

NORTH BRANCH CHICAGO RIVER WATERSHED WORKGROUP GENERAL MEMBERSHIP MEETING MINUTES



**NORTH BRANCH
CHICAGO RIVER
WATERSHED
WORKGROUP**

**Glenview Municipal Center and Police Department, Appleyard Training
Room, 2500 East Lake Ave., Glenview, IL 60026
Wednesday, May 11, 2022 * 1:00pm – 3:00pm**

NBWW GENERAL MEMBERSHIP MEETING MINUTES

1. Introductions

Brandon Janes, North Branch Chicago River Watershed Workgroup (NBWW) President, welcomed attendees at 1:07 pm to the May 11, 2022 NBWW General Membership Meeting. The meeting was held in a hybrid format with members attending via Zoom and in-person. The members attending in-person introduced themselves. A total of 13 members (tallying 58 votes) were in attendance, so an NBWW meeting quorum was present (see the voting quorum and meeting participants list below). Janes announced that Watershed Project Updates (originally agenda item #5) will come before the Guest Speakers (originally agenda item #4) to accommodate a guest speaker's schedule.

Voting Quorum: Ashley Strelcheck, Lake County Stormwater Management Commission; Mike Warner, Gewalt Hamilton, Village of Northfield and Village of Riverwoods; Leonard Dane, Fehr Graham Engineering & Environmental; Larry Bridges, East Skokie Drainage District; Al Giertych, Lake County Division of Transportation; Susan Lenz, Lake Forest Open Lands; Matt Ueltzen, Lake County Forest Preserve District, Unincorporated Lake County; Rob Flood, North Shore Water Reclamation District; Brandon Janes, Village of Deerfield; Robyn Flakne, Village of Glenview; Matt Farmer, Village of Northbrook; Kate Amoruso, Village of Wilmette; Emily Grimm, Village of Winnetka.

2. Public Comment – None

3. NBWW Business

- a. Approve NBWW February 09, 2022 General Membership Meeting Summary. First Motion: Mike Warner, Gewalt Hamilton (representing Villages of Northfield and Riverwoods). Second Motion: Larry Bridges, East Skokie Drainage District. The motion passed with unanimous consensus vote.
 - i. A question was asked by Leonard Dane, Fehr Graham Engineering, regarding an answer that was documented in response to a question regarding chloride levels for Brian Valleskey asked during the NARP Workplan Overview in the February 09, 2022 minutes. Dane asked why the answer documented seemed to address chlorophyl levels instead of chloride levels. Strelcheck answers that she will reach out to Brian Valleskey to get clarification on this.
- b. Approve NBWW February 23, 2022 Special Call General Membership Meeting Summary. First Motion: Al Giertych, Lake County Division of Transportation. Second Motion: Rob Flood, North Shore Water Reclamation District. The motion passed with unanimous consensus vote.
 - i. Strelcheck notes that when the Executive Board meets in June, the Board will be discussing potential options for adjustments to the financial timeline that would provide members more time for potential cost adjustments to their membership dues.
- c. Financial Report: Ashley Strelcheck, NBWW Coordinator, presented the expenditures and revenues for ratification. Emily Grimm, Village of Winnetka, asked what the NBWW's fiscal year is. Strelcheck answers that it's from December 1st to November 30th of each next year, which is Lake County Stormwater Management's fiscal year because SMC is the administrative agent of the NBWW.
 - i. Ratify revenues and expenditures: First Motion: Larry Bridges, East Skokie Drainage District. Second Motion: Matt Ueltzen, Lake County Forest Preserve District.

- ii. Roll Call: Dane, Bridges, Giertych, Strelcheck, Lenz, Ueltzen, Flood, Janes, Flakne, Farmer, Warner, Amoruso, Grimm. Motion passed: 13-0-0.
- d. Monitoring Committee Update – Rob Flood, NBWW Monitoring & Water Quality Impairment Abatement Committee Chair gave a Monitoring Committee Update. Twenty-five sites are being sampled for water quality parameters which started in February at all 25 sites. Sampling will be completed again in May, July, August, and September. The Annual Stream Monitoring Report was sent to Illinois EPA on March 17, 2022.
 - i. NBWW NARP Update: The NARP work plan that was submitted by Geosyntec was approved by the Executive Board January 2022. A Request for Proposal for completing the 2024 NBWW NARP was reviewed and approved by the Executive Board at the April 13, 2022 meeting. It is currently on the Lake County Purchasing Portal available to the public for bid until May 16, 2022. Interviews will be conducted on May 25, 2022 at an Executive Board Special Meeting. Aiming for monitoring to begin in June/July and run through September, after which it will be determined whether Outcome A or B cost scenario occurs and therefore will determine the 2023/2024 membership dues.
- e. Old Business: None
- f. New Business: None

4. Watershed Project Updates

- a. Open Discussion: Watershed Updates
 - i. Robyn Flakne announced that the Village of Glenview secured a 319 Grant for a streambank stabilization project on Longvalley Road in Glenview, along the West Branch of the North Branch Chicago River.
 - ii. Ashley Strelcheck gave an overview on three Lake County SMC 319 Grant-funded projects in the North Branch Chicago River watershed: the Pine Street Streambank Stabilization and Open Space Project, which is complete; the Park District of Highland Park County Club Conversion Project is now open space and passive recreation and renamed “The Preserves” and completed; East Skokie Drainage District completed Phase I of the Lake Forest Streambank Stabilization Project between Old Elm Road and Westleigh Road and is starting Phase II of that project.
 - iii. Strelcheck and Warner provided information to the attendees that Lake County was awarded \$30 million from the Department of Commerce and Economic Opportunity (DCEO) for 14 stormwater related projects throughout the County. The funds came from a statutory insertion to the state budget as a capital grant program through Rebuild Illinois.
 - iv. Emily Grimm shared that the Village of Winnetka is starting work on their large storm sewer project through ARPA and MWRD funding, and construction is slated to begin in June 2022.
 - v. Friends of the Chicago River is hosting their 30th annual Chicago River Clean-Up Day on May 14, 2022 from 9:00am – 12:00pm.
 - vi. Jacob Jozefowski, SMC, presented a working draft version of the [Site-Specific Action Plan Recommendations Web Mapping Application](#) to be included in the North Branch Chicago River Watershed-Based Plan Update. Any questions or issues that arise in using the draft version can be sent to astrelcheck@lakecountyil.gov or jjozefowski@lakecountyil.gov.
- b. Member Remarks
 - i. Al Giertych, Lake County Division of Transportation, announced that he will be retiring in June 2022.
- c. Next NBWW General Membership Meeting (August 10, 2022)

5. Guest Speakers

a. Project Highlight: Pine Street Streambank Stabilization & Open Space Project

Robyn Flakne, Natural Resources Manager, Village of Glenview

Flakne presented on the buyout and demolition of homes on Pine Street in Glenview in response to flooding from the West Branch of the North Branch Chicago River. The project converted five acres of land into open space. This project was funded by 319 Grants with the goal to improve water quality by stabilizing about 764 feet of the streambank, adding a riffle-pool structure and rain gardens/bioswales with herbaceous native vegetation, and increasing canopy cover with emphasis on climate adapted tree and shrub species. Brandon Janes asked about the maintenance on the rain gardens. Flakne responded that the contractor is responsible for maintenance in the first year. After the first year, the project will be rolled into an annual natural areas maintenance contract that the Village has with another contractor. Mike Warner asked how involved FEMA is in the buyout process. Flakne responded that FEMA does not allow any impermeable surfaces to be constructed on the open space that is left behind after the homes were demolished. Please see Robyn's presentation in the meeting minutes for more details.

The Long Game: River Systems Planning

b. Şevin Yıldız, PhD, Assistant Professor, Department of Urban Planning and Policy, University of Illinois Chicago

Yıldız presented on a research study that explores how we think about natural systems, especially rivers, and their contribution to the watershed as a whole, as well as their contribution to urban design. Her research suggests that we take a more integrated view of these systems so that the river may build a regional metropolis identity for the region. Yıldız presented an example from Germany along the Emscher River Corridor that has been rebranded as Metropolis Ruhr through planning, policy, zoning, and ordinance creation. Her research encourages Chicagoans, urban planners, and policy makers to view the Chicago River in a similar way to promote a stronger sense of regional metropolis identity with the river's natural systems. Please see Şevin's presentation in the meeting minutes for more details.

6. Adjournment – 2:42 pm

First Motion: Matt Farmer, Village of Northbrook. Second Motion: Mike Warner, Gewalt Hamilton (representing Villages of Northfield and Riverwoods). The motion passed with unanimous consensus vote.

