goals and Objectives

After celebrating the centennial of Seattle's Olmsted Plan in 2003, many city residents were left wondering, "Where is the vision for our next century of open space?" Despite palpable public interest, neither civic resources nor municipal will were evident to engage the question.

Without funding, client or mandate, Open Space Seattle 2100 (OSS2100) took up the mantle to engage the design/planning profession's role as public advocate and educator. Stepping in to fill an evident void, we rallied thousands of dollars of

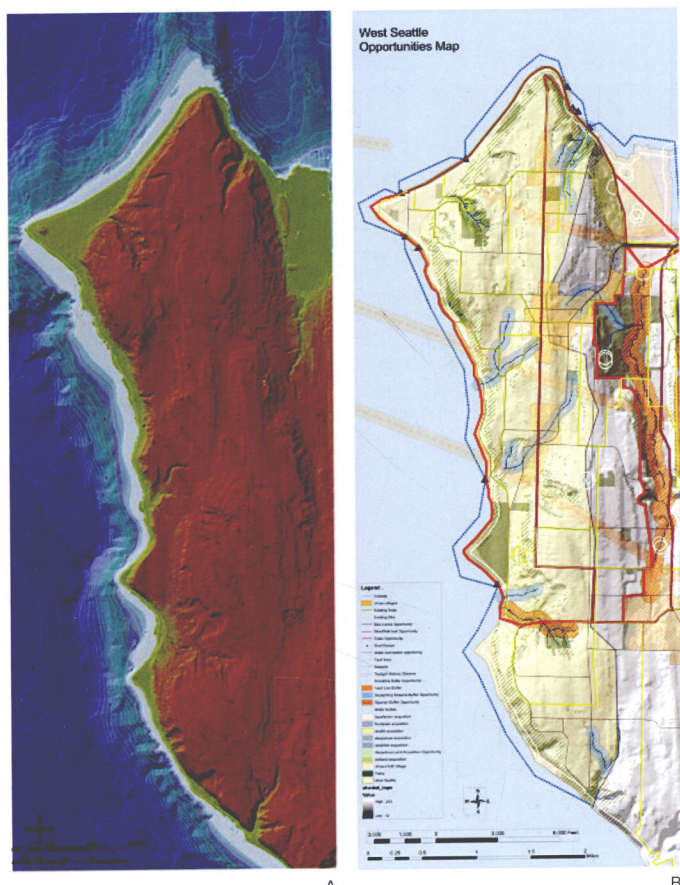
▼ 规划团队将城市划分成流域区域，各个小组分别对每个区域进行深入的研究。按这种方式进行分析，规划团队增强了对生态的意识，从而将社会的各个方面充分地结合在一起

We divided the city into urban watersheds and assigned teams to investigate a particular watershed study area in-depth. Framing the analysis in this way, we increased ecological awareness and created surprising social connections (Open Space Seattle 2100)

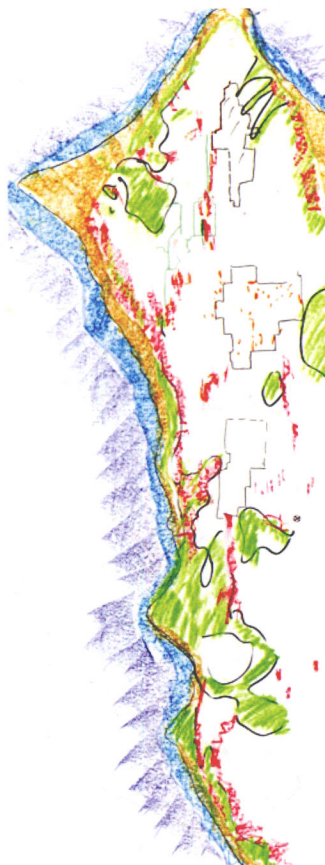


WE DIVIDED THE CITY INTO URBAN WATERSHEDS AND ASSIGNED TEAMS TO INVESTIGATE A PARTICULAR WATERSHED STUDY AREA IN-DEPTH. BY FRAMING THE ANALYSIS IN THIS WAY, WE INCREASED ECOLOGICAL AWARENESS AND CREATED SURPRISING SOCIAL CONNECTIONS

OPEN SPACE SEATTLE 2100 : ENVISIONING SEATTLE'S GREEN INFRASTRUCTURE FOR THE NEXT CENTURY



A



C



D

典型的区域研究分析和最终规划。西雅图西队提出了线性、密集的城市中心方案和水普吉特海湾水平线升高后，对滨水区域动物栖息地的修复方案

Typical Study area analysis and resulting plans. The West Seattle team proposed dense urban centers on the ridgelines and restoration of nearshore habitat after rising waters flood homes along Puget Sound (West Seattle Team and Meriwether Wilson)

- A LANDSCAPE ANATOMY MAP
- B OPEN SPACE OPPORTUNITY MAP
- C CHARRETTE OPPORTUNITY SKETCH
- D CHARRETTE MASTER PLAN
- E 20-YEAR GIS PLAN
- F 100-YEAR GIS PLAN



