

RIVER BIODIVERSITY UNION

HANDBOOK

2018



PREFACE

„IN THE GREAT, OPEN-ENDED, MULTI-VOICED CONVERSATIONS OF THE STORIED-PLACES THAT ARE CITIES, SOME SPECIES HAVE FARED FAR BETTER THAN OTHERS, AND ALL HAVE FREQUENTLY BEEN SACRIFICED FOR THE NEEDS OR CONVENIENCE OF HOMO SAPIENS. [...] AN ETHICS OF CONVIVIALITY PUTS THE BURDEN BACK OF HUMANS: TO FIND MULTIPLE, LIFE ENHANCING WAYS OF SHARING AND CO-PRODUCING MEANINGFUL AND ENDURING MULTISPECIES CITIES“

VAN DOREN; BIRD ROSE, PAGE 19

HOW CAN WE DESIGN WITH ANIMALS? THIS IS THE RBU'S TRY. THIS HANDBOOK PRESENTS THE RIVER BIODIVERSITY UNION (RBU). IT GUIDES MEMBERS OF THE RBU THROUGH THEIR TASKS BY PROVIDING INSTRUCTIONS AND CONTAINS ALL OFFICIAL FORMS THAT WILL BE NEEDED THROUGHOUT A PROCESS SUCH AS THE COMMITMENT FORM AND THE PROTOCOLS.

INDEX

PREFACE	01
INDEX	03
THE RIVER BIODIVERSITY UNION	04
THE COMMITMENT	06
HOW TO OPERATE	08
THE PROTOCOLS	10
WATER REGULATION MANUAL	18
COMMUNITY AND TRANSPARENCY	24



Join us!

YOU



The River Biodiversity Union is inviting everyone to share thoughts and feedback. We are hoping for your input and here in case of complains. Join us for our regular open conferences. Design a better planet together with us and the beavers!

Find out more under **River Biodiversity Union**. wixsite.com/RBU

THE RIVER BIODIVERSITY UNION

„AS WE ARE GAINING AN UNDERSTANDING OF THE URBAN AS A CHANGING ASSEMBLAGE WHERE NOT ONE AGENT DOMINATES BUT RATHER A HOST OF AGENTS [...] IN ORDER TO TRANSFORM THE CURRENT EVENTS IN MORE POSITIVE WAYS“

FOGELBERG; FORM FOLLOWS ECOLOGIES, ABSTRACT

TRANSFORMING THE CURRENT EVENTS IS JUST WHAT THE RBU IS SEEKING FOR IN ORDER TO RESTORE THE BALANCE WITHIN NATURE. TO DO SO, AN INTERDISCIPLINARY COLLECTIVE OF PEOPLE WITH VARIOUS BACKGROUNDS AND SKILLS COMES TOGETHER AND WORKS ON A CO-DESIGN RELATIONSHIP WITH NON-HUMAN ANIMALS. FOLLOWING THE LOGIC OF WORKING AS A WIDER COLLECTIVE THAT IS ALWAYS OPEN FOR CHANGE, TRANSPARENCY IS OF MAJOR IMPORTANCE FOR THE RBU. THEREFORE, THE RBU IS HOSTING REGULAR OPEN MEETINGS WHERE EVERYONE CAN JOIN. FURTHERMORE, SEVERAL ARTEFACTS ARE OPEN FOR A PUBLIC DESIGN COMPETITION. THIS HELPS TO GET MORE GENERAL ATTENTION AND IS AIMING FOR SELF-FUNDING AND CHARITY INVOLVEMENT.

THE COMMITMENT

THE FORM ON THE RIGHT SHOWS OUR COMMITMENT. EVERY DESIGNING MEMBER OF THE RBU HAS TO MEET THE REQUIREMENTS AND HOLD A VERIFIED AND STAMPED FORM.

THE FORM IS IMPORTANT TO EXPLAIN WHAT WORKING FOR THE RBU MEANS AND WHY OUR ACTIONS ARE IMPORTANT.

IT ALSO PROVIDES AN AUTHORIZATION TO DESIGN AS EXPLAINED IN THE FORM AND A STRONG LIMITATION, WHICH IS THAT NO DESIGN IS DONE WITHOUT THE NON-HUMAN PARTICIPANTS. IN OUR CASE, THESE ARE THE BEAVERS.

THE OFFICIAL VERSION OF THE FORM IN A4 CAN BE DOWNLOADED ON [RIVERBIODIVERSITY.WIXSITE.COM/UNION](https://riverbiodiversity.wixsite.com/union).

COMMITMENT FORM

This document comprises my commitment as a designer of the River Biodiversity Union.

I. Research led me to reasoning that:

- 1) Previous attempts to re-naturalize the Isar had always been human-centric, which means they have only followed human understanding of what is natural.
- 2) This human-centric designing is unjustified because the city is inhabited by numerous non-human animals as well. Although there is an attempt to design for non-human animals, all methods still exclude non-human designers, which means design remains man-made.
- 3) Human-centric designing becomes even more problematic in our current crisis, which is a significant disbalance in nature caused by human actions that is troubling the planet and leading to alarming processes such as global warming and nature cathastrophies.
- 4) This is why future planning needs to include non-human designers.

II. Keystone species work best as non-human partners due to their ability to improve biodiversity.

- 1) Beavers are not only keystone animals, they also very effectively build enviroment.

III. I concluded that learning from beavers in order to re-naturalize the Isar would not be enough to escape the human-centric way of designing.

- 1) I completed several sensorial explorations, hosted by the River Biodiversity Union and confirm the experiences helped me expand my senses and imagine other animal's "Umwelt".
- 2) I commit to a co-working relation between human and beaver designers.

