# Spokane Urban River Experience SURE

# The WHY

## Spokane has a world-class set of Natural Assets, Built-out Amenities and Public Spaces in its Urban Core

- Largest Urban Falls in the Nation
- Nationally Ranked EXPO-Legacy Downtown Park
- Unmatched Entertainment, Sports and Tourist Facilities
- Nationally Recognized Universities on Both Sides of the River
- Incredible Urban River Trail System
- Kendall Yards Award Winning Downtown Community

# The WHY

By bringing these community assets Together under one Partnership, we can better maximize our Economic, Environmental and Quality of Life outcomes for the Spokane region

# The WHERE



The 3-mile stretch of the Spokane River from the Sandifur Bridge to Iron Bridge, and the neighboring public spaces along that stretch.

# The HOW

- Partnership Options Considered
  - New Organization – i.e. Conservancy or Non-Profit
  - Extend Riverfront Park Boundaries to Encompass 3-Mile Stretch
  - Partnership/Consortium of Key 'Owners'

# Current Partners

- Parks
- Public Facilities District
- Avista
- Gonzaga
- University District
- Kendall Yards
- Innovia Foundation
- Centennial Trail
- River Forum
- Downtown Spokane Partnership
- Visit Spokane
- Greater Spokane Incorporated

# The WHAT - Proposed Strategic Goals

- **GOAL 1** – Activate the Urban River Corridor with Additional Amenities and Activities
- **GOAL 2** - Brand/Market this Under One Unified Identity
- **GOAL 3** - Address Mobility to Connect To and Thru this Corridor
- **GOAL 4** - Increase Emphasis on Safety throughout Corridor
- **GOAL 5** - Continue to be Good Environmental Stewards of these Assets

THE GORGE REACH (G) | THE FALLS REACH (F) | THE UPRIVER REACH (U)


G1 G3 WHITEWATER EXPERIENCE

G2 KENDALL YARDS PRIORITY PROJECT OVERLOOK OR HIGH BRIDGE MP

G3 GORGE ZIP LINE

F1 WEST GATEWAY OPPORTUNITIES

F2 AVISTA POWER STATION AND DAM TOURS: INTERPRETIVE SITES

F3 EAST GATEWAY/ FLOATING STAGE

U1 U2 GONZAGA SOUTH CAMPUS ENTRY

U2 U1 UPRIVER ELECTRIC BOAT CRUISE/TAXI

U3 U3 IRON BRIDGE RIVER PUT-IN

**LEGEND**

- CENTENNIAL TRAIL
- SOUTH GORGE TRAIL
- NON-MOTORIZED PUT-IN
- GORGE REACH OPPORTUNITY SITE
- FALLS REACH OPPORTUNITY SITE
- UPRIVER REACH OPPORTUNITY SITE

PARTNERS:

SPOKANE URBAN RIVER EXPERIENCE
PROJECT MASTER PLAN | APRIL 2025

# THANK YOU!

# Explore!

## The Spokane River Water Trail


Fort Spokane

Spokane Indian Reservation

Tumtum

Spokane

Spokane Valley

Liberty Lake

Post Falls

Show Locations With:

- [ ] Boat Launch
- [x] Canoe, Kayak, SUP
- [ ] Raft
- [ ] Drift Boat
- [ ] Motorized Boat
- [ ] Personal Pontoon
- [ ] Shelter
- [ ] Picnic Area
- [ ] Playground
- [ ] Swimming
- [ ] Campground
- [ ] RV Camping
- [ ] Fishing
- [ ] View Points
- [ ] Trail Connection
- [ ] Restrooms
- [ ] Sports Complex
- [ ] Pet Friendly

Select Location | Street Map | Center Map | Home

## PLANT SCHEDULE

| SYMBOL | CODE | BOTANICAL / COMMON NAME |
|---|---|---|
| TREES | | |
| | D | DECIDUOUS / DECIDUOUS |
| | PC | PROPOSED CONIFER / PROPOSED CONIFER |
| | PD | PROPOSED DECIDUOUS / PROPOSED DECIDUOUS |

## REFERENCE NOTES SCHEDULE

| SYMBOL | DESCRIPTION |
|---|---|
| 1 | WAYFINDING |
| 2 | PEDESTRIAN LIGHTING TYP. |
| | OPEN SPACE AREA |
| | TRAIL |
| | RESTORATION |
| | COURT |

## PROJECT PROGRAM

- PLAZA / COURTYARD
- SAFETY
- SHORELINE TREATMENT
- ENVIRONMENTAL DESIGN / RESTORATION
- DOCK / GU ROWING TEAM
- COOLING STATION
- CONNECTION
- BUFFER
- LIGHTING
- PLAY
- VENDORS