North Branch Chicago River Watershed Workgroup Meeting Attendees

Name	Organization	In-Person/Virtual
Anitha Das	Cook County	Virtual
Ashley Strelcheck	Lake County Stormwater Management Commission	In-Person
Brandon Janes	Village of Deerfield	In-Person
Ben Gordon	Hey & Associates	Virtual
Benjamin Metzler	Clark Dietz; Village of Green Oaks	Virtual
Bud Reed	East Skokie Drainage District	In-Person
Damon Cederberg	Libertyville Township	Virtual
Dave Lampert	Illinois Institute of Technology	Virtual
David Johannesen	James Anderson Company	Virtual
Deb Kutska	Cook County Department of Environment and Sustainability	Virtual
Derek Anderson	HMG Engineers	In-Person
Dudley Duderdonk	Village of Glencoe	In-Person
Emily Grimm	Village of Winnetka	In-Person
Henrietta Saunders	Village of Glenview	Virtual

Jacob Jozefowski	Lake County Stormwater Management Commission	In-Person
Jim Jabcon	Chicago Botanic Garden	Virtual
Joan O'Shaughnessy	Chicago Botanic Garden	Virtual
Justin Vick	Metropolitan Water Reclamation District of Greater Chicago	Virtual
Kate Amoruso	Village of Wilmette	In-Person
Larry Bridges	East Skokie Drainage District	In-Person
Leonard Dane	Fehr Graham Engineering	In-Person
Mac McKavanagh	Union One West Fork Drainage District	Virtual
Mark Olszewski	Village of Deerfield	In-Person
Matt Farmer	Village of Northbrook	In-Person
Matt Ueltzen	Lake County Forest Preserve District	In-Person
Mia Gerace	Lake County Stormwater Management Commission	In-Person
Mike Warner	Gewalt Hamilton Associates, Inc.; Village of Northfield; Village of Riverwoods	In-Person
Paula Miller	Village of Morton Grove	Virtual
Peter Nagle	Village of Morton Grove	Virtual
Rebecca Connolly	Stantec	Virtual
Rob Flood	North Shore Water Reclamation District	In-Person
Robert Pilat	Village of Niles	Virtual
Robyn Flakne	Village of Glenview	In-Person
Ron Milanese	City of Highland Park	In-Person
Senator Adriane Johnson	Illinois State Senate	Virtual
Sevin Yildiz	University of Illinois at Chicago	Virtual
Steve Silic	Forest Preserve District of Cook County	Virtual
Susan Lenz	Lake Forest Open Lands	In-Person
Tatiana Papakos	Michael Baker International	Virtual
Tracy Gastfield	Vernon Township & West Deerfield Township	Virtual
Vern Witthuhn	Strand Associates	In-Person

PDHs are self-reporting. If attendees want to apply NBWW meetings towards their professional license, keep the certificate, agenda, and minutes with sign-in sheets. Acceptance of these materials for credit is at the discretion of the licensing authority.

MS4 Program BMP fulfillment. If attendees want to apply NBWW meetings and education towards their MS4 Program BMP Measurable Goals, keep the certificate, agenda and minutes with sign-in sheets. Acceptance of these materials for MS4 program credit is at the discretion of the Illinois EPA.

Village of Glenview, IL

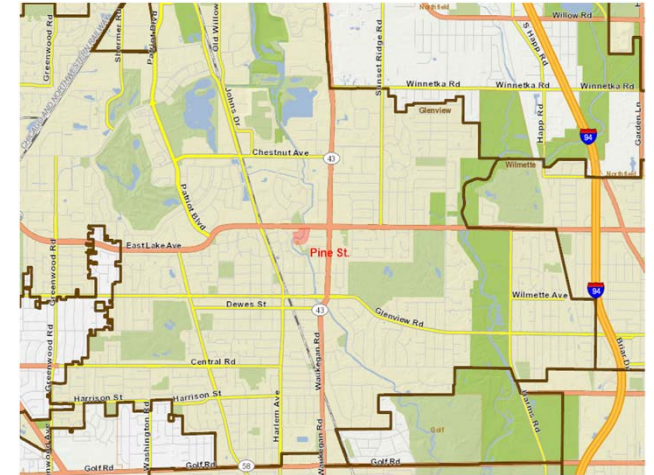
Pine Street Stabilization and Open Space Project

Floodplain Buyouts

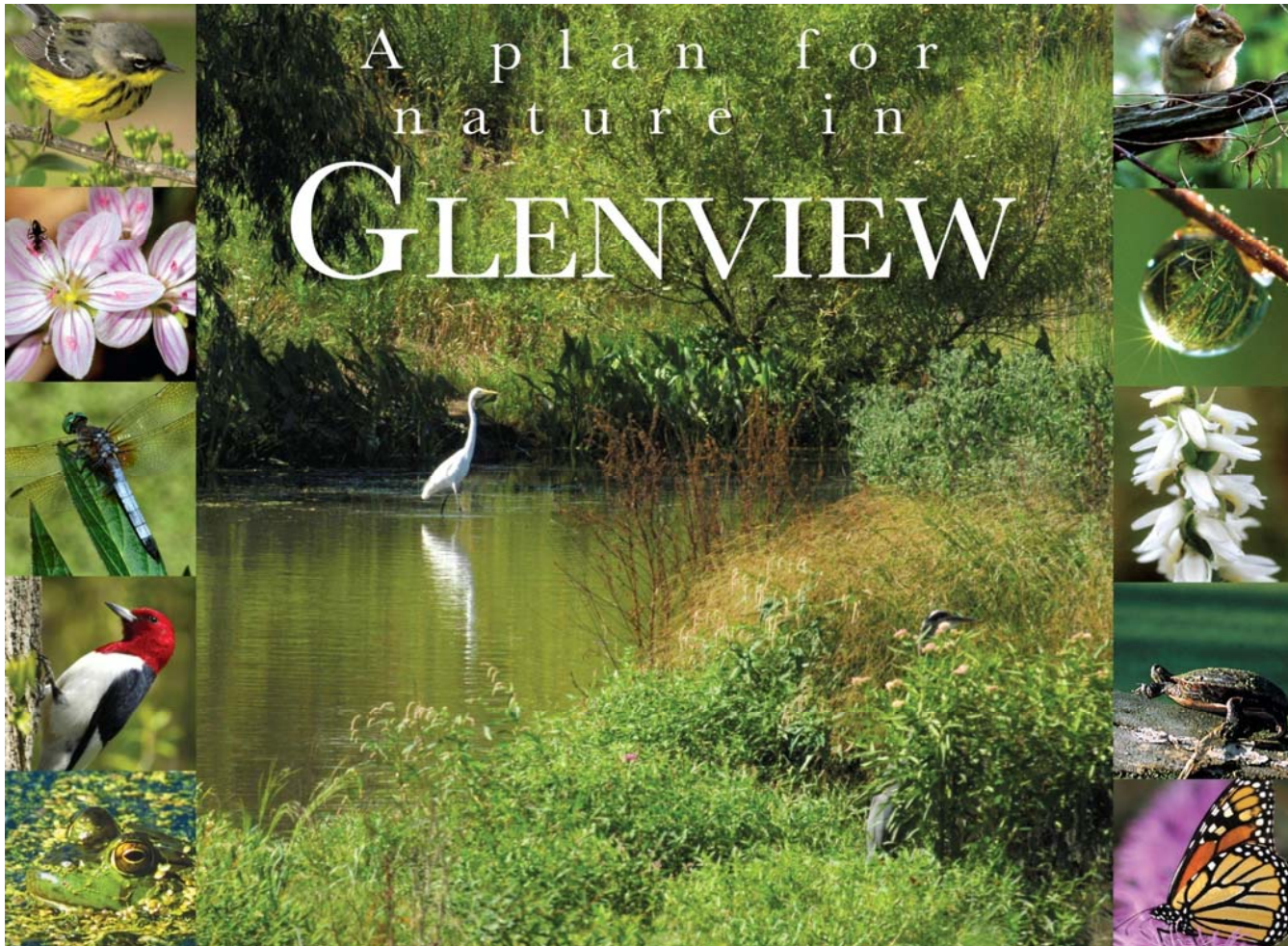
5-Acre property where homes have been demolished in response to flooding

Residential setting across river from park

- Remnant vegetation reflecting residential past of the property; erosion along streambank reflected history of flooding/urban river issues
- 319 funding with goal to improve water quality by stabilizing the streambank, adding a riffle-pool structure and rain gardens/bioswales with herbaceous native vegetation, and increasing canopy cover with emphasis on climate adapted species