If signed by the participant and verified by the RBU, this document authorizes to design concepts and strategies for co-designing with non-human animals. It does **not** authorize to create designs for the Isar.



stamp here

By signing, I confirm my agreement to all mentionend issues above. Name: _____

Signature: _____ Federal I.D. Number: _____ Date: _____

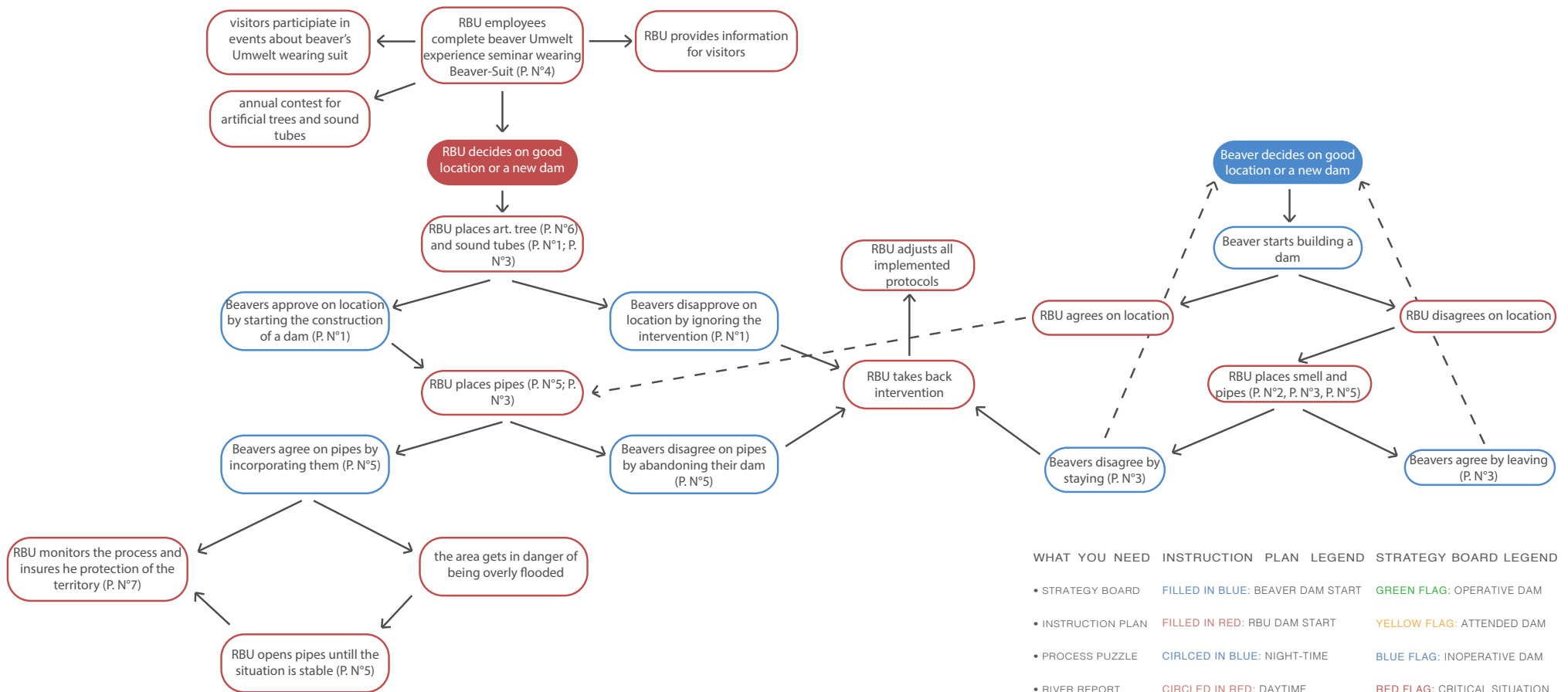
HOW TO OPERATE

THE RBU HOLDS A STRATEGY BOARD WITH A MAP OF THE ISAR DIVIDED CHESSBOARD-LIKE INTO SMALLER SQUARES. DURING MEETINGS, THE RBU DISCUSSES AROUND THIS BOARD, THE NECESSARY PIECES CAN BE ARRANGED DEPENDING ON WHAT AREA IS REVIEWED.

FLAGS WITH DIFFERENT FEATURES FOR THE PARTICULAR DAM SITUATIONS CAN THEN BE PINNED ON THE BOARD ACCORDING TO THE LOCATION OF THE DAMS. THE NUMBERS ON THE FLAGS REFER TO THE RESPECTIVE RIVER REPORTS THAT ARE DOCUMENTING ALL EVENTS AND CONTAIN THE NEEDED PROTOCOLS.

THE PROCESS PUZZLE IS THEN USED IN THE CONVERSATION TO BUILD UP A STRATEGY WHILE ELABORATING THE DIFFERENT POSSIBILITIES.

THE PLAN ON THE RIGHT SHOWS THE CURRENT EXISTING INSTRUCTIONS BUT AS NEW SITUATIONS MIGHT APPEAR, IT IS REQUIRED THAT BOTH THE PLAN AND THE PUZZLE ARE FREQUENTLY UPDATED.



THE PROTOCOLS

THE FOLLOWING SIX PROTOCOLS DESCRIBE THE DIFFERENT ARTEFACTS THE RBU USES WHEN BEING IN ACTION. THE PROTOCOLS ALWAYS CONTAIN THE FUNCTION OF THE OBJECT, THE DESIGN AND THE TERMS OF USE.