## COMMUNITY SURVEY

### IDEAL SOUTH LOGAN

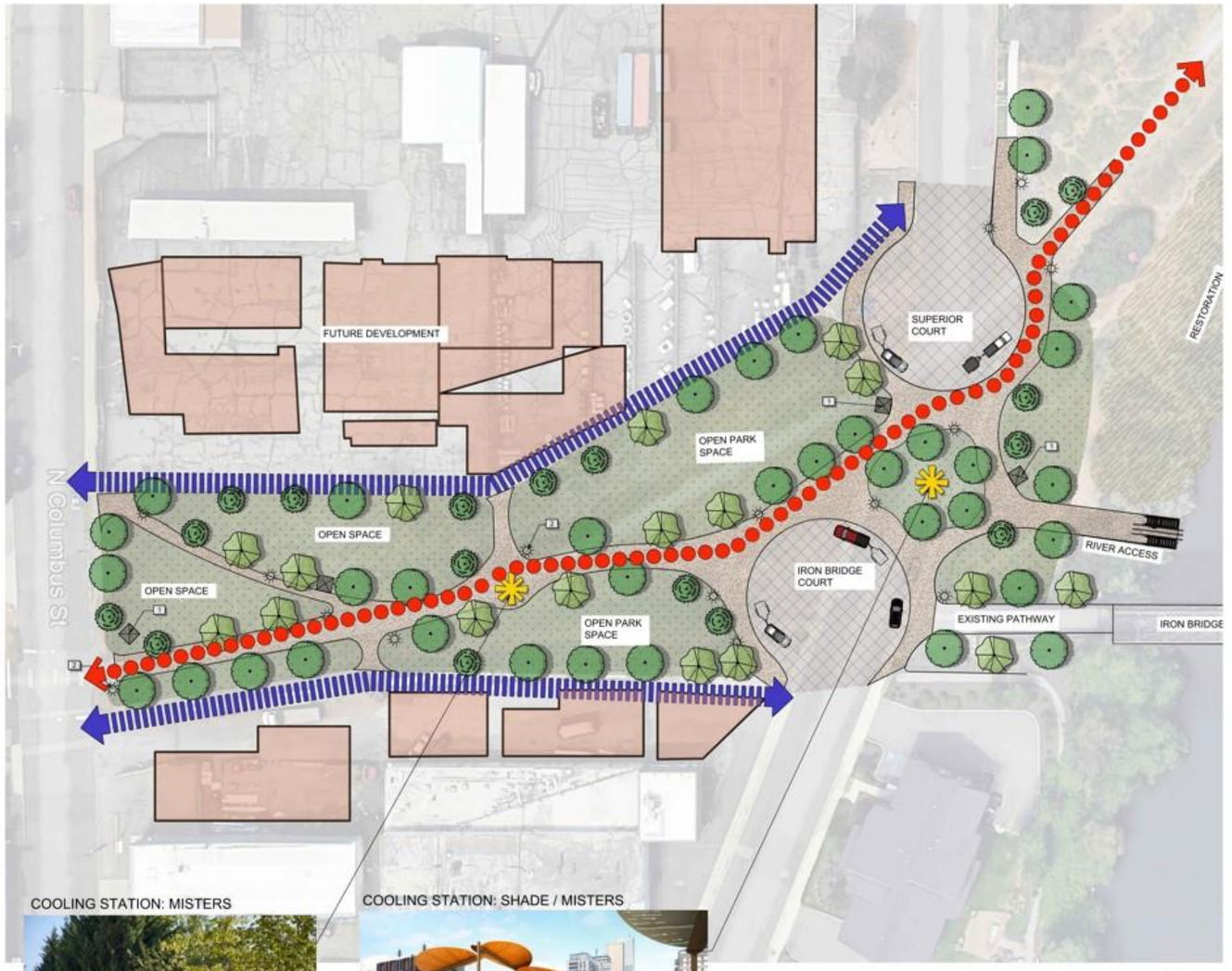
- WALKABLE / ACCESSIBLE
- FESTIVE
- VIBRANT
- SAFE
- ART
- GREEN / TREES
- QUIET / CALMING
- UNIQUE

### BARRIERS

- TRAFFIC
- NOISE
- INACTIVE FRONTAGE
- INCOMPLETE TRAIL
- LACK OF DIRECT RIVER ACCESS / RIVERFRONT ACTIVITIES

## CONCEPT GRAPHICS SCHEDULE

- FUTURE DEVELOPMENT
- IRON BRIDGE ART WAY FINDING
- EXISTING NON-MOTORIZED TRAIL SYSTEM
- MIXED-USED DEVELOPMENT INTERFACE




COOLING STATION: MISTERS

COOLING STATION: SHADE / MISTERS

SPVV LANDSCAPE ARCHITECTS
1908 W NORTHWEST BLVD, SUITE A
SPOKANE, WA 99205
509.325.0511
www.spvv.com

SEAL:

CONSULTANT:

PROJECT NUMBER: 2376
IRON BRIDGE RIVER GATEWAY
NORTH SUPERIOR SPOKANE, WA

SHEET TITLE:
LANDSCAPE PLAN
DRAWN BY: MAP
CHECKED BY: KVV

Revisions:

SHEET
L-2A
CONCEPTUAL DESIGN
10/04/2021

COPYRIGHT STATEMENT

## PLANT SCHEDULE

| SYMBOL | BOTANICAL / COMMON NAME | CONT | HEIGHT |
|---|---|---|---|
| TREES | | | |
| | ACER GLABRUM / ROCKY MOUNTAIN MAPLE | MULTI-STEM | 6` HT. |
| | AMELANCHIER ALNIFOLIA / SERVICEBERRY | B & B | |
| | PINUS PONDEROSA / PONDEROSA PINE | B & B | 6` HT. |

## REFERENCE NOTES SCHEDULE

| SYMBOL | CODE | DESCRIPTION |
|---|---|---|
| CONCRETE CONSTRUCTION | | |
| | CC-101 | 16" CONC CURB |
| ELECTRICAL | | |
| ☼ | E-101 | 16' LED LIGHT POLES |
| PAVING | | |
| | P-101 | ASPHALT CONCRETE PAVEMENT (ACP CITY STANDARD) |
| | P-102 | EXISTING ACP PATHWAY |
| CONCRETE | | |
| | P-201 | CONCRETE WALK |
| UNIT PAVING | | |
| | P-301 | PERVIOUS PAVERS |
| | P-302 | PERVIOUS SPECIALTY PAVER/INLAY |
| | P-303 | RIVER ACCESS PERVIOUS RAMP PAVING |
| AGGREGATE SURFACE | | |
| | P-401 | RIVER ACCESS PERVIOUS HARDENED SURFACE |
| PLANTING | | |
| | PL-101 | LAWN AREA |
| | PL-102 | NATURALIZED STORM WATER TREATMENT |
| | PL-103 | RE-WILDING VEGETATION RESTORATION |
| | PL-104 | EXISTING VEGETATION MANAGEMENT |
| | PL-105 | RE-WILDING VEGETATION TREE PLANTINGS |
| | PL-106 | STORM WATER SWALE |

WAY FINDING/KIOSK



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509-325-0511
www.spvv.com


SEAL:

CONSULTANT:

PROJECT NUMBER: 2376

IRON BRIDGE RIVER GATEWAY

NORTH SUPERIOR
SPOKANE, WA

SHEET TITLE
MATERIAL SHEET

DRAWN BY: NHP
CHECKED BY: KVV

Revisions:

SHEET:
**L-301**
FEASIBILITY
1/6/2025



PLOT DATE:Wednesday, April 16, 2025 FILE LOCATION:N:\2376 Iron Bridge River Gateway\Drawings\2376 Material.dwg

UNIVERSITY DISTRICT

# Habitat Protection and Restoration in Spokane River Watershed

Spokane River Forum
April 23, 2025

Juliet Sinisterra, CEO
Spokane University District

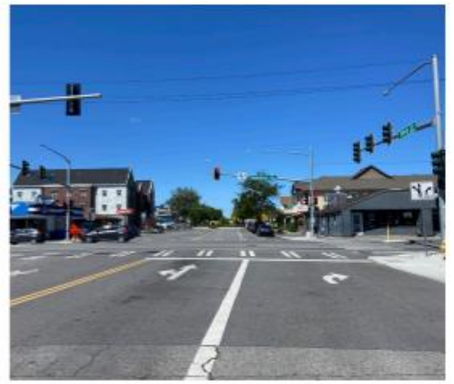
# TODAY'S AGENDA

- Spokane University District
- Converging Crises
- Generosity of Nature
- Nature-Positive Urban Design
- How We Design
- Salmon Safe Certification