Environment and Natural Resources – Part of a Plan



Comprehensive Plan
Plan for Nature
Urban Forest Management
Plan
Bike and Sidewalk Master Plan
Monarch Conservation Plan
Sustainability/Climate Action
Plan

319 Funding
ComEd Green Region
US Forest Service/IDNR

Project Highlights

- 319 Grant assistance amount: \$209,243.12 (total cost \$434,299.75)
- Stabilize 764 linear feet of West Fork streambank with interplanted boulder toe
- Add instream riffle/pool structure
- Add 200 linear feet of bioswale and 0.2 acres rain garden
- Native wetland buffer and upland buffer along stream (0.5 acres)
- 30 native trees and 35 native shrubs (blue beech, hackberry, ironwood, swamp white oak, chinkapin oak, bald cypress, buttonbush, spicebush, elderberry, nannyberry)
- Reduce sediment by 57 tons/yr, P by 62 lbs/yr, N by 144 lbs/yr

Project Actions and Goals

- Improve water quality through reduced runoff and erosion
- Stabilize streambank through re-grading, rock toe, and native vegetation
- Intercept runoff using bioswales and rain gardens
- Improve in-stream habitat for invertebrates and fish
- Increase tree cover
- Improve terrestrial habitat for pollinators and other wildlife
- Increase habitat connectivity in watershed
- Offer public interaction opportunities



Desired Outcomes

Improved water quality

Reduced streambank erosion

Increased biodiversity – particularly native species biodiversity

Increased habitat corridor connectivity

Increased canopy cover with improved climate change resiliency

Enhanced public education and support

Ongoing development, improvement, and expansion of all of the above!



River Systems Planning

SEVIN YILDIZ, PhD
Assistant Professor, Urban Planning and Policy
University of Illinois at Chicago



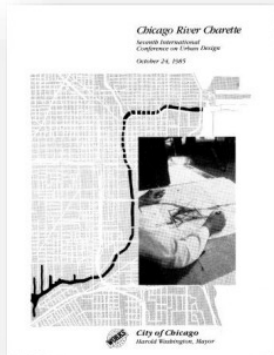
Research Focus

A multi-stage and multi-pronged research

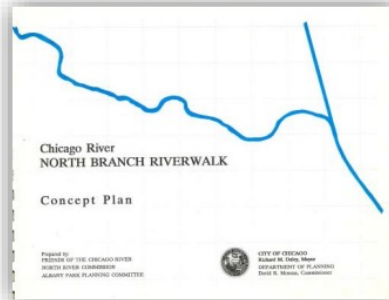
The exploration of Chicago River's integration into Chicago's larger planning vision represents opportunities to push for new conceptual approaches in ecology, urban design and spatial planning.

- The changing nature of these guidelines over three decades (1990-2019) manifest changing approaches to urban nature.
- Flexible adaptation, urban risk accommodation through design and spatial planning, and systems thinking guide the research projects in MCD studios

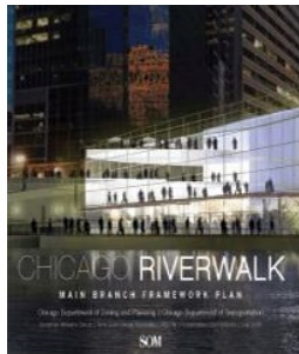
RIVER AREA AND COMMUNITY PLANS



1985



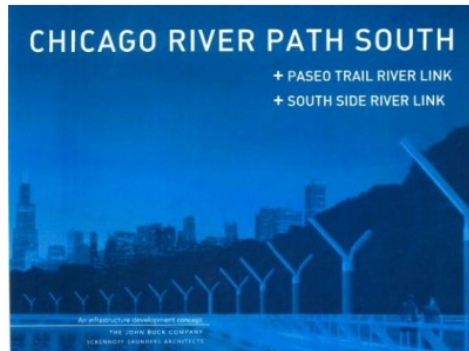
1990



2009



2017



2017



2018



In process

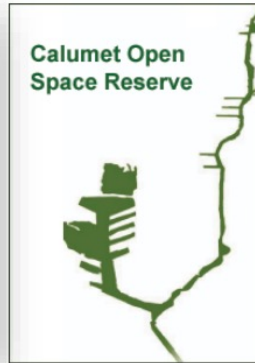
Active Transportation Alliance
 Albany Park Planning Committee
 Chicago Metropolitan Agency for Planning
 City of Chicago, Department of Planning & Development
 City of Chicago, Department of Transportation
 Friends of the Chicago River
 Institute of Urban Design
 John Buck Company
 Metropolitan Planning Council
 North River Commission
 South Branch Park Advisory Council
 Upper Illinois Valley Association

RIVER SYSTEMS PLANS

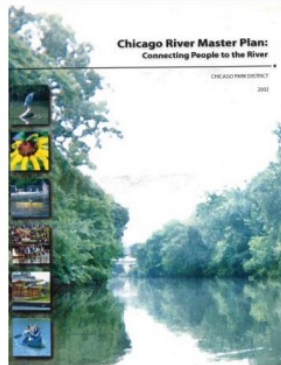
Active Transportation Alliance
 City of Chicago, Department of Planning and Development
 Chicago Community Trust
 Chicago Metropolitan Agency for Planning
 Forest Preserve District of Cook County
 Friends of the Chicago River
 Metropolitan Planning Council
 Openlands



1999



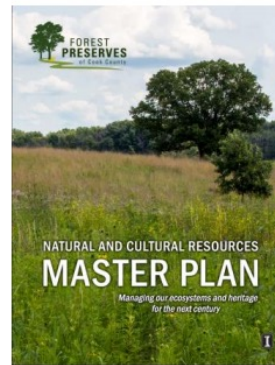
2002



2002



2014



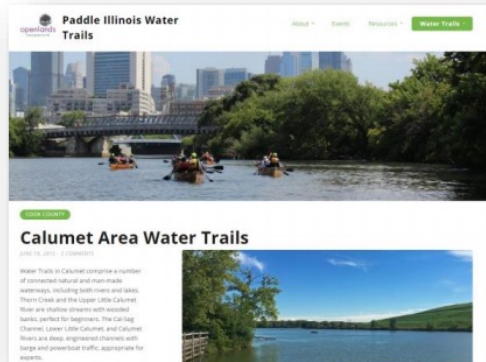
2018



2016



Our Great Rivers: Chicago's Next Frontier
 Ongoing



Ongoing



Ongoing

The Confluence of All These Spatial Plans
Continuous Ecosystems vs. Framed Zones



CHICAGO RIVER CORRIDOR DESIGN GUIDELINES AND STANDARDS



City of Chicago
Richard M. Daley, Mayor

Department of Planning and Development
Denise M. Casalino, Commissioner

April 2005 Revised Edition



CHICAGO RIVER CORRIDOR DEVELOPMENT PLAN



City of Chicago
Richard M. Daley, Mayor

Department of Planning and Development
Christopher R. Hill, Commissioner

1999

Chicago River Guidelines (2005)

Chicago River Corridor Development



Chicago Riverwalk Main Branch
Framework Plan (2009)



MAYOR EMANUEL'S INDUSTRIAL CORRIDOR MODERNIZATION NORTH BRANCH FRAMEWORK

City of Chicago • Department of Planning and Development • Department of Transportation