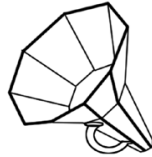
THE PROTOCOLS NEED TO BE SIGNED BY THE OPERATING MEMBER OF THE RBU AND APPROVED BY THE BEAVERS UNDER THE TERMS THAT THE FORMS DESCRIBE. THIS PERMITS A MUTUAL AGREEMENT BETWEEN HUMANS AND BEAVERS AND PREVENTS A HUMAN-DOMINATED RELATION WHEN IT COMES TO DESIGNING THE RIVER AND ITS WATERFRONT. FURTHERMORE, THE PROTOCOLS GUARANTEE SAFETY PRECAUTIONS FOR HUMANS AND NON-HUMANS AND THE USE OF ENVIRONMENTALLY FRIENDLY MATERIALS.

IF A PROTOCOL DOES NOT WORK OR GETS DISAPPROVED BY THE BEAVERS, IT NEEDS TO BE CHANGED.

ALL PROTOCOLS ARE NEEDED FOR THE RIVER REPORTS AND AVAILABLE AT RIVERBIODIVERSITY.WIXSITE.COM/UNION.

PROTOCOL N°1

SOUND



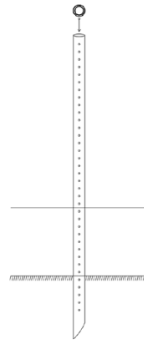
This document comprises the functions, design and terms of use of the Sound Tube and becomes effective if signed by the River Biodiversity Union and approved by the beavers over a period of two weeks.

§1 Function

- 1) enhancing the sound of flowing water
- 2) suggesting possible dam location

§2 Design

- 1) Tube with 8 cm diameter
- 2) Length: 2 m
- 3) Thickness: 5 mm
- 4) Holes: every 5 cm along tube on 3 sides, diameter: 5 mm
- 5) Possible materials: reused/recycled timber and metal
- 6) sharpened end
- 7) Min-max sound volume: 55-65 Db
- 8) Any additions on top of the tube need to be detachable
- 9) Distance between two tubes: 1,5 m



§3 Terms of Use

- 1) Placed and maintained by employees of the River Diversity Union
- 2) Location:
 - a) In a calm environment with little human presence
 - b) At a narrow part of the river
 - c) Nearby beaver food and resources
 - d) In an area where an extension of the river width does not intervene with essential human structures
- 3) Instructions:
 - a) Use suit according to PROTOCOL N°3
 - b) Detach add-ons if applicable
 - c) Use the hammer to put the tube in the ground
 - d) When fixed, attach add-ons if applicable
- 4) The River Diversity Union is responsible for the removal of the tubes

Beavers **agree** legally by:

Starting the construction of the dam near the Sound Tubes within a period of two weeks



stamp here

Beavers **disagree** legally by:

Not starting the construction of the dam near the Sound Tubes within a period of two weeks





stamp here

Agreed and accepted:
River Biodiversity Union

By: _____
An Authorized Signer

Federal I.D.
Number: _____

Date: _____

<h1>PROTOCOL N°2</h1> <h2>SMELL</h2>	
<p>This document comprises the functions, design and terms of use of the Smell Applicator and becomes effective if signed by the River Biodiversity Union and approved by the beavers over a period of one week.</p>	
<p>§1 Function</p> <ol style="list-style-type: none"> 1) Spreading the smell of a foreign territory 2) Illustrating inconvenient beaver location from a human's perspective 	
<p>§2 Design</p> <ol style="list-style-type: none"> 1) Container of 100 ml (human scent) 2) Filling hole on top with a diameter of 3 - 5 cm 3) Max. height of container: 15 cm 4) Max. width of container: 10 cm 5) Rain protection for the substance 6) Smell diffuser mechanism (f.e. ribbons, sticks) 7) Materials: reused/recycled metal, plastic or glass 8) Mobile attachment (no glue, no damaging substances) 9) Attached out of reach for (non-) human animals over 1.2 m 	
<p>§3 Terms of Use</p> <ol style="list-style-type: none"> 1) Refilled and maintained by employees of the River Biodiversity Union 2) Location: <ol style="list-style-type: none"> a) Protected areas defined by the Institute for River Preservation 3) Instructions: <ol style="list-style-type: none"> a) Use suit according to PROTOCOL N°3 if required b) Attach to existing objects (f.e. trees, landerns, buildings) or to objects provided by design (f.e. sticks, poles) 4) The River Biodiversity Union is responsible for the removal of the containers 	<p>Beavers agree legally by:</p> <p>Avoiding the marked area within a period of one week</p> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 10px auto; text-align: center;"> stamp here </div>
<p>Agreed and accepted:</p> <p>River Biodiversity Union</p> <p>By: _____</p> <p style="padding-left: 40px;">An Authorized Signer</p> <p>Federal I.D. Number: _____</p> <p>Date: _____</p>	<p>Beavers disagree legally by:</p> <p>Staying or moving to the marked area</p> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 10px auto; text-align: center;"> stamp here </div>

PROTOCOL N°3

CO-WORKER-SUIT



This document comprises the functions, design and terms of use of the Co-Worker-Suit and becomes effective if signed by the River Biodiversity Union and approved by the beavers over a period of four days.