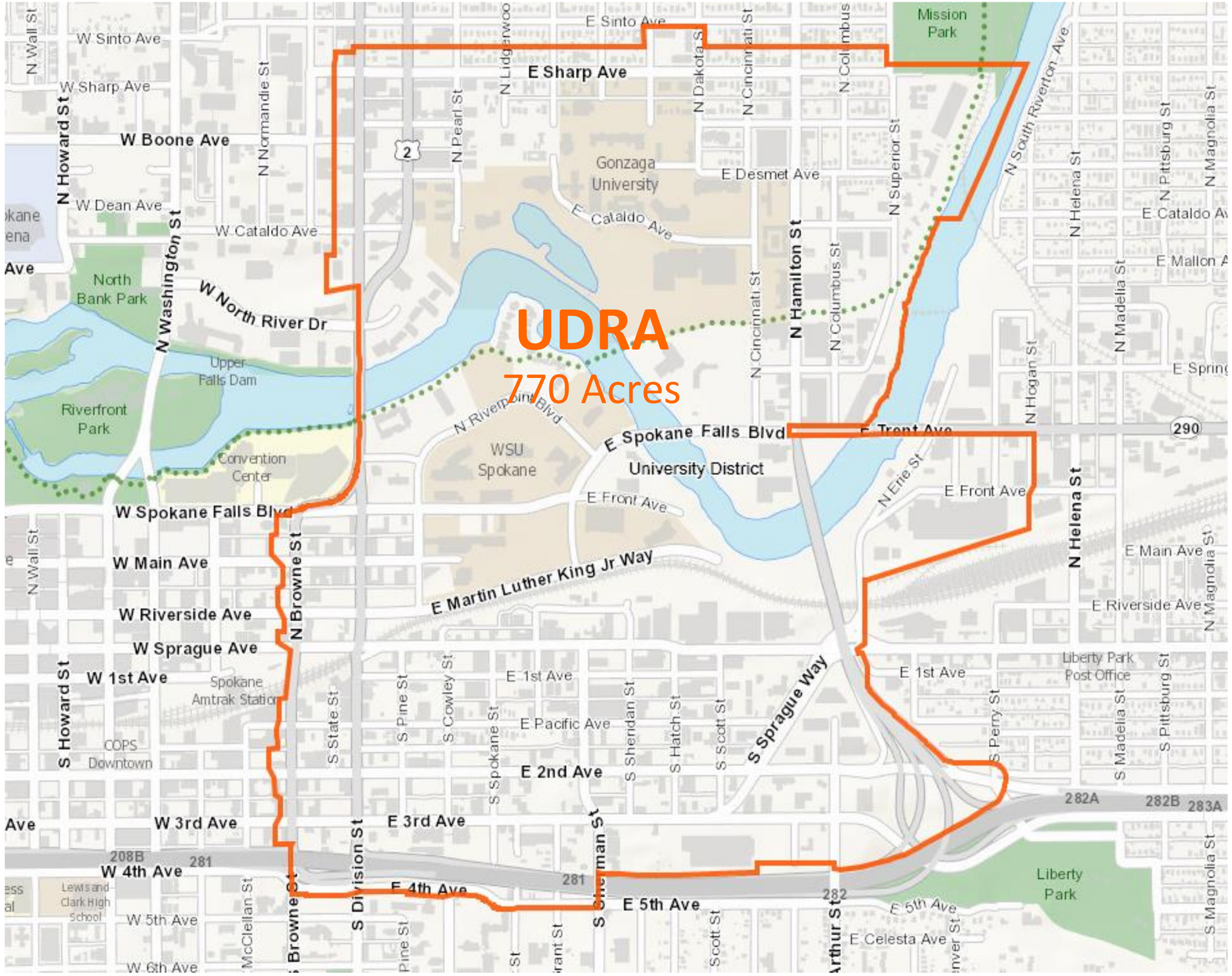


# Built for Collaboration

## INNOVATING TOGETHER

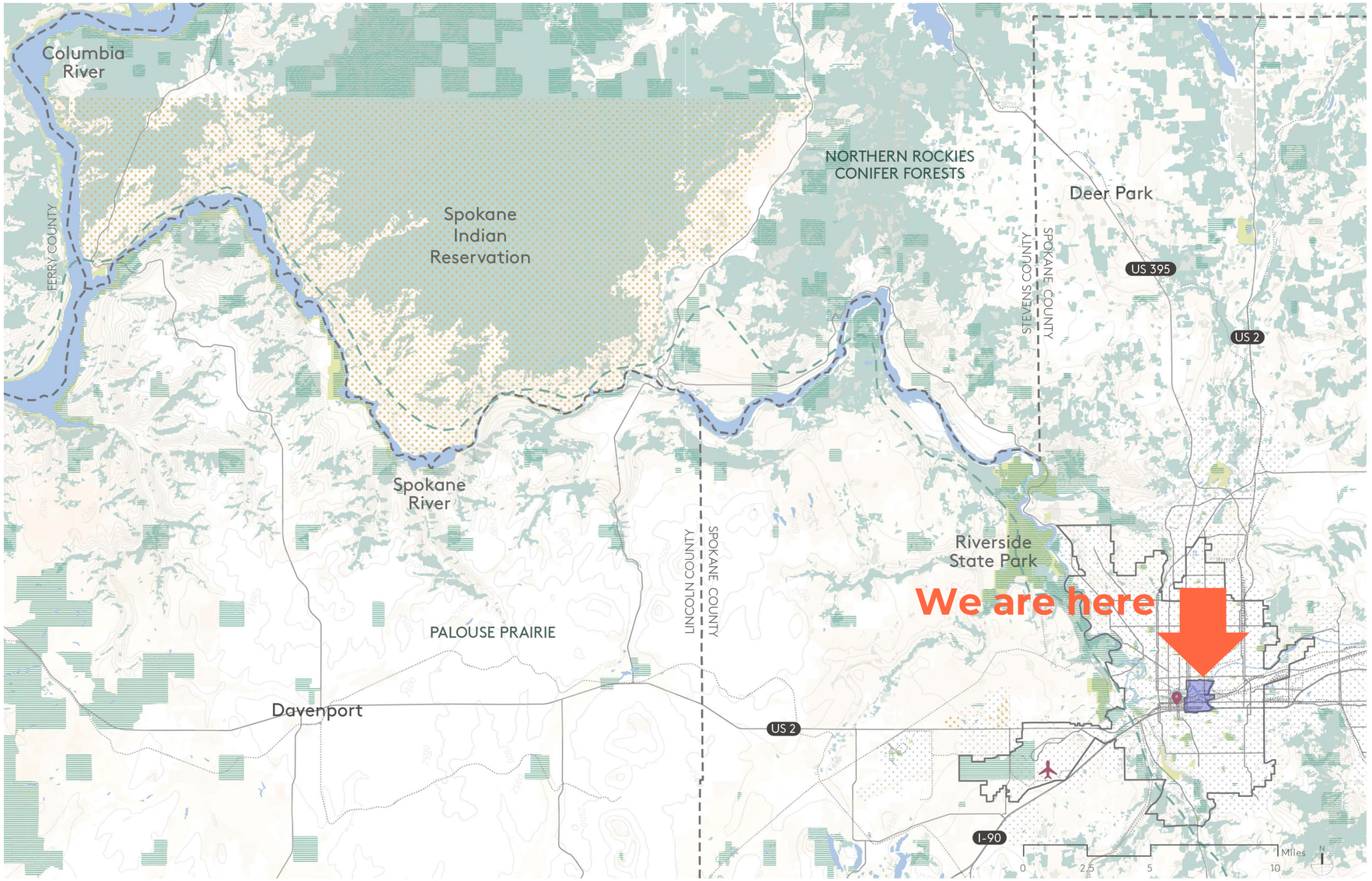
The University District is where business and education grow together. Community partners are connected through geographical ecosystem and strong commitment to collaboration with a focus on four key areas:

- HIGHER ED AND UPLIFT OPPORTUNITIES
- MEDICAL AND LIFE SCIENCES
- BUSINESS AND ENTREPRENEURSHIP
- ENERGY AND SUSTAINABILITY




UNIVERSITY DISTRICT

# The Bioregion as Eco-Tone

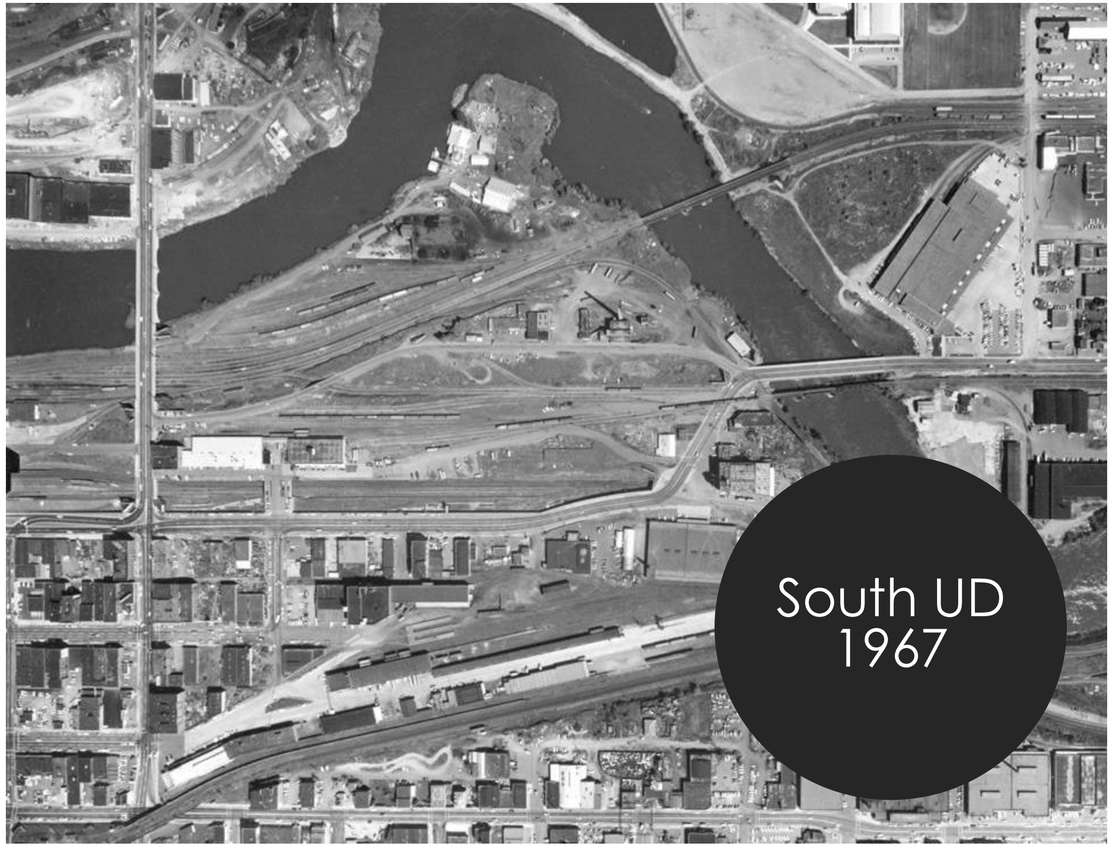


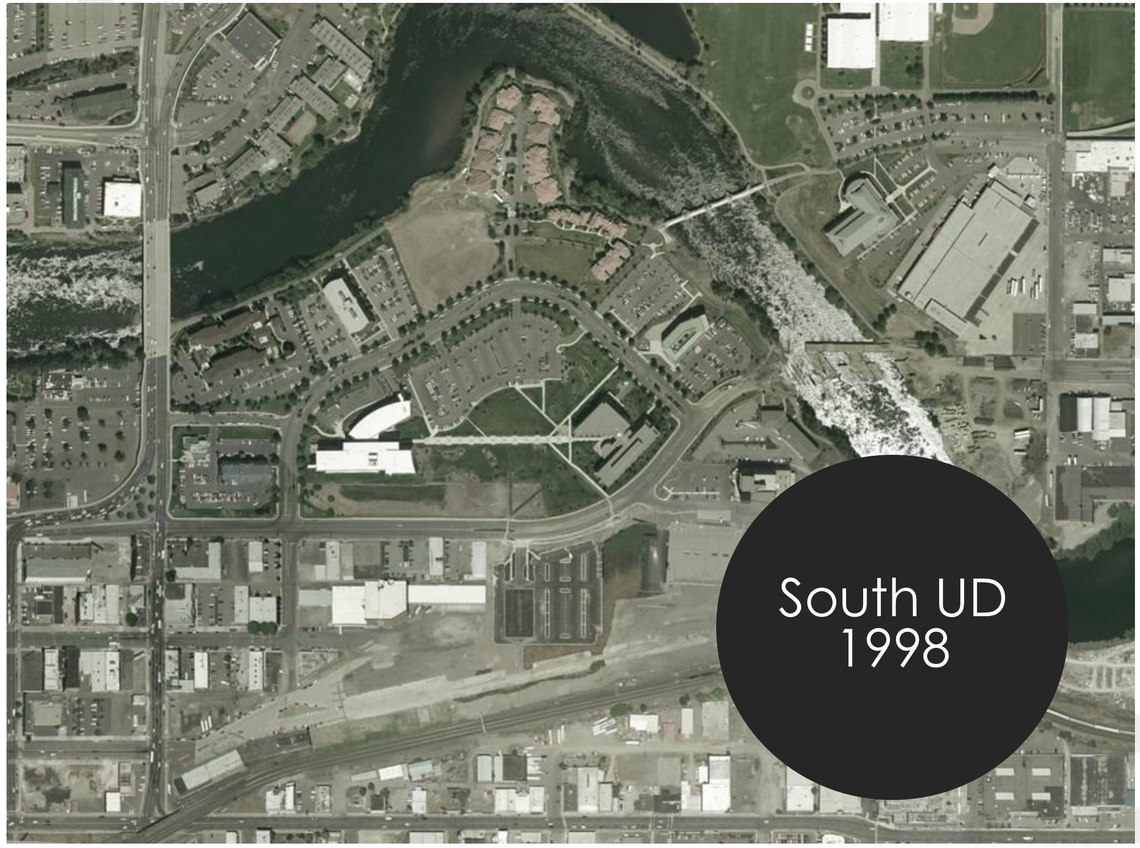
# A Traditional Crossroads

- What today is the University District was intersected by important native trails linking the area to the fisheries in the east, the winter camps in the west and trails connecting north to fisheries near Kettle Falls, **an intertribal gathering place attracting as many as 10,000 natives at the height of the fishing season**
- Cayuse, Palouse and Nez Perce would have traversed through the UD on their way to Kettle Falls, trading with the Spokanes, along the banks of the River


# The Rise of the UD

- **EXPO 74: Removed railroads from downtown**, cleaned up decrepit factories, flop houses and tenements along the River
- **Momentum 87:** Paul Redmond, WWP; Bill Cowles, Cowles Publishing; Mike Murphy, Central Pre-Mix and Dave Clack, ONB
- **1992 masterplan for the Riverpoint Campus** (joint between WSU and EWU)
- **1994: SIRTI opens**
- **1996:** Phase One Building
- **2002:** Health Sciences Building
- **2004 UD Strategic Masterplan**
- University District Development Association created in **2009** (501c3)
- University District Public Development Authority in **2011**