E



F

间规划的空白，设计团队通过捐赠的方式（得到ASLA的CIP认可）筹集了许多资金。邀请各个行业的设计专家参与到该项目的设计中，这激起了当选政府的兴趣并积极采取行动，也通过一次多达350名参与者的专家研讨会激发

grant and donor funding (including an ASLA CIP grant), engaged a wide spectrum of academic and professional design communities, provoked earnest interest and action from elected officials, and stoked the flames of popular imagination through the more than 350 participants in the Green Futures charrette. In doing so, we have begun to create a new paradigm for the ways that Seattle conceptualizes, funds, and prioritizes green

TYPICAL STUDY AREA ANALYSIS AND RESULTING PLANS. THE WEST SEATTLE TEAM PROPOSED DENSE URBAN CENTERS ON THE RIDGELINES AND RESTORATION OF NEARSHORE HABITAT AFTER RISING WATERS FLOOD HOMES ALONG PUGET SOUND.

OPEN SPACE SEATTLE 2100 : ENVISIONING SEATTLE'S GREEN INFRASTRUCTURE FOR THE NEXT CENTURY



IMAGES FROM THE GREEN FUTURES CHARRETTE, WHICH ENGAGED OVER 350 PROFESSIONALS AND CITIZENS AND 23 TEAMS.

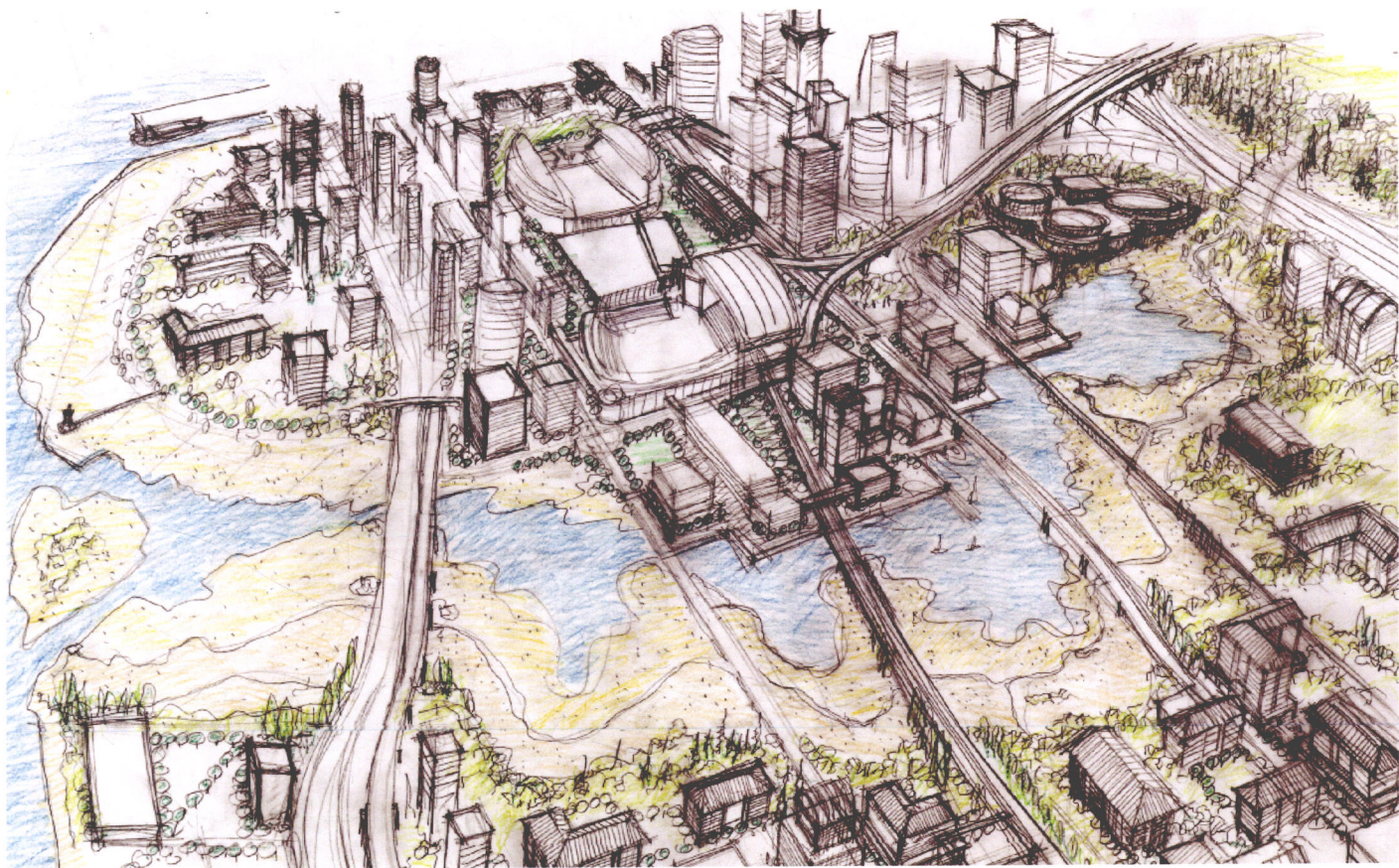
了市民的想象力。然后，设计团队开始西雅图概念规划设计、资金的筹措和绿色空间有限发展的模型。除此之外，OSS2100和最后的规划产生了连锁反应，“生活的格子：社区系统”这个概念已经深入到居民心中，为继续实施这个长远的绿色基础设计提供了动力。