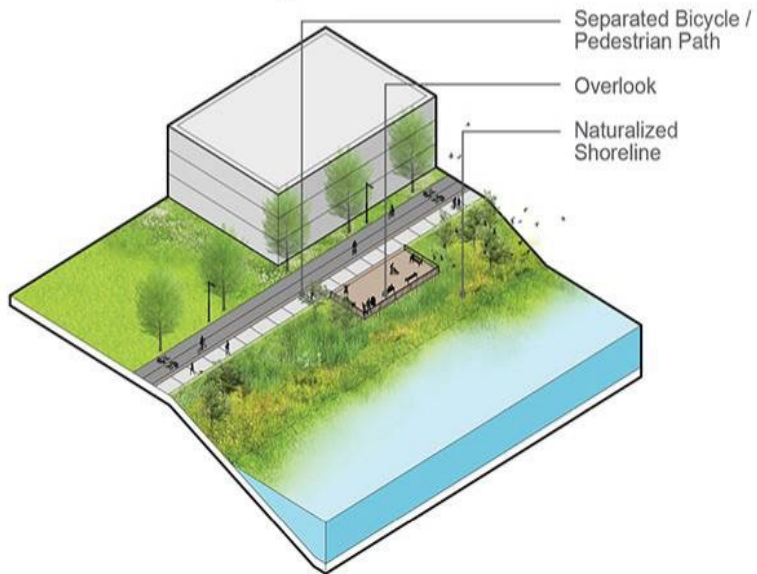
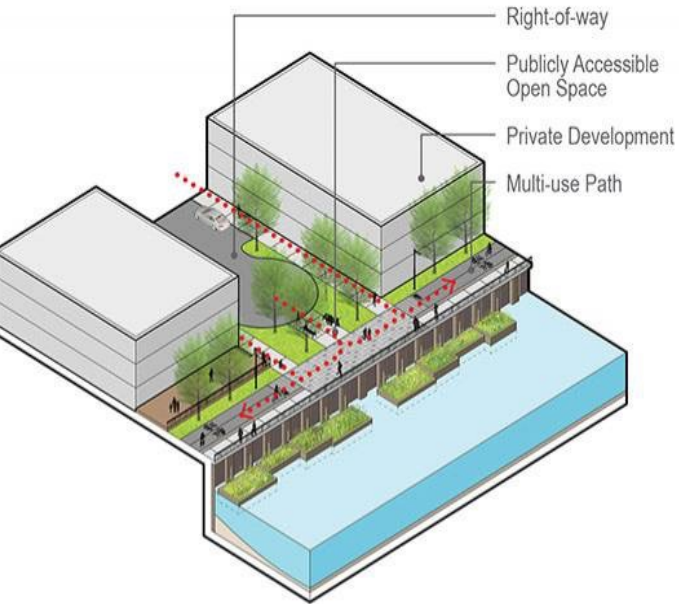
North Branch Industrial Corridor
Framework Plan and Design
Guidelines (2017)



By 2040, Chicago's rivers will be inviting, productive and living, providing everyone with opportunities to find or create their own place, their own experience and their own community on our rivers.

Our rivers will invite us to engage in stewardship, recreation and work.
Our rivers will connect people to nature, in the city and beyond, and function as thriving ecosystems.
Our rivers will be the best of us, where communities, habitats and businesses prosper together.
Ultimately, our rivers will define us, rivaling the lakefront in our hearts and minds, and become a key source of pride for metropolitan Chicago.

Our Great Rivers (2016)



CHICAGO RIVER DESIGN GUIDELINES

City of Chicago * Department of Planning & Development * January 24, 2019

Community Input Process

Final Review	DPD & Other Dept. Review	Developers Present to Community	Public Notification of Plan Commission	Applicant Respond to Comments	Plan Commission Meeting	City Council
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See Appendix 7
Information and
90 for more deta

Figure 3.6: Minimum Path Width, Northwest and Southwest

Chicago River Edge Design Guidelines

Chicago River Design Guidelines

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back

Chicago River Edge Design Guide

Timeline:

Views of Waterway Infrastructure as...

"Navigation"

1600 ● 1860

Chicago Harbor
Illinois and Michigan Canal

"Control over Nature"

1861 ● 1914

Chicago Sanitary and Ship Canal
North Shore Channel
Calumet Harbor

"Quality of Life"

1915 ● 2011

Tunnel and Reservoir Plan
Navy Pier
Flood Planning

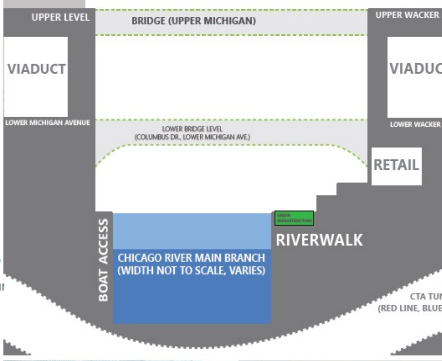
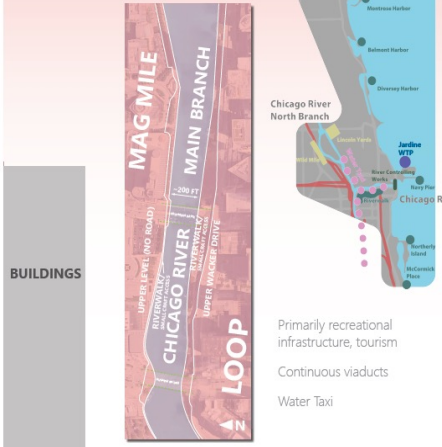
"Compatible with Nature"

2012 ● 2020+

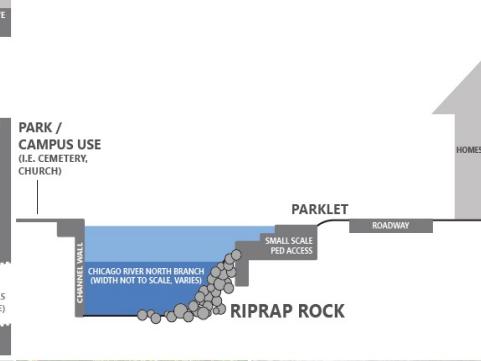
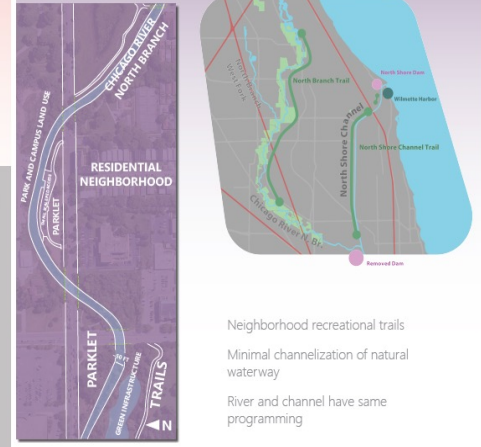
Restoring Natural Divide
Chicago Riverwalk
New 78, Lincoln Yards



Zone 1: Downtown AKA "The Moneymaker"

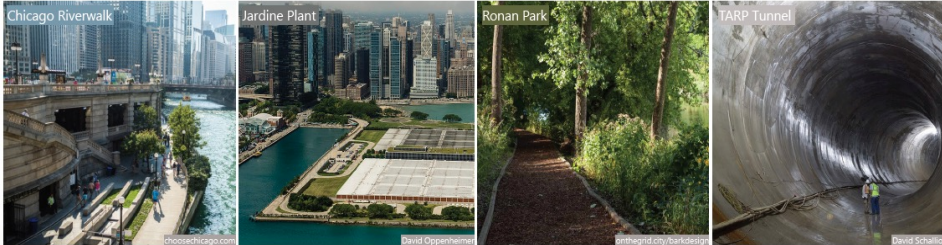


Zone 2: Neighborhood AKA "The NIMBY"



River Infrastructure

© MCD Studio Spring 2020 | Instructor: Yildiz
Group: Dominik Marlow, Caroline Brooks, Nishant Ostwal, Kachi Nwosu



04 MASTERPLAN



Oscar Martinez

ZONING

The zoning of the island allows for the largely open space with a few institutional and commercial pockets located throughout. This allows for the sanctuary to flourish while still having areas of commerce and education for prospective visitors.

PUBLIC VS PRIVATE

The public vs private relationship of the island allows for the institute and the services it provides to prosper while still letting visitors tour and enjoy the vast swaths of land that are public.

NETWORKS

The network of walkways and shared paths on the island all stem from the extended 606 to the pedestrian bridges and to the streets of Halsted and Division. The continuation of the Chicago grid allows for the fluid movement of peoples from surrounding neighborhoods to the island and vice versa.

OPERATION CLOUDBURST CHICAGO

Making Room for Pluvial Floods Between
the Lake and the River

Instructors: Dr. Sevin Yildiz (UIC) and Visiting Prof. Phil Enquist (SOM)