South UD
1967


South UD
1998

# Spokane University District: People

## Demographic overview

### Total population

City of Spokane
**228,989**
*Source: US Census Bureau 2020*

University District
**≈3,548**
*Source: US Census Bureau Blocks 2020*

### Addiction State of Emergency

**18%** increase in overdose deaths 2023-2024

Overdose responses clustered around Division and Brown

### Traffic Safety

**40%** increase in people hit by cars 2022-2023

Hot spots along Division, Brown, and Hamilton, arterials which carry 20,000-40,000 ADT (2018)

### Housing Crisis

**>2,000** people experiencing houselessness

Jan 2024 point in time count; 54% decrease in unsheltered houselessness; 10% increase in sheltered houselessness; 15% decrease in overall houselessness

### SOCIAL VULNERABILITY INDEX

*Susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood.*

**RELATIVELY LOW**
*Tract 25.03*
Score 31.12
*31% of U.S. Census tracts have a lower Social Vulnerability.*

**VERY HIGH**
*Tract 145*
Score 94.37
*94% of U.S. Census tracts have a lower Social Vulnerability.*

Fig. 14 FEMA National Risk Index 2022

### HEALTH SUPPORTIVE NATURE

*NatureScore: Amount and quality of natural elements.*

**ADEQUATE**
*Tract 25.03*
Score 42.2
Balanced mix of natural and built environmental elements. Modest effort required for immersive nature exposure opportunities.

**DEFICIENT**
*Tract 145*
Score 11.9
Low density of natural elements. Effort required for immersive nature exposure opportunities.

Fig. 15 NatureQuant LLC 2024

### HEALTH DATA

#### ASTHMA

Estimated prevalence of current asthma among adults aged 18 and older.

**14.5%** tract 25.03

**13.7%** tract 145

Fig. 11 CDC ACS 2021

#### OBESITY

Estimated prevalence of obesity among adults aged 18 and older.

**27.3%** tract 25.03

**37.8%** tract 145

Fig. 12 CDC ACS 2021

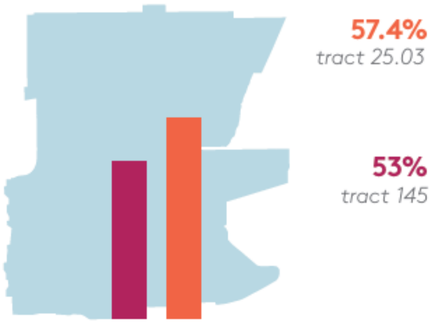
#### PHYSICAL INACTIVITY

No leisure-time physical activity during the past month among adults aged 18 and older.

**27.9%** tract 145

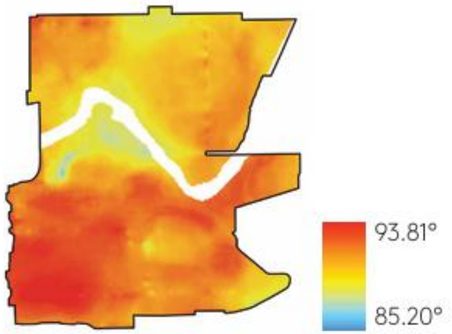
Fig. 13 CDC ACS 2016 - 2019

# Spokane University District: Place



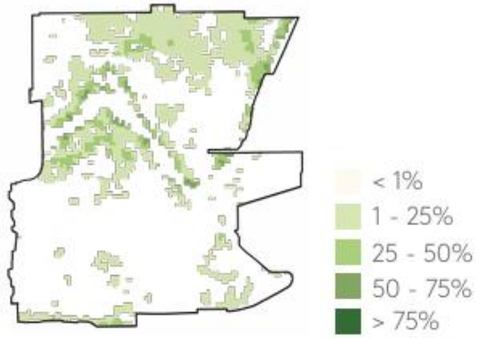

**Poverty**
Percentage of persons living below 150% of the poverty level.

US Census Bureau 2022: 19.1%
*Source: ACS 2017 - 2021*



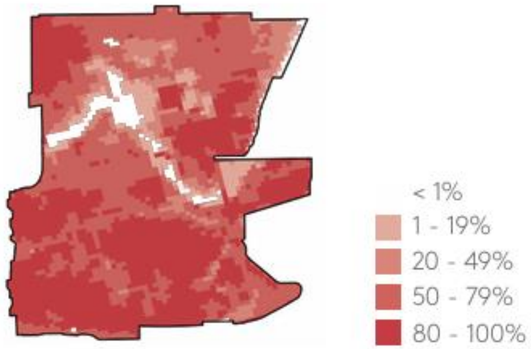

**Heat**
Afternoon heat temperatures comparison

*Source: Gonzaga Center for Climate, Society, and the Environment, 2022*




**Tree canopy**
Percentage of tree canopy

*Source: USA NLCD Tree Canopy 2021*




**Impervious surfaces**
Percentage of impervious surfaces

*Source: USA NLCD Impervious surfaces 2021*

# Climate Impact and Environmental Justice

Climate change is increasing the frequency of days with wildfire smoke. **Since 2015**, **Spokane has averaged eight unhealthy smoke days per year, up from zero** between 1999 and 2011