§1 Function

- 1) Participating in the construction of a beaver dam

§2 Design

- 1) Different sized insulated swimsuit
- 2) Different sized floating devices
- 3) Different sized footwear for protection and stabilisation in the water
- 4) Diving goggles
- 5) Snorkelling device
- 6) Head protection gear
- 7) Different sized gloves
- 8) Tool belt with small container (PROTOCOL N°1), sound tubes and hammer (PROTOCOL N°2), camera, screwdriver and handbook



§3 Terms of Use

- 1) Worn by employees of the River Biodiversity Union (RBU)
- 2) When to use:
 - a) During recruiting program of the RBU
 - b) When participating in the construction of a beaver dam
 - c) When installing a smell applicator (PROTOCOL N°2)
- 3) Location:
 - a) Beaver-active areas
- 3) Instructions:
 - a) Co-Worker-Suits can be obtained at the RBU headquarters
 - b) Wear a suit according to your size
 - c) All devices should be worn at the same time
 - d) Before participating in any interventions, the entire suit needs to be checked by another member of the IRP
 - e) After participation, the suit needs to be returned to the RBU

Beavers **agree** legally by:

Continuing the dam construction with the participation of the River Biodiversity Union over a period of four days



stamp here

Beavers **disagree** legally by:

Abandoning the dam after the participation of the River Biodiversity Union within a period of four days



stamp here

Agreed and accepted:

River Preservation Union

By: _____
An Authorized Signer

Federal I.D.
Number: _____

Date: _____

PROTOCOL N°4

BEAVER SUIT



This document comprises the functions, design and terms of use of the Beaver-Suit and becomes effective if signed by the River Biodiversity Union and approved by the beavers over a period of a year.

§1 Function

- 1) Experiencing the beaver's Umwelt

§2 Design

- 1) Different sized water resistant swimsuits
- 2) Different sized insulating air filled undergarments
- 2) Different sized floating devices
- 3) Different sized footwear to improve diving and swimming
- 4) Night vision simulating swimming goggles
- 5) Different sized gloves with nail prothesis
- 6) Water flow direction device
- 7) Adjustable tool belt which can hold at least 5 items
- 8) 2 cutting devices simulating beaver teeth



§3 Terms of Use

- 1) Worn by employees of the River Biodiversity Union (RBU) and visitors
- 2) When to use:
 - a) During recruiting program of the RBU
 - b) During events for visitors, supervised by the RBU
- 3) Location:
 - a) In areas with a distance from beaver active areas of at least 500 m
- 3) Instructions:
 - a) Beaver-Suit can be obtained at the RBU headquarters
 - b) Wear a suit according to your size
 - c) All devices should be worn at the same time
 - d) Before participating in any activities, the entire suit needs to be checked by another member of the RBU
 - e) After being used, the suit needs to be returned to the RBU

Beavers **agree** legally by:

Continuing their activities close to the area of the events where the suit was used within a period of one year



stamp here

Agreed and accepted:

River Biodiversity Union

By: _____

An Authorized Signer

Federal I.D.

Number: _____

Date: _____

Beavers **disagree** legally by:

Stopping their activities close to the area of the events where the suit was used within a period of a year



stamp here

PROTOCOL N° 5

PIPE SYSTEM



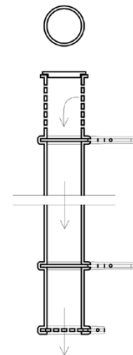
This document comprises the functions, design and terms of use of the Pipe System and becomes effective if signed by the River Biodiversity Union and approved by the beavers over a period of two days.

§1 Function

- 1) Regulating water level under regular circumstances
- 2) Regulating water level under emergency circumstances

§2 Design

- 1) Pipes with a diameter of 30 cm
- 2) Material for the pipe: reused/recycled/environmental friendly
- 3) Length: adjustable to the thickness of the dam
- 4) Platform: 80 cm wide
- 5) Tubes used for structure: 5 cm diameter
- 6) Other structure: stainless steel or any other long lasting material
- 7) Double gate closing mechanism
- 8) Filter at the entrance of the water and grid at the end



§3 Terms of Use

- 1) Placed and maintained by employees of the River Biodiversity Union
- 2) A construction team is required
- 3) When to place:
 - a) At the beginning of a new dam construction
- 4) Instructions:
 - a) Use suit according to PROTOCOL N°3
 - b) Follow the manual in the Handbook
 - c) Implant the pipe carefully without damaging the construction
 - d) Shut closing mechanism until required otherwise

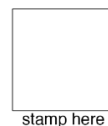
Beavers **agree** legally by:

Incorporating the pipes in the dam within a period of two days



Beavers **disagree** legally by:

Abandoning incipient beaver dam within a period of two days



Agreed and accepted:
River Biodiversity Union

By: _____
An Authorized Signer

Federal I.D.
Number: _____

Date: _____

PROTOCOL N°6

ARTIFICIAL TREES



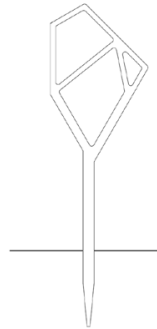
This document comprises the functions, design and terms of use of Artificial Trees and becomes effective if signed by the River Biodiversity Union and approved by the beavers over a period of three months.

§1 Function

- 1) Providing sustainable dam material
- 2) Avoiding deforestation of a beaver active area

§2 Design

- 1) Sticks of 1-5 m length
- 2) Material: reused/recycled timber or organic, compostable material
- 3) All components need to be robust and meant to last over and under water for a minimum period of one year
- 4) No sharp or hard materials such as glass or metal
- 5) Max. weight of one object: 10 kg



§3 Terms of Use

- 1) Distributed and fixed by employees of the River Biodiversity Union
- 3) Location:
 - a) In areas with beaver action or possible future beaver action
- 3) Instructions:
 - a) Use Co-Worker-Suit according to PROTOCOL N°3
 - b) Implant objects in a maximum distance of 10 m to the river
 - c) Work during the day and remove all signs of a building site (f.e. trucks, not yet implanted trees or tools) before dawn

Beavers **agree** legally by:

Integrating at least 30% of the Artificial Trees in their territory into the dam or lodge within three months



stamp here

Beavers **disagree** legally by:

Integrating less than 30% of the Artificial Trees in their territory into the dam or lodge over a period of three months



stamp here

Agreed and accepted:
River Biodiversity Union

By: _____
An Authorized Signer

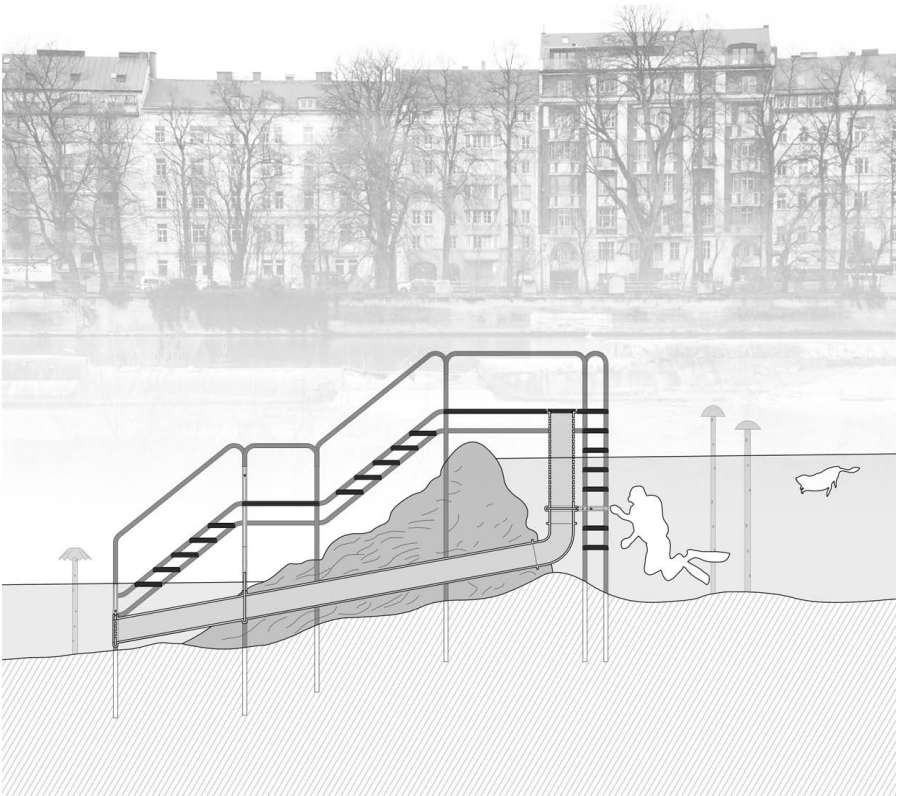
Federal I.D.
Number: _____

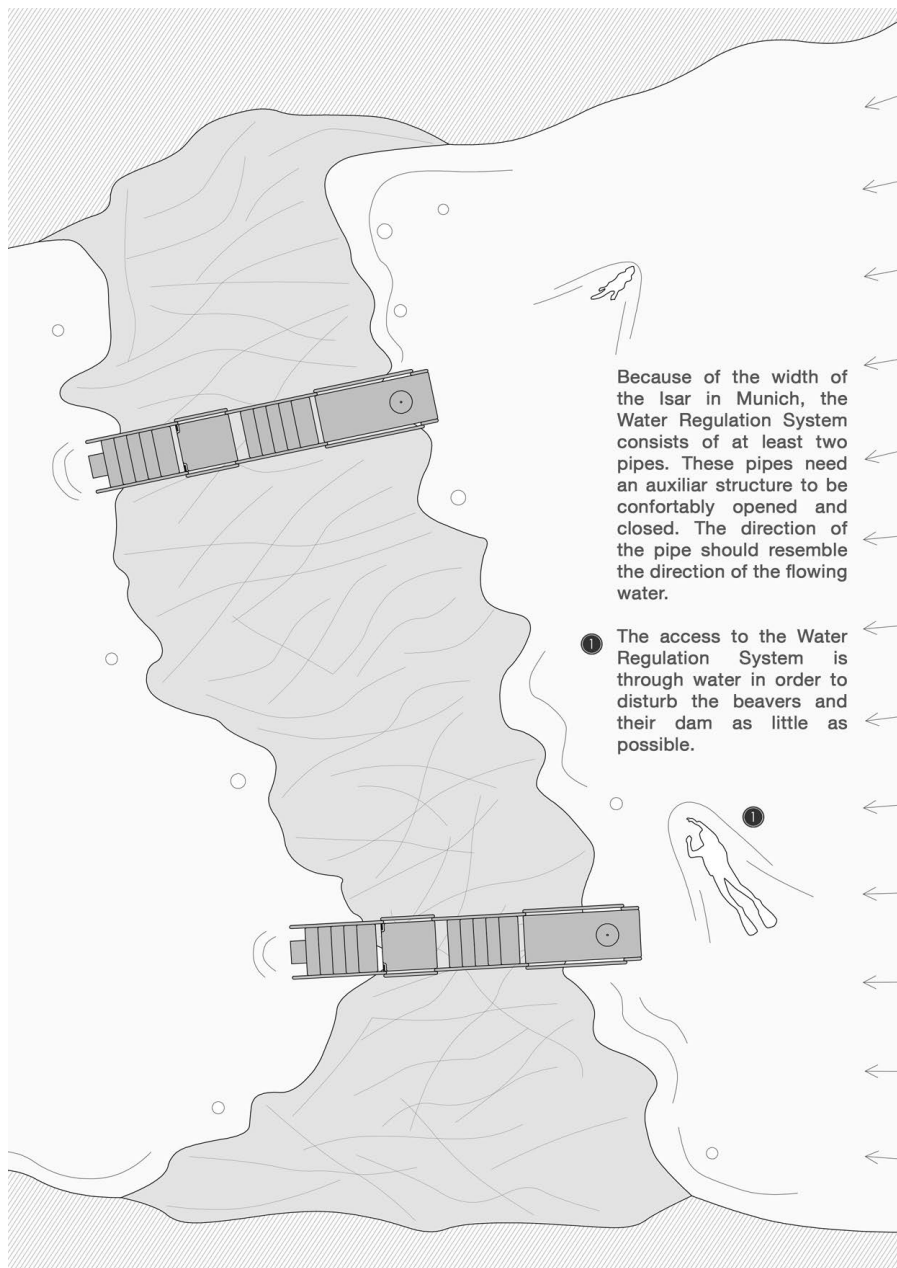
Date: _____

MANUAL FOR THE WATER REGULATION SYSTEM

For the regulation of the water level, a system of pipes should be installed. These system of pipes should only be opened when there is a risk of flood, a risk of a protected area or a risk for the human or not human animals. It shouldn't be opened just to satisfy the human's will.