seviny@uic.edu pjenquist@gmail.com

Tuesdays and Fridays: 12:30 – 3:15 pm

Venue: #2234 and 6th floor studio-space in CUPPA Hall



Macro | City & Regional Scale

Copenhagen

Master plan for cloudburst

- Cloudburst Road
- Detention street
- Cloudburst pipe
- Central retention area



Cloudburst street planning

Wuhan



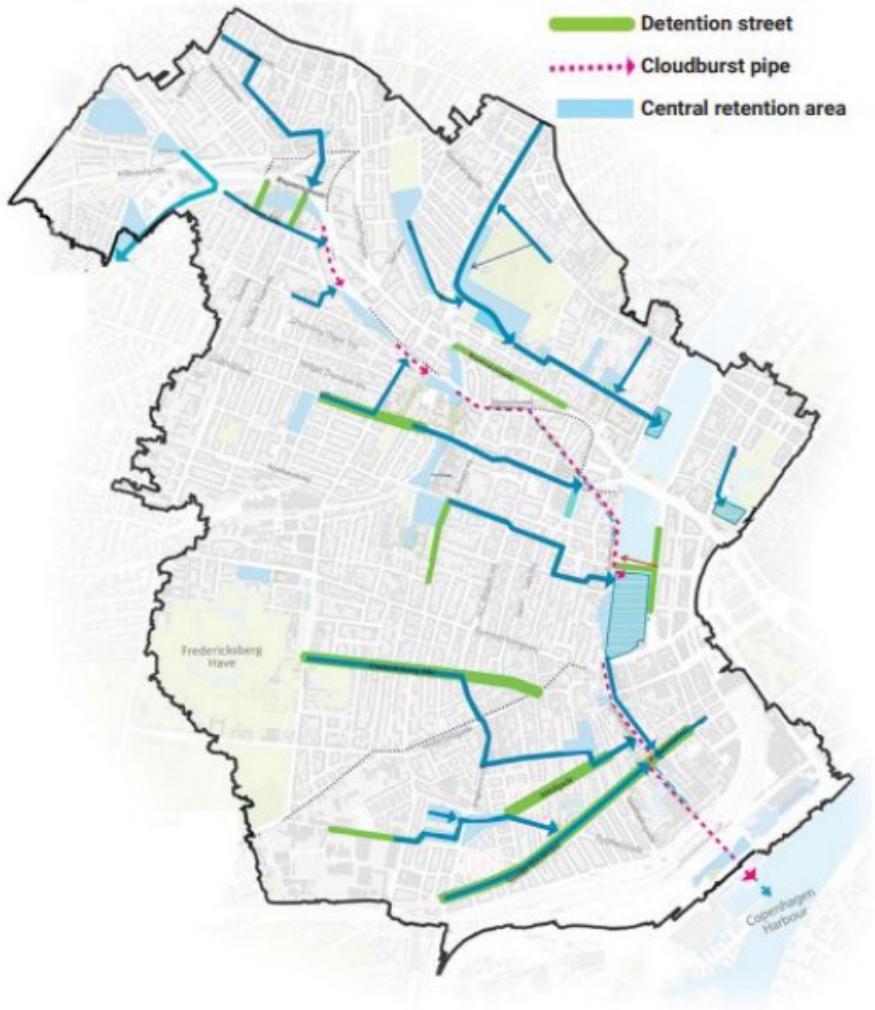
Sponge city initiative

Macro | City & Regional

Copenhagen

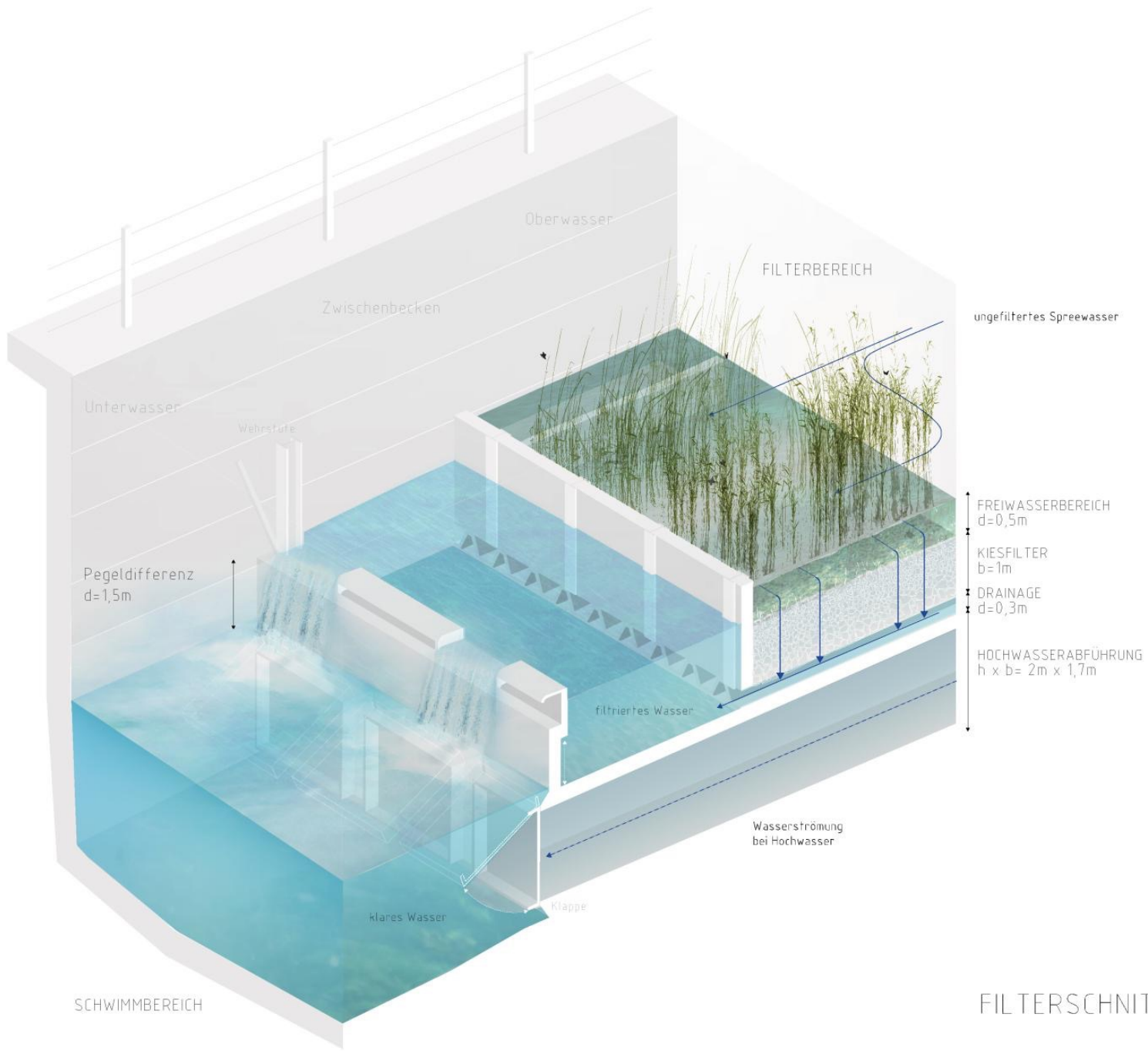
Master plan for cloudburst

- Cloudburst Road
- Detention street
- ⋯ Cloudburst pipe
- Central retention area



Cloudburst street planning





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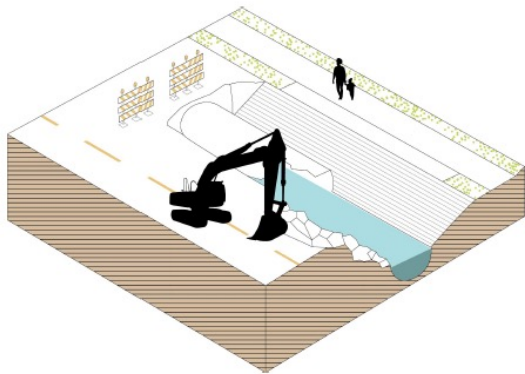