这个过程不是要探询“答案”，而是对公众未涉及到的问题也做出了回应，规划团队经过研究将世界范围内公共空

▲ 绿色景观研讨会给出的图像。共有350多名专业人员和市民参与其中，共分为23个小组

Images from the Green Futures Charrette, which engaged over 350 professionals and citizens in 23 watershed-based teams (Photos: Steve Hartson, Hartson Photography)

infrastructure expenditures. But more than that, the ripple effects of Open Space Seattle 2100 and the resultant plan, The Living Lattice: A Network of Neighborhoods, has firmly rooted itself in the civic imagination of the city, and momentum



GREEN FUTURES CHARRETTE PARTICIPANTS ON THE DOWNTOWN TEAM ENVISIONED A RETURN OF THE TIDAL SALT MARSH THAT SITS OVER A SHALLOW EARTHQUAKE FAULT. THE MARSH ALSO DOUBLES AS A WATER BIOFILTRATION CHAIN.

▲ 绿色景观研讨会的“市中心小组”提出小地震后的场地修复成为随潮汐起落的湿地方案。湿地也成为过滤系统中的重要组成部分
Green Futures Charrette participants on the Downtown Team envisioned a return of the tidal salt marsh that sits over a shallow earthquake fault. The marsh also doubles as a water biofiltration chain (Kenichi Nakano and Pietro Potesta, Downtown Team)

间单元与系统呈现在公众眼前。研讨会上的演讲嘉宾介绍了许多创新规划方法，带来了不同的设计角度，使公众对后期规划充满了期待，参与热情不断高涨。专家研讨会将促使城市未来公共空间远景发展规划的进一步实施。

更为重要的是，这个过程使景观设计师团队和规划专家们能够与政策制定者和官员进行交流，使公众了解并支持城市未来的远景规划，有效地进行可持续发展空间结构的建设。这个努力颇有成效，各个区域的各个城市现在都采取了百年规划概念，并将西雅图专家研讨会作为学习的典范。

OSS2100首要目的是形成将城市空间转变为可持续发展的“绿色空间结构”概念并将此付诸实践。

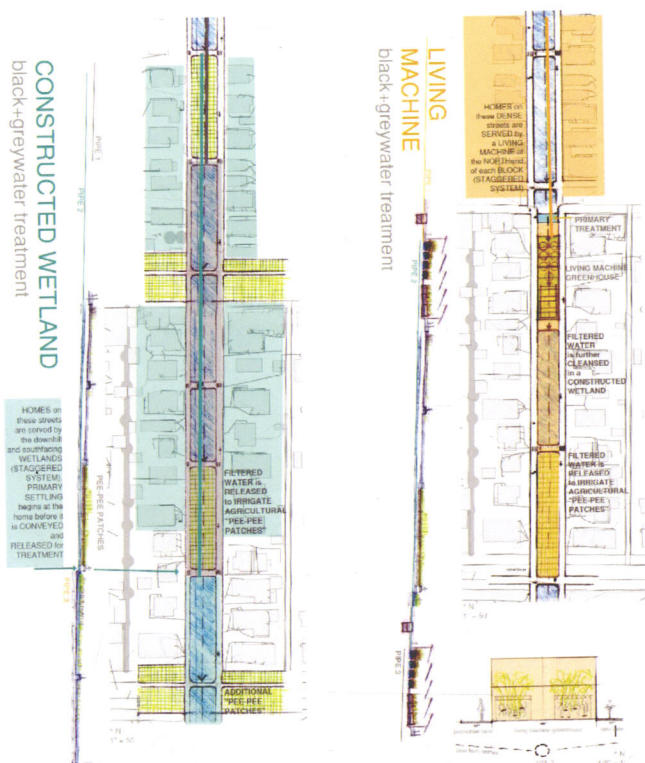
首先规划团队提出了一个大胆的设计理念，对西雅图下一个百年公共空间进行规划的实施策略，可提升健康、文

continues to build for implementing a comprehensive, long-term green infrastructure plan for the city.

Not seeking to find “answers,” our process was built upon the promise of engaging the public to ask un-asked questions. Through research, we brought precedents of open space typologies and systems from around the world to the fore. With invited lecturers, we energized and excited the broader public community by introducing innovative approaches and perspectives. By the end of the process, the bounding energy of the public’s engagement was overwhelming. Through the charrette process, a cohesive vision materialized, and has been formally integrated with the city’s future planning efforts.