The **Water Regulation System** is opened or closed by a system of two gates. When it is opened, the water first enters through a filter, then it access the pipe and exits to the exterior side of the dam, where there is a protective grid. It was designed to avoid abrupt changes in the water flow or any potential harm to the animals.



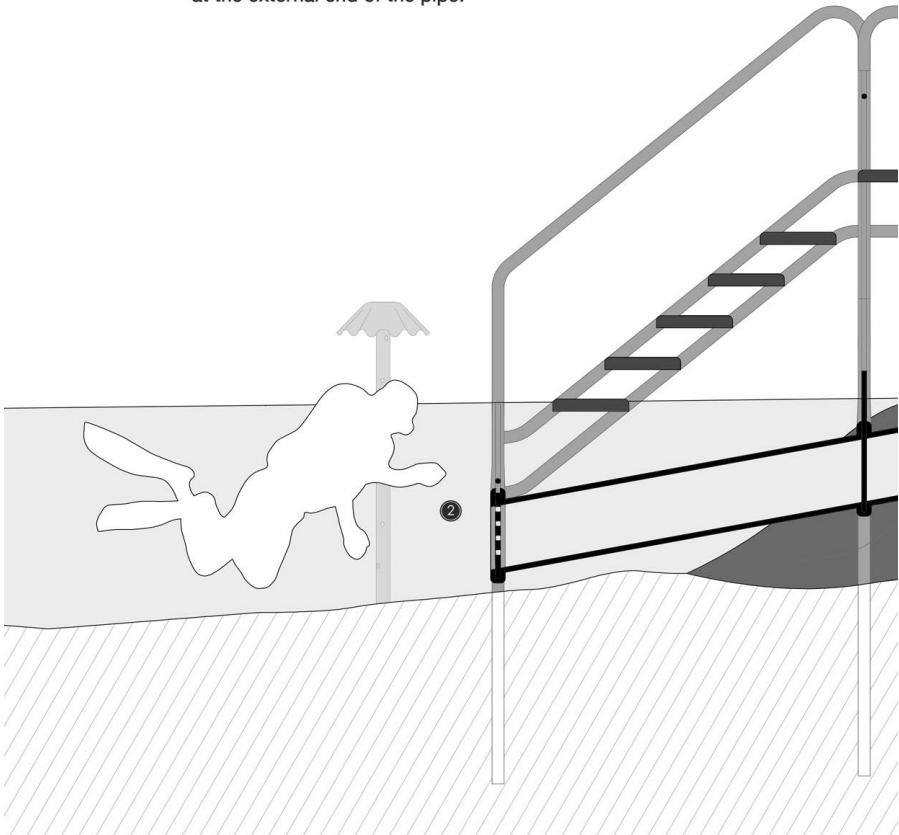


Because of the width of the Isar in Munich, the Water Regulation System consists of at least two pipes. These pipes need an auxiliary structure to be comfortably opened and closed. The direction of the pipe should resemble the direction of the flowing water.

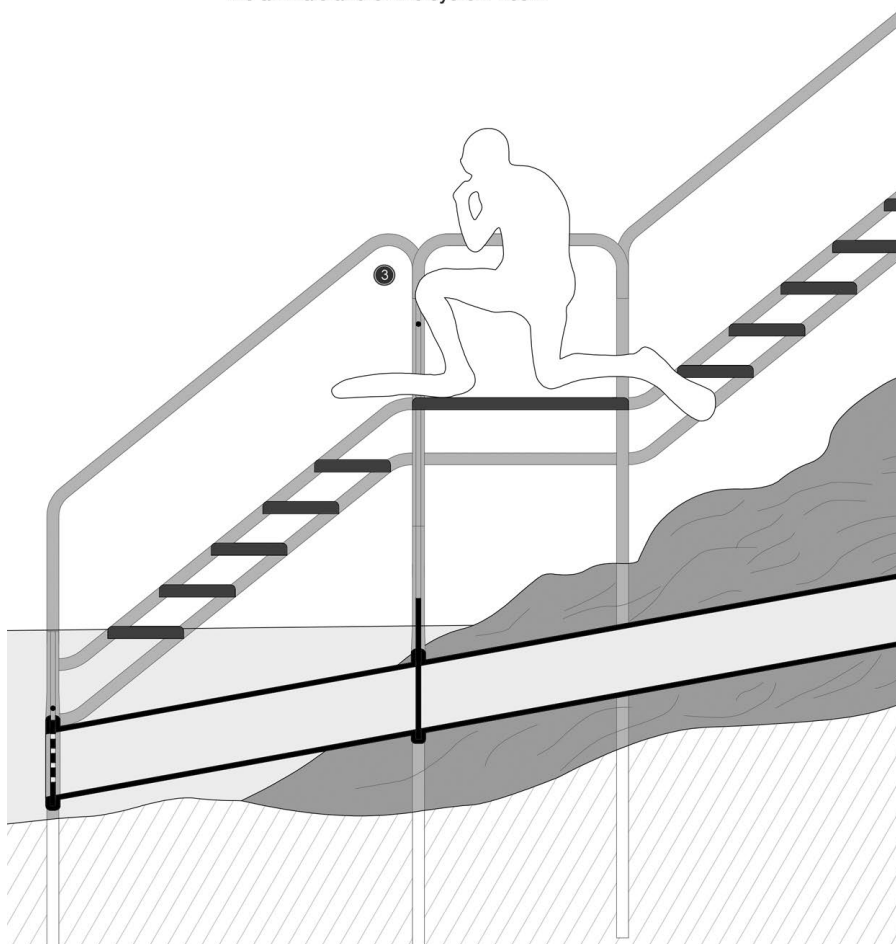
- ① The access to the Water Regulation System is through water in order to disturb the beavers and their dam as little as possible.