Water Accumulation

20% of area
experiences
water pooling



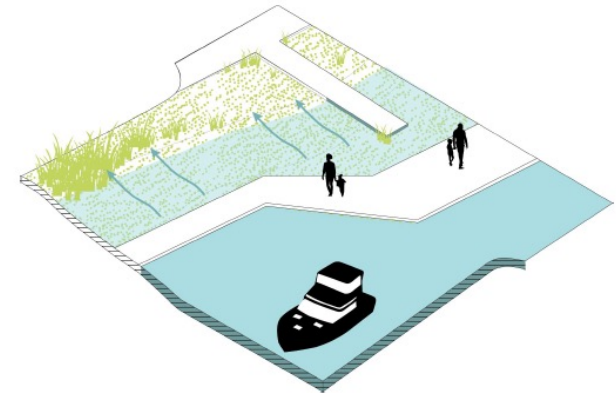
Toolkit



Repurposed Tunnels



Wildlife Intervention



Reimagining the River

Toolkit



Retention Ponds



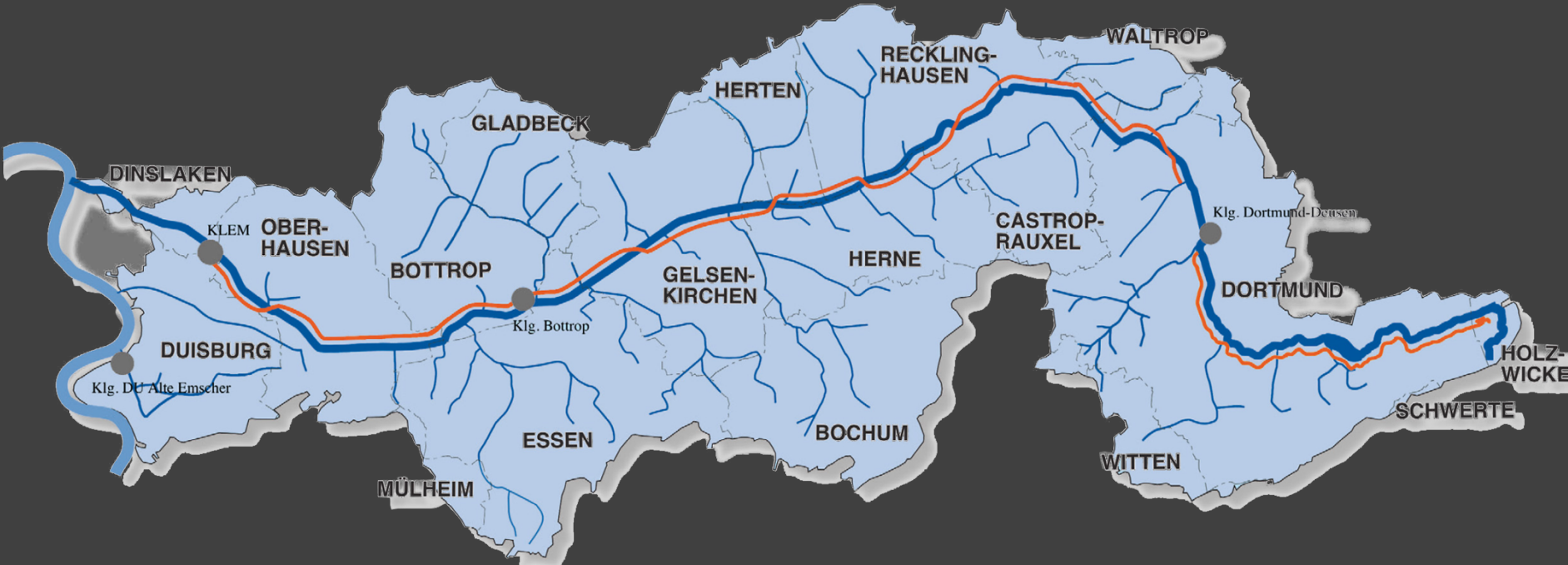
Permeable Parkland



to an urban ecotope?

River Planning Strategies
Emscher Corridor + EU Governance Models





EMSCHER 3.0

From grey to blue

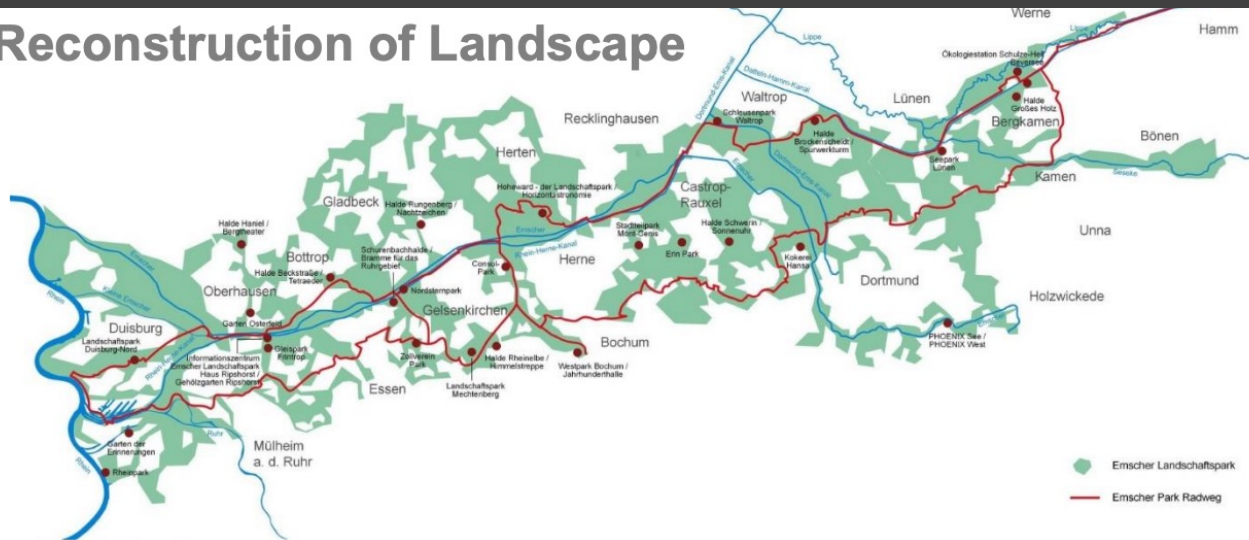
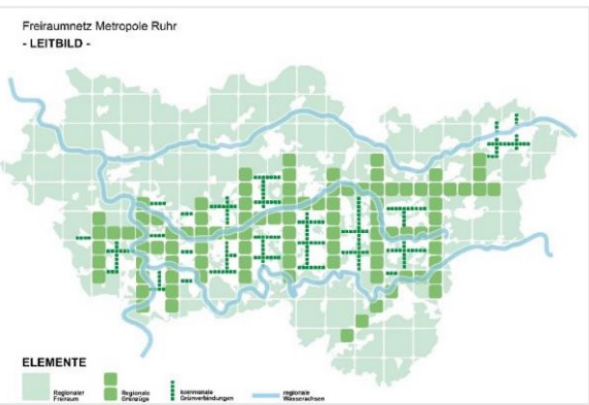
Or, how the blue sky over the Ruhr region
fell into the Emscher

**From the neglected back yard to
the showpiece front garden of
a former mining area – the river
changes with the region**

The River Builds a Regional Metropolis Identity



Think Green! Motto: The Reconstruction of Landscape



Grafik: Walter von Lotringen; Fotos: Henning Maier-Jantzen, Claudia Dreyße

The Concept of Industrial Nature

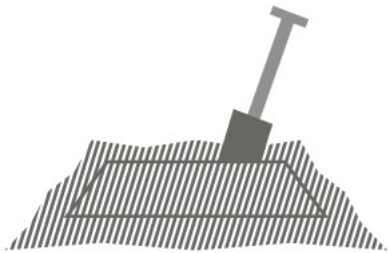


Re-naturalize the riverbanks regardless of land use in every section of the river corridor.

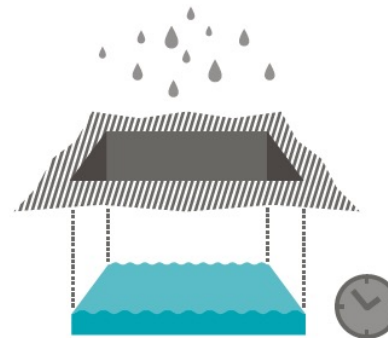
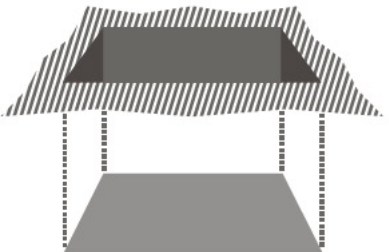
Filtering Water on the Riverbanks

(Larger Spatial Planning Implications of Water Retention)

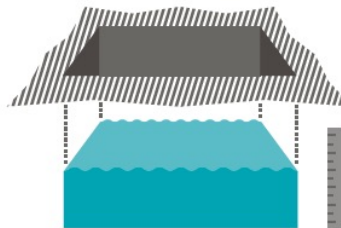
Rainwater infiltration – ground test



This requires a 30×30 cm square, pit that is around 30 cm deep. The bottom must be perfectly level. The bottom is covered with a 1 to 2 centimetre-thick layer of fine gravel to prevent mud from accumulating. It is important that the test be carried out at the depth at which the filtration system will subsequently be built.



Because dry ground absorbs water more quickly than damp ground, the pit must be pre-soaked for about an hour. Only then will seepage be consistent and practice-oriented results be achieved. In this phase, the pit must not be allowed to dry out during soaking!



Once the ground has been thoroughly soaked, measurements can be made. The pit is filled with water and the water level and time recorded. At the end of this measurement, the time and water level are again recorded. Three measurements should be made consecutively. The pit can be refilled with water between two measurements as required.