But more important, this process empowered the community of landscape architects and design professionals to step out in front of policy makers and elected officials to educate and inform the public, thus encouraging the City to initiate dramatic new goals and approaches for effectively implementing sustainable infrastructure. As word of this effort spreads, cities both regionally and nationally are now adopting the 100-year

OPEN SPACE SEATTLE 2100 : ENVISIONING SEATTLE'S GREEN INFRASTRUCTURE FOR THE NEXT CENTURY



Ballard / Ship Canal

▲ 设计团队提出2100年自给自足的“生态村庄”概念，街道上没有车辆，路边“活的机器”可以进行污水处理。处理后的水可以用来灌溉保证城市粮食的供应

One team envisioned a year 2100 where self-sufficient "eco-villages" would reclaim the street from cars in order to treat their wastewater in roadside "living machines." This water would then be used to grow produce, ensuring urban food security (Vanessa Lee, Ballard Team)

化和自然环境方面的品位。可再生绿色空间的远景就是在经济、社会和生态的全面可持续性下创建健康美丽的西雅图。

在这个长达一年的规划过程当中，专家研讨会提出的具体目标是：提升公众对于可预见的未来发展的意识，例如气候和人口数量的变化；提出新的设计与规划解决方案；形成公共空间网络的连接性远景；指出景观设计师在确保城市发展和维护可持续性发展方面起到的领导作用。其他目标还包括规划与增加公共空间的密度，满足居住和可持续发展方面的要求，为各行各业的人们提供沟通交流的场所；有利于长期规划的实施和提升西雅图公共空间的质量。

规划项目、规划资料、规划分析和公众参与

1. 首先向关注这个问题的相关团队进行咨询，如市政工作人员、非盈利组织、生活水平低下的市民、少数民族和关

planning concept, and are explicitly looking to our process of engagement as a model.

The primary goal of Open Space Seattle 2100 was to generate awareness and action towards transforming urban space into a city's sustainable "green infrastructure," to:

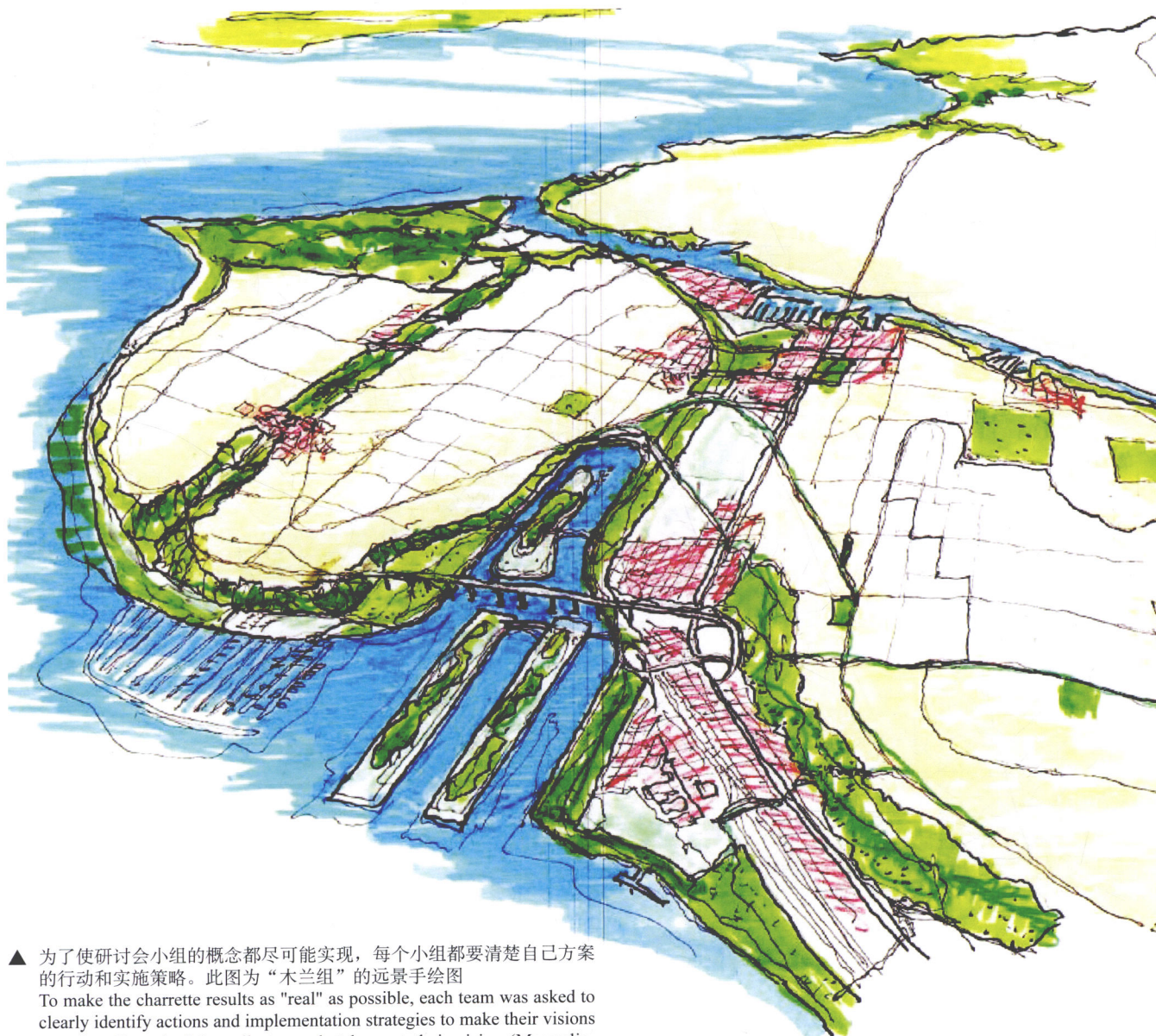
create a bold integrated Open Space Plan with implementation strategies for Seattle's next hundred years which will enhance the health and well-being of both our cultural and natural environments. This vision of a regenerative green infrastructure will strive to create a healthy, beautiful Seattle while maximizing our economic, social, and ecological sustainability.