The external gate will always be opened before the internal gate to avoid abrupt movements of sediments or the obstruction of them inside the pipe.

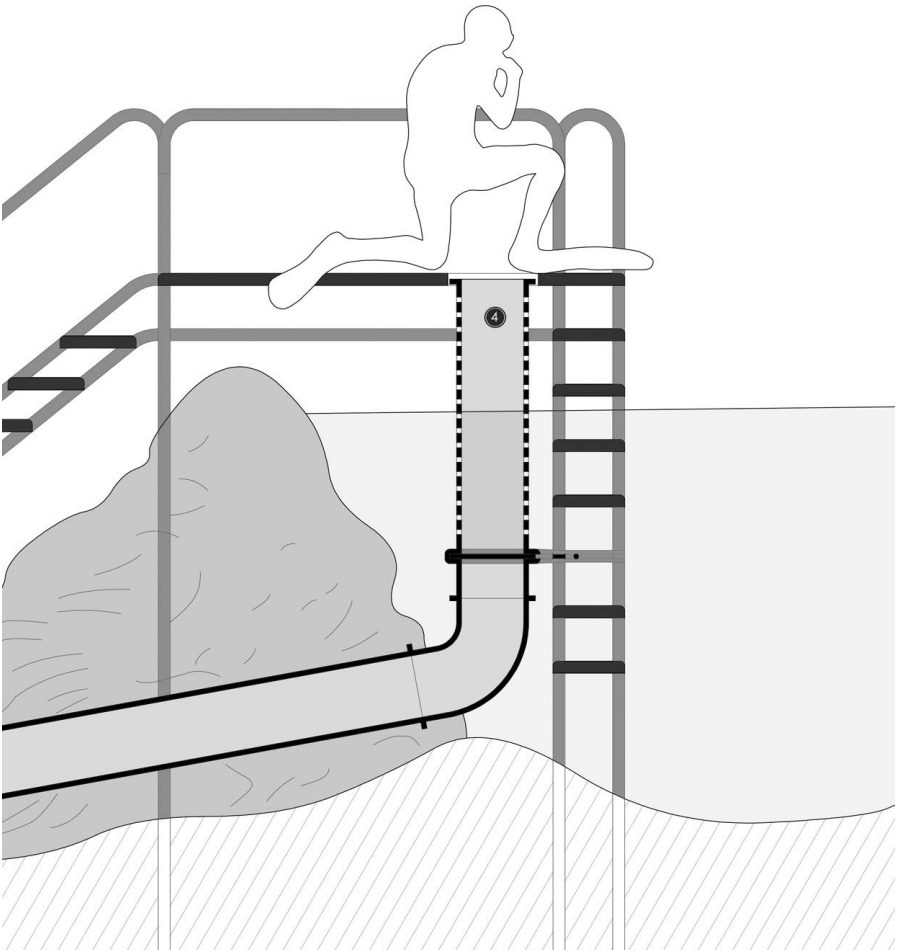
- ② It is mandatory for opening the external gate to first check the grid and clean it if necessary. You can access the grid and extract it at the external end of the pipe.



- ③ The system for opening the external gate you can find in the lower platform. Just by pulling the handles, the external gate should be opened. This gate is in the inside of the pipe for a better protection of the animals and of the system itself.