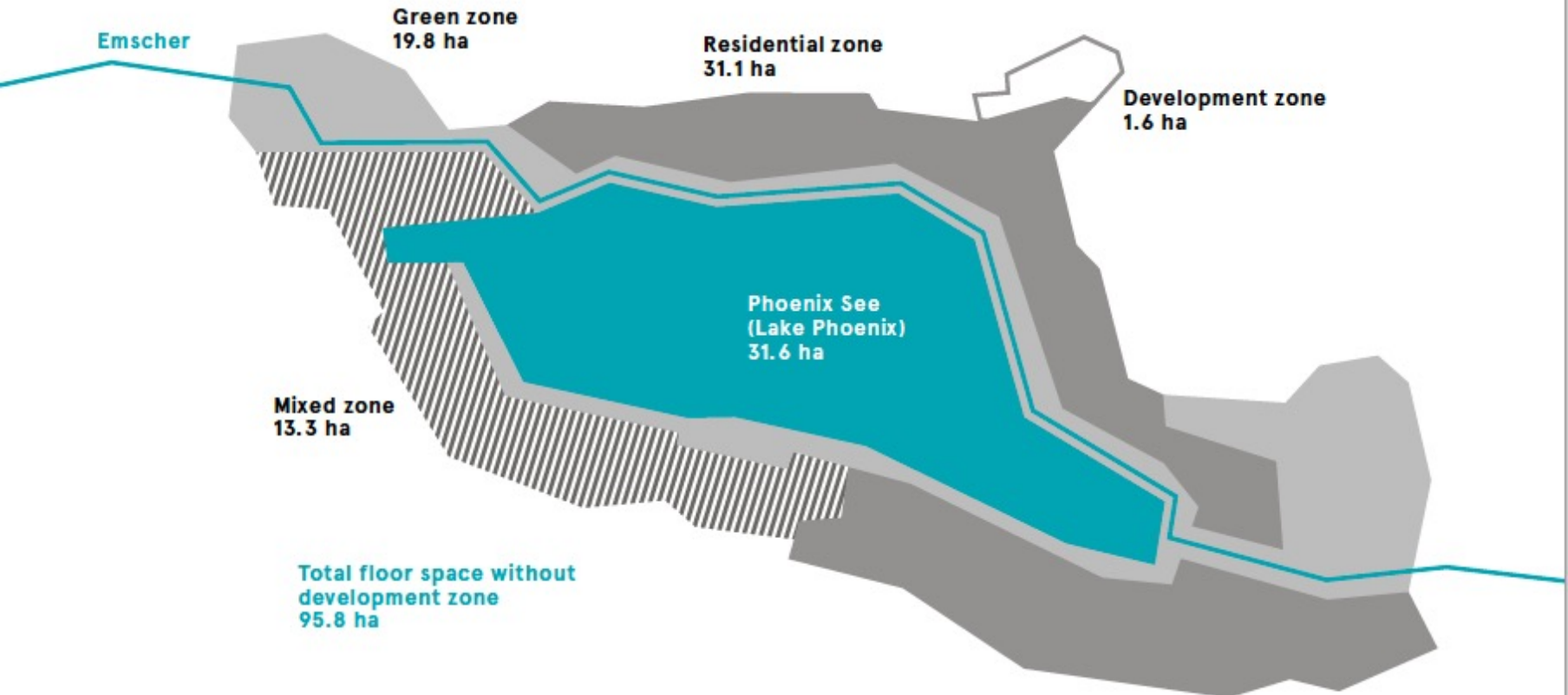


Space for nature again –
the Alte Emscher in Duisburg

Making Room for the Rivers

(Larger EU Landscape + Spatial Planning Initiative)

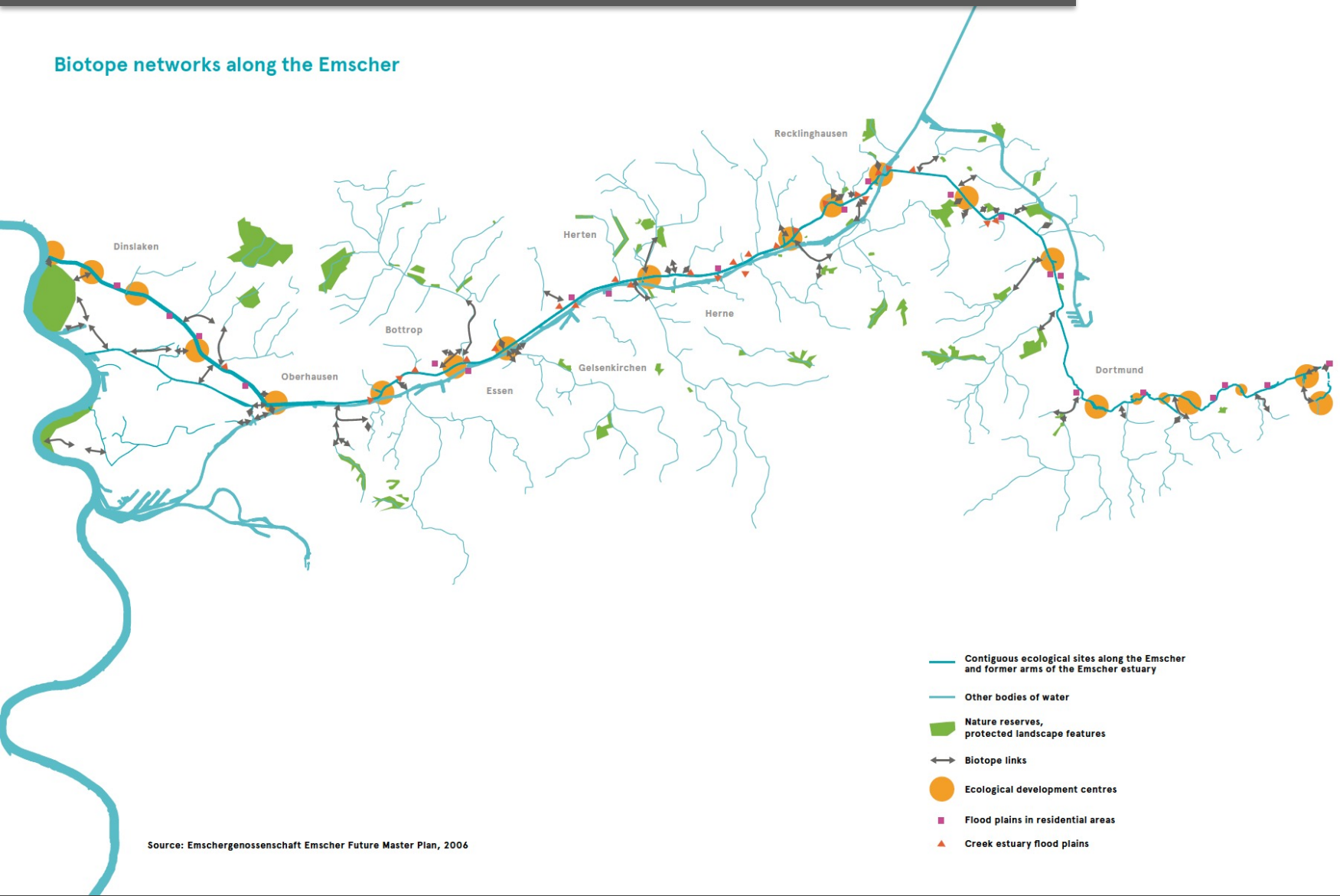
Phoenixsee (Lake Phoenix) land utilization



Biotope Networks along the River Corridor

(Ordinances are in place for each municipal entity)

Biotope networks along the Emscher



Source: Emschergenossenschaft Emscher Future Master Plan, 2006

Adding new zoning combinations in mixed use

(A capsule hotel project in the former wastewater treatment plant zone)