In this year-long process, objectives were to: raise awareness of predicted future scenarios, such as climate change and new demographics; proactively propose new integrated design and planning solutions; forge a striking vision of a potential

ONE TEAM ENVISIONED A YEAR 2100 WHERE SELF-SUFFICIENT "ECO-VILLAGES" WOULD RECLAIM THE STREET FROM CARS IN ORDER TO TREAT THEIR WASTEWATER IN ROADSIDE "LIVING MACHINES". THIS WATER WOULD THEN BE USED TO GROW PRODUCE, ENSURING URBAN FOOD SECURITY

TO MAKE THE CHARRETTE RESULTS AS "REAL" AS POSSIBLE, EACH TEAM WAS ASKED TO CLEARLY IDENTIFY ACTIONS AND IMPLEMENTATION STRATEGIES TO MAKE THEIR VISIONS A REALITY. HERE THE MAGNOLIA TEAM SKETCHES OUT THEIR VISION.

Magnolia / Interbay / Q. Anne



▲ 为了使研讨会小组的概念都尽可能实现，每个小组都要清楚自己方案的行动和实施策略。此图为“木兰组”的远景手绘图
To make the charrette results as "real" as possible, each team was asked to clearly identify actions and implementation strategies to make their visions a reality. Here the Magnolia team sketches out their vision (Magnolia-Interbay-Queen Anne Team)

注规划的市民，随后将近50个团队形成的咨询意见结合起来。这个团队协助完成了对后得到西雅图市政府认可的8个公共空间规划原则的确定，提出了项目目标和专家研讨会参与者的未来发展模式。

2. 西雅图市的一次整体规划中，规划团队对景观的具体分

interconnected network of open spaces; and to highlight the leadership role of landscape architects in (re)shaping the quality and sustainability of urban development. In the process, other objectives were achieved including illuminating connections between open space, density, livability, and sustainability; creating a context where diverse professionals and citizens would convene to exchange ideas and develop new relationships; and catalyzing a long-term advocacy coalition and

NEAR-TERM PRIORITIES AND IMPLEMENTATION STRATEGIES

Five-Year Action Plan

Waterfront

Develop a plan for waterfront restoration and access and require easements for public access to the water's edge as a condition of new development.

Hazard Areas

Secure funding for acquiring parcels located in hazard areas and strengthen the Critical Areas Ordinance to discourage development on steep slopes.

Revitalize Existing Parks

Improve trail systems to create better access to and within Kinross Park. Maximize the use of the Elliott Bay trail with better connections to Magnolia and Queen Anne. Continue reforestation efforts and create better kayak access along Discovery Park.

Create New Parks

Acquire parcels in strategic locations to be designated as parks (e.g., parcels adjoining Seattle Center, proposed Monorail station property).

Re-Think Public Right-of-Ways

Develop an inventory of public right-of-ways to determine existing opportunities for open space in leftover spaces (i.e., roundabouts, parking and planting strips, street ends, and alleys). This inventory might lead to a program to create opportunities for parking strip enhancement, roundabout plantings, and right-of-way improvements or modifications to "green" neighborhood streets.

Encourage Environmental Stewardship

Create a program to encourage the stewardship of private open spaces and land by residents and landowners. Such programs might encourage and provide funds for creating backyard habitat, vegetated green spaces, stormwater retention and filtration areas, and green roofs.

Development Incentives and Regulations

Consider providing developer incentives as a way to encourage usable and diverse open spaces that function for both humans and the natural environment. These incentives could be phased into the land use code over time.

Implementation Strategies

- Hazard mitigation fund
- Density bonuses for open space provision by developers
- Neighborhood matching funds
- City-wide parks levy
- Transfer of development rights (TDR)
- Local improvement districts (LID)
- Department of Ecology grant funds/ City of Seattle funds for ecological restoration
- Expedited permitting for green building
- Establish green streets as a requirement
- Private donations
- Secure easements for shoreline access
- Develop a rights-of-way inventory and plan

▼ 执行总结文件的内容，与研讨会小组提出的主题与策略一致
Pages from the Executive Summary document identify common themes and strategies from the charrette teams' work (Open Space Seattle 2100)

PAGES FROM THE EXECUTIVE SUMMARY DOCUMENT IDENTIFY COMMON THEMES AND STRATEGIES FROM THE CHARRETTE TEAMS' WORK.