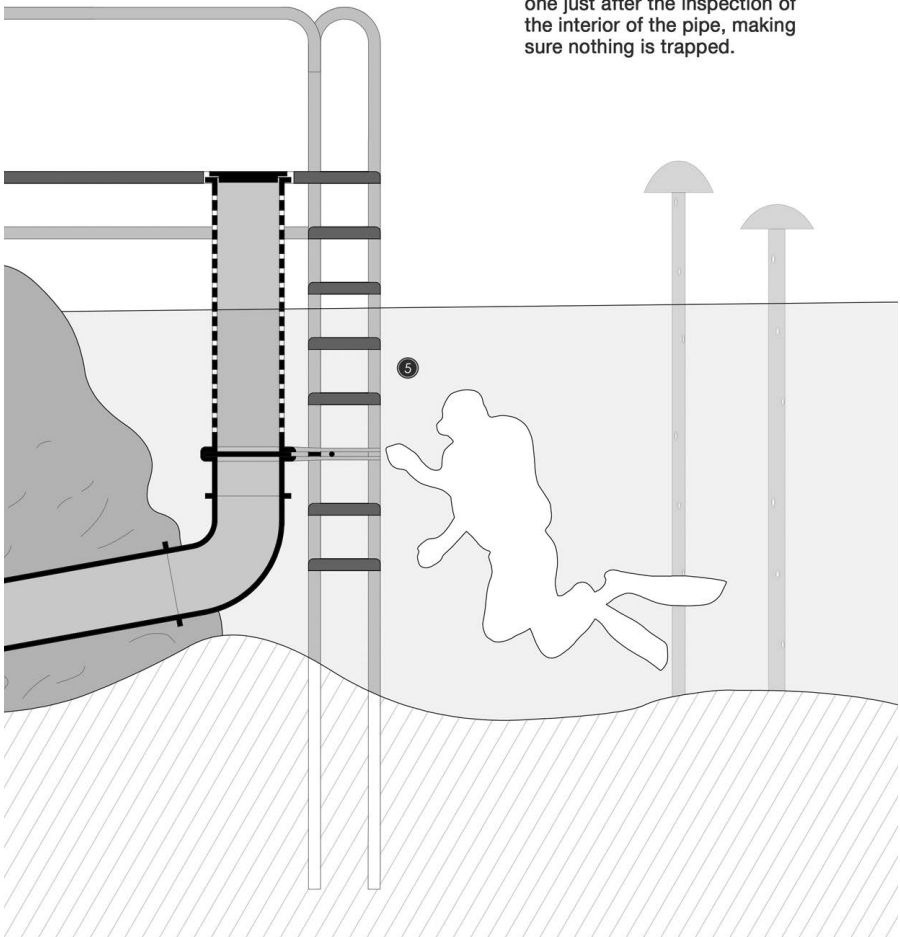


- ④ It is mandatory for opening the internal gate to first check the filter and clean it if necessary. You can access the filter opening the cap in the platform.



- ⑤ For opening the internal gate you can dive and pull the gate.

For closing the Water Regulation System you should follow the reversed order: first the internal gate should be closed and then the second one just after the inspection of the interior of the pipe, making sure nothing is trapped.



COMMUNITY AND TRANSPARENCY

"BE TRANSPARENT. LET'S BUILD A COMMUNITY THAT ALLOWS HARD QUESTIONS AND HONEST CONVERSATIONS SO WE CAN STIR UP TRANSFORMATION IN ONE ANOTHER."

GERMANY KENT

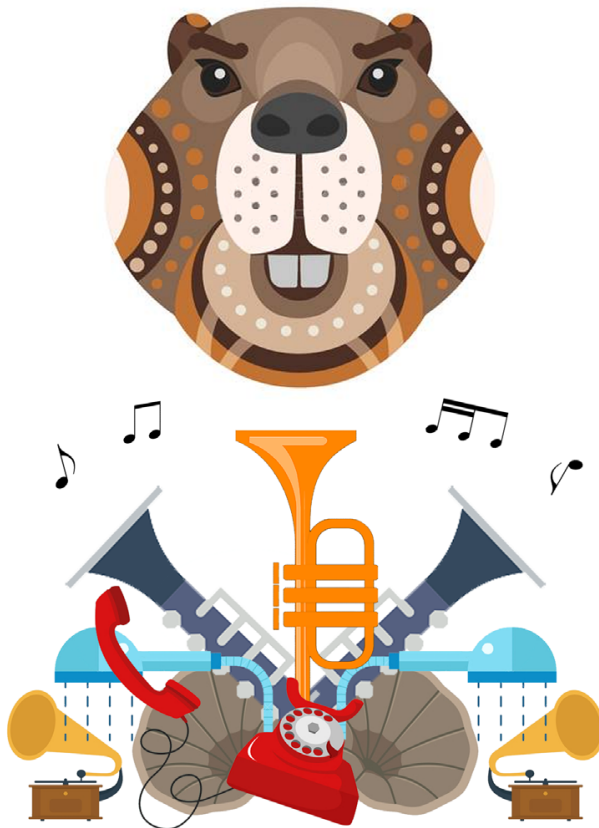
AS MENTIONED IN THE PREFACE, THE RBÜ IS CONVINCED THAT REAL IMPROVEMENT IN OUR WAY OF DESIGNING CAN ONLY WORK IN AN INTERDISCIPLINARY TEAM AND WITH THE HELP OF THE WIDER COMMUNITY. THE RBÜ WELCOMES EVERY INPUT ON REGULAR OPEN CONFERENCES OR ONLINE FROM ALL OVER THE WORLD.

FURTHERMORE, TRANSPARENCY IS A MAJOR GUIDELINE.

WE WANT TO SHOW WHAT WE DO AND ENCOURAGE ANYONE TO DESIGN WITH US. BY HOLDING SEASONAL OPEN DESIGN COMPETITIONS, SEVERAL ARTEFACTS THAT ARE PLACED IN AND AROUND THE RIVER ARE LAID IN THE HANDS OF NON-MEMBERS OF THE RBÜ. THIS IS IMPORTANT TO ASSURE THAT THE HUMAN CO-WORKING PART OF THE ISAR DESIGN IS NOT DICTATED BY THE RBÜ. ONLY THE ESSENTIAL REQUIREMENTS ARE DEFINED IN THE PROTOCOLS.

OPEN DESIGN INVITATION - - - BEAVER-CALLER - - -

Want to see your design in the Isar?



HELP THEM HELP US!

Learn more under [River Biodiversity Union.wixsite.com/RBU](https://RiverBiodiversityUnion.wixsite.com/RBU)