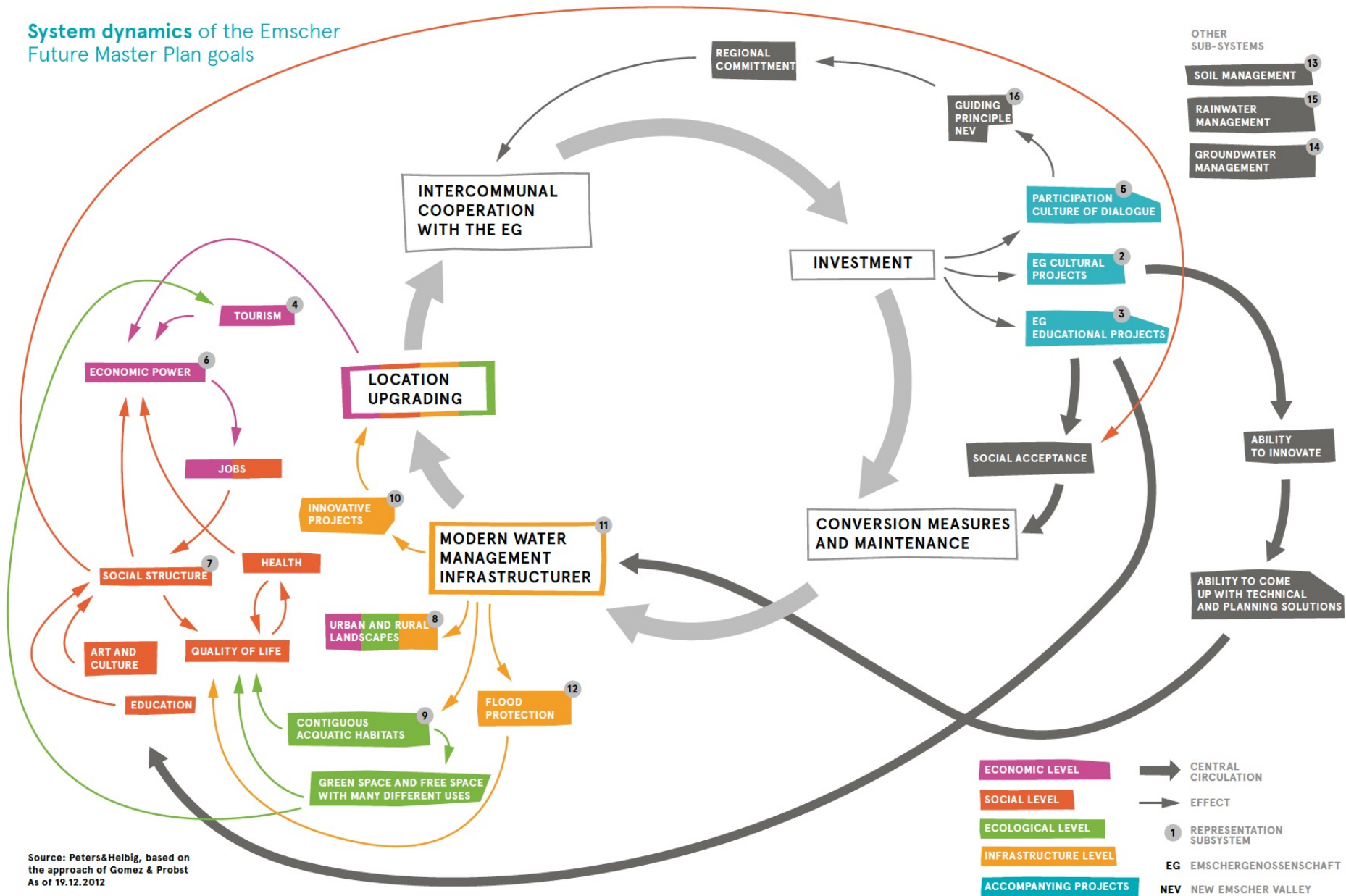




Theses for a new infrastructure model

- 1** — Regions and their infrastructure must be 'resilient'. In times of economic, social and ecological crisis, they need to be very robust and adaptable, so knowledge from various actors must be integrated and new management models developed.
- 2** — Statutory planning instruments should be supplemented by informal regional planning instruments such as Master Plans. These utilize the expertise of many actors and go beyond territorial boundaries to emphasise the real spatial dimension of planned infrastructure projects.
- 3** — Informal planning instruments and processes live from the desire of those involved in them to create change. Cooperatives are of vital importance here, gathering various actors 'under one roof' with a shared goal of responsibly creating added value in the long term.

System dynamics of the Emscher Future Master Plan goals



Source: Peters&Helbig, based on the approach of Gomez & Probst As of 19.12.2012

River Contracts in EU countries

A public private spatial planning tool

“A River Contract is an important example of environmental management “from bottom”, it could be the test to share the Inner Areas planning aims.”

D. Cialdea & s. Cacucci, 2017

The River's Contract could

Integrate the interventions for environmental protection – closely related to the resolution of flood safety problems – with needs of local productive development and fruition.

Seek the active involvement of local communities- essential for searching for solutions based on integrated policies for ecological regeneration, and for fruition of the landscape river system.

(Started in French and Belgian River Corridors and now spreading in Italian Riverine Cities.)

THE RIVER CONTRACT

The RC is a process of negotiated governance (TDFA - Territorial Development Framework Agreement) to restore the eco-landscape of river basins through multi-sector actions.

Its aim is the consolidation of the governance within the full basin, where actions to lower hydraulic risks are integrated with the protection and valorization of the river, with the reduction of pollution of both surface and groundwater, with the restoring of the landscape and historical cultural sites and with the protection of biodiversity.

The process is developed in stages: construction and animation of the network, definition of rules and tools, building the vision and prioritization of shared objectives, execution of the agreement, implementation and performance monitoring, communication and training.



THE RIVER CONTRACT (2)

Regione Abruzzo implemented **16 initiatives**, including Tordino, Sagittario, Tavo-Fino, Alento, Aterno, Arielli, Liri, Nora, Piomba, Sangro, Saline, Trigno, Pescara and Vomano-Mavone.

Some tangible examples:

- **Tordino River Contract** involves 17 municipalities, an area of 450 km² and a population of about 100.000 citizens. This successful model of hydrogeology redevelopment has been implemented thanks to the european project ERCIP.
- **Sagittario River Contract** involves 12 municipalities. It has been financed by the Province with 75.000 € and by privates with 80.000 €.
- **Aterno River Contract** (November 2015) engages about 55 milion € in interventions related to river restoration, protection of water quality and flood control. The funds are mostly destined to create compensation basins



Legal Basis and Combined Directives at the Local and Regional Levels

2000/60/EC, for the redevelopment of surface and ground water, establishes a framework for Community action in water management, identifying the ‘Hydrographic Basin’ as the correct territorial unit reference.

Further directives are the Habitats Directive 92/42/EEC [12] of the European Ecological Network, or Directive 2007/60/EC on flood risk [10, 13].

The local code example:

In Italy, references concerning landscape issues are the already mentioned Code of Cultural and Landscape Heritage, and the Legislative Decree 152/2006 [14] on environmental issues.

Also, the potentials of the Urban Code incorporating the realization of River’s Contracts in the landscape planning applications. *D. Cialdea & s. Cacucci, 2017*

Capacities of River Contracts

The incorporation of landscape planning into water planning which results in **overlay corridors in master plans**.

At times, **rural-urban interface** becomes the sub-focus under the RCs.

These contracts can extend the river zones beyond setback areas, expanding to basin boundaries where necessary, especially important for internal urban street systems that connect to river corridors. (*The city of Essen has a program called “Streets on the River”.*)

These programs develop **landscape matrices** of entire urban regions.

Table 1. General and implementing Italian tools and their responses compared with the ELC purposes.

Europe	Italy:				
	Laws		Planning tools		
ELC* ¹	C & L Code* ²	E CODE* ³	Landscape plan	Protected area plan	River contract tool
Awareness	Promotion of the public fruition of cultural heritage	Free access to information relating to the environment and landscape status in the national territory Information and dissemination of water saving methods and techniques in residential, industrial, tertiary and agricultural sectors	Elaboration of cognitive elements for the definition of general and sectoral planning choices, territorial planning and project activities	Access through cycling and walking routes Green areas Launch of initiatives for training and education in biodiversity culture	Implementation of activities programme and interventions of common interest Sharing of information and dissemination of water culture. Launch of initiatives for the training and education of a water culture
Landscape quality objective	Protection and enhancement of cultural heritage to preserve the memory of the national community and its territory and promote the culture development	Principle of sustainable development, whereby, in the context of the comparative choice of public and private interests characterized by discretion, interests in the protection of the environment and cultural heritage must be given priority consideration	Structured and articulated interpretations of the territory and landscapes, underlining values and identity factors, or the processes of degradation and trivialization, and proposing appropriate protection and recovery interventions	Park plan with exposed and stated purposes for the protected area.	Protection Plan Planning of infrastructural interventions related to the water cycle. Adoption of tools for sharing information
Landscape protection	Conservation of cultural heritage	Improvement of environmental conditions and wise and rational use of natural resources	Sustainable development promotion of and high level of environmental protection Protection of the landscape and the territory	Conservation of biodiversity	Activity plan for the relocation of incompatible settlements Reduction of water pollution Identification of management rules and flood warning Definition and adoption of municipal and emergency plans
Landscape management	Authorization for areas under landscape restriction (150 m for each riverbank).	Rationalization of water, in order to avoid waste and promote the renewal of resources, not to jeopardize the water heritage, the liveability of the environment, agriculture, fish farming, aquatic fauna and flora,	Landscape management	Environmental requalification. Phytodepuration basins	Definition of guidelines for the territory development according to sustainability and safety criteria Activity plan for the adaptation of the crossing structures and infrastructures

THANK YOU!

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