Themes and Strategies from the Green Future



Image Credit: Nancy Rottle

Introduction

While each charrette team developed visions for its own respective watershed study area, patterns clearly emerged across each of all teams' visions. Taken in aggregate, these themes and strategies represent new pathways for the City of Seattle to pursue as it looks toward future infrastructure investments that are humanistic, health, ecologically-responsible and climate friendly.



Image Credit: Brice Maryman

Create an Integrated Green Infrastructure



Image Credit: Peter Nelson

- **Aggregate Open Space to Create Connections and Urban Greenways** forming loops, connecting uplands to shorelines, linking backyards, and connecting to regional trails.
- **Create Multi-functional Open Space** that maximizes the uses and benefits of every parcel as real estate prices rise. For example, multiple-use street rights-of-ways could include transit, water purification, stream corridors, and recreation.
- **Redefine Transportation Corridors** to include more green spaces and ecosystem functions in the rights-of-way. Lid freeways to create new urban space and re-connect neighborhoods.
- **Recreate Natural Drainage to Restore our Waters** using pervious surfaces, rain gardens, restored wetlands and bioswales that can clean and detain water before entering streams, lakes and the Puget Sound.



Image Credit: Lake Union Team B

Promote Ecological Open Space



Image Credit: Tim Shuck

- **Understand the City as Watersheds** to repair water-based ecological corridors and to connect neighborhoods.
- **Respect Underlying Natural Conditions** to honor the existing ecology and minimize damage from natural disasters.
- **Re-establish Historic Streams** that are now buried in pipes by bringing water to the surface and restoring riparian corridors that salmon will always have a place in our city.
- **Restore Shorelines for Habitat** since Seattle sits at a critical threshold of two major Puget Sound watersheds—Lake Washington-Cedar-Sammamish and the Green-Duwamish—for salmon migrating to and from spawning grounds.
- **Establish and Protect Greenbelts and Habitat Networks** to extend existing urban forests, with potential wildlife, forestry and recreational uses.



Image Credit: Seattle Public Utilities

▼ 执行总结文件的内容，与研讨会小组提出的主题与策略一致
Pages from the Executive Summary document identify common themes and strategies from the charrette teams' work (Open Space Seattle 2100)

OPEN SPACE SEATTLE 2100 : ENVISIONING SEATTLE'S GREEN INFRASTRUCTURE FOR THE NEXT CENTURY



Image Credits: Brice Maryman

Balance Density and Community

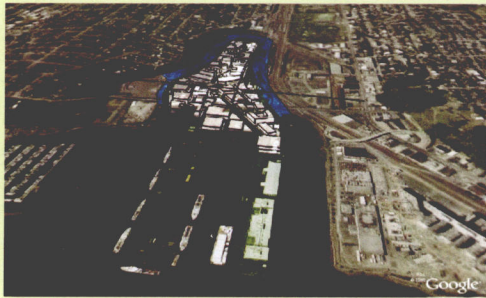


Image Credit: Alyse Nelson

- **Focus development in the urban core** to protect outlying farms and forests, reduce the impacts of sprawl to lakes and streams, climate and air.
- **Create New Urban Villages with Civic Hearts** that are walkable with mixed residential, commercial, public amenities and civic gathering spaces while creating magnet communities. Charrette teams typically located new urban nodes on ridgelines, with views corridors preserved.
- **Employ Green Roofs and Walls** on residential and commercial buildings to reduce the city's heat island effects, detain stormwater, create habitat and provide green relief.
- **Encourage Decentralized Self-sufficiency** with localized power generation, water treatment, and agriculture to reduce dependency and impacts on outside resources.

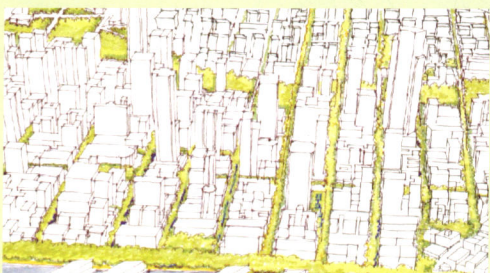


Image Credit: Downtown Team A

Provide Democratic Access and Use



Image Credit: Elizabeth Umbanhowar

- **Provide Equality in Accessibility** to open space for all citizens, addressing diverse cultural needs and environmental justice.
- **Give Increased Access to Water** from every neighborhood with waterfront acreage through public and private incentives.
- **Use Open Space for Education/Schools** for Open Space by incorporating schoolyards as community open space, and creating learning spaces such as gardens, views, interpretive trails and eco-revelatory features.
- **Provide a Hierarchy and Variety of Open Spaces** including natural areas, large parks, playgrounds, P-patches, trails and pocket parks.

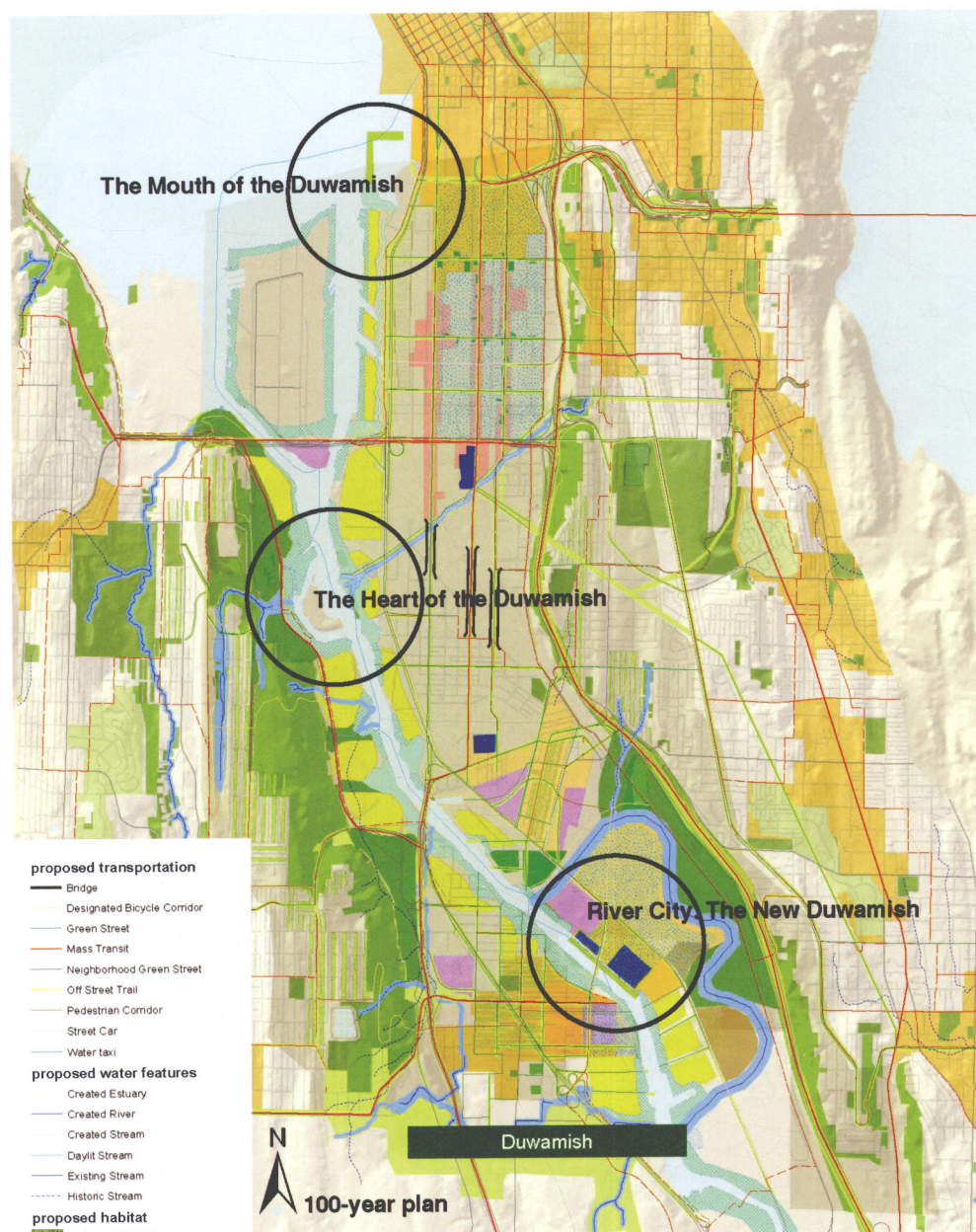


Image Credit: Virginia Coffman



Image Credit: Brice Maryman

EXAMPLE PLANS FOR A WATERSHED-BASED STUDY AREA REPRESENTED IN GIS FROM THE PROJECT REPORT. LOOKING FORWARD 100 YEARS,



Strategies and implementation

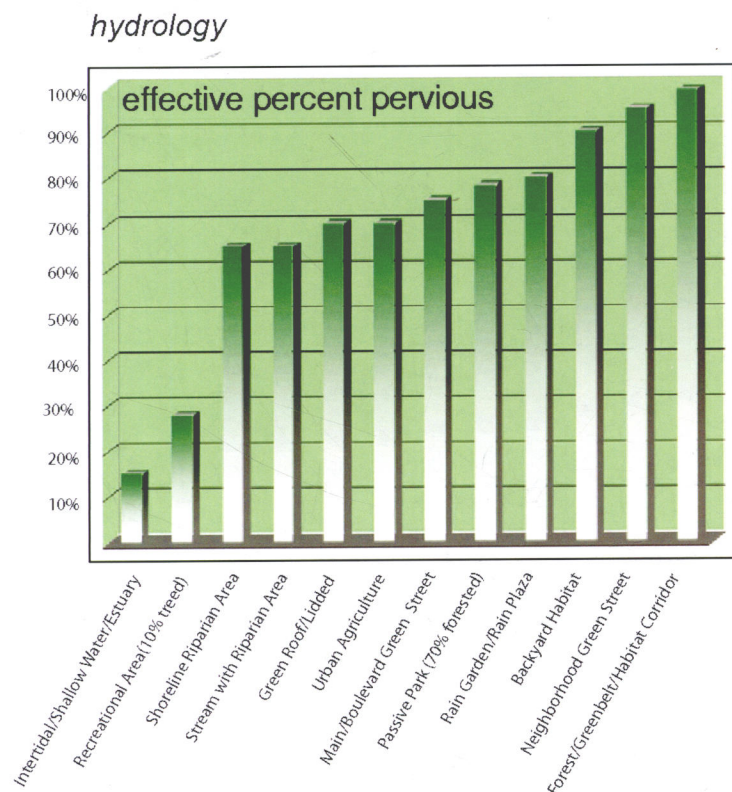
- Percent of State Sales Tax applied to lidding regional transportation corridors
- Increase incentives for Transfer of Development Rights and Conservation Easements to increase designated habitat acreage
- Develop citywide financial incentives to encourage implementation of Green Energy Technology and Sustainable Development (i.e. wind, microhydro, solar, green roofs)
- Public Purchase of waterfront and greenbelt parcels to create continuous terrestrial and waterfront habitat corridors
- Use Real Estate Excise Tax to develop public open space amenities (i.e. parks, green streets, rain gardens and green roofs)
- Develop transportation networks that facilitate industrial development in non critical (i.e. non-waterfront) habitat areas

以分水岭为基础的研究区域规划图都在项目的GIS信息中显示出来
Example plans for a watershed-based study area represented in GIS from the project report (Kari Stiles, Duwamish Team)

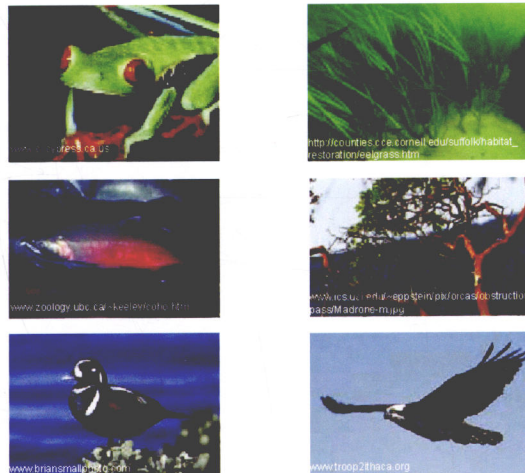
OPEN SPACE SEATTLE 2100 : ENVISIONING SEATTLE'S GREEN INFRASTRUCTURE FOR THE NEXT CENTURY

ECOLOGICAL BENEFIT EVALUATION

analysis of hydrological and habitat improvements: ballard and duwamish study areas



habitat



Throughout the world, cities fragment, isolate, and degrade natural habitat. Application of the principles of landscape ecology, including interactions among patches, corridors, and metapopulation habitat networks, is valuable for enhancing urban ecological health. By improving habitat quantity, quality, and connectivity, it is possible to conserve and protect native plant and animal species.

EVALUATION OF THE 100-YEAR DUWAMISH PLAN INDICATES THAT, IF IMPLEMENTED, IT WOULD TRIPLE PERVIOUS SURFACES, DRAMATICALLY REDUCE COMBINED SEWER OVERFLOWS, AND INCREASE HABITAT QUALITY AND QUANTITY.

Duwamish Study Area Results

study area size: 1,230,036 acres

area of improvements (20 years): 959 acres

area of improvements (100 years): 3054 acres

对DUWANISH小组规划的评估说明：如果实施规划，原来的公共空间面积将扩大三倍，将大大缓解合流下水道污水泛滥，提升栖息地环境质量且增加动植物的数量

Evaluation of the Duwamish plan indicates that, if implemented, it would triple pervious surfaces, dramatically reduce combined-sewer overflows, and increase habitat quality and quantity (Elizabeth Powers and Melissa Martin)

析作为城市分隔的基础。规划团队将城市划分为18个城市流域研究区域，并在城市规划方法中采用流域作为区域单元，用来取代现有的行政区域。自然框架方便参与者越过传统社会对立状态，阐明分水岭区域单元之间的流动联系性与生态性特征。

3. 每个分水岭都使用GIS系统对当地资源信息进行了项目资料的整理和分析。规划团队使用设立“档案”的方式收集项目背景信息，也通过大尺度的GIS“有利环境与界定”地图进行各个区域的研究。分析资料在地图上向专家研讨会的所有参与者标识出了相关的空间信息，向城市居民传达了他们从未考虑过的城市规划概念信息，其中包括现有的公园与公共空间的规划、水体与地下水、城市发展区域、自行车道与人行道、土地面积与使用、危险区域有

planning process to advance the quality of Seattle's integrated open space.

Programming, Inventory, Analysis, and Public EngagementThis phase included:

1. Preliminary consultation with numerous stakeholder focus groups, including City staff, non-profits, underserved and minority groups, and concerned citizens. This was followed by the formation of a coalition advisory group of over 50 organizations. This group assisted in crafting eight Open Space Principles that were subsequently endorsed by Seattle City Council, and helped articulate our goals, objectives, and the future scenarios that charrette participants would use.

2. For the first time in Seattle city-wide planning, we used the underlying anatomy of the landscape as the basis for partitioning the city. By dividing the city into 18 urban watershed study areas, we broke new ground in approaching urban planning by using watershed units rather than political boundaries. This natural framework helped participants to transcend traditional