In recent years, the number of days in Spokane over 90 degrees has increased: in **2019, 13 days; in 2020, 20 days; in 2021, 44 days; in 2022, 44 days; in 2023, 34 days**

In 2021, the Pacific Northwest experienced a **heat dome event that killed 112 people in Washington State, including 19 in Spokane**

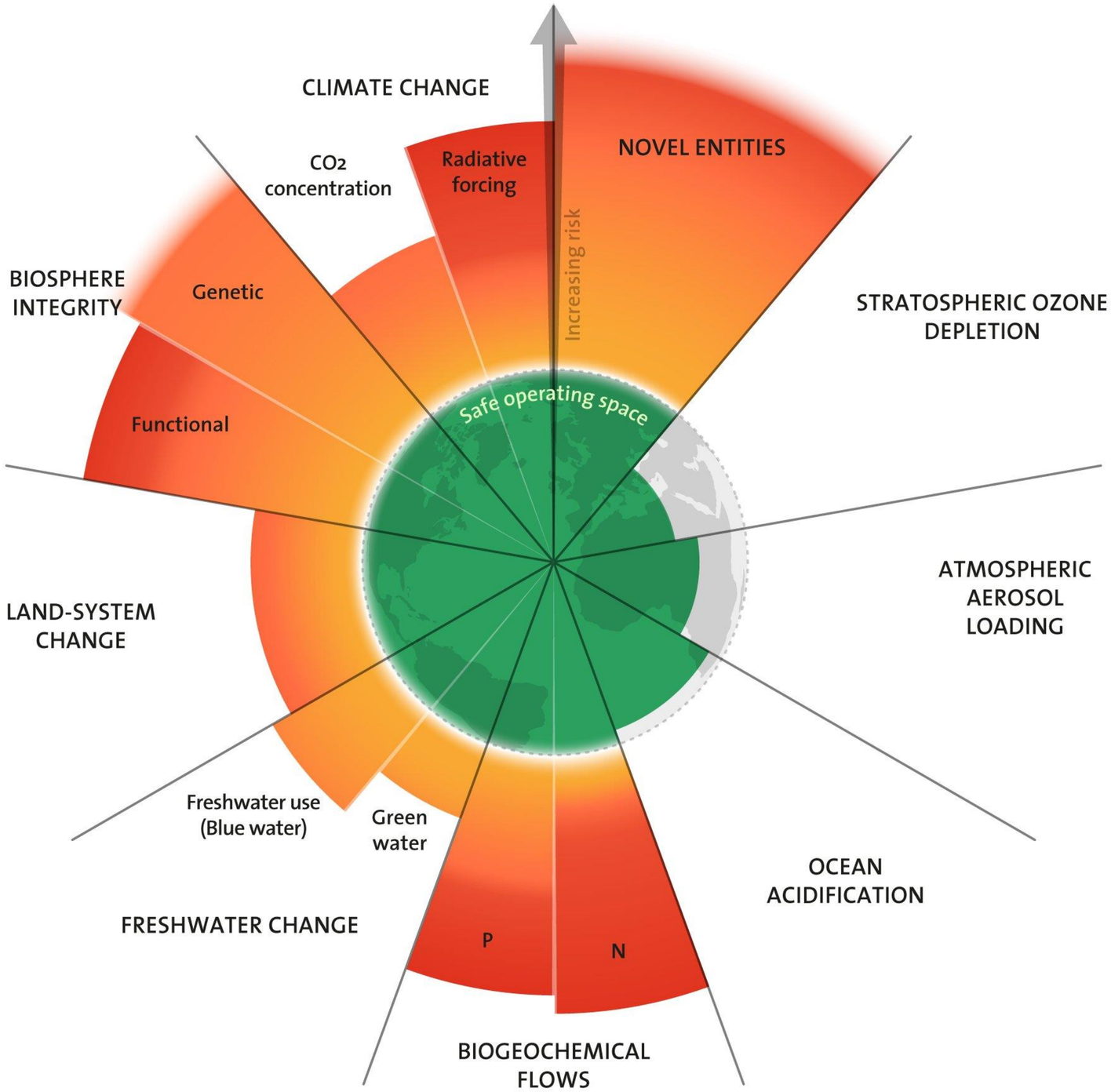
**Table 1. EJSCREEN Environmental and Health Burden Data**

| | Census Block Group 530630145002 | | Census Block Group 530630145004 | |
|---|---|---|---|---|
| EJScreen, Supplemental Index | State Percentile | National Percentile | State Percentile | National Percentile |
| Particulate Matter 2.5 | 98 | 99 | 99 | 99 |
| Diesel Particulate Matter | 97 | 97 | 99 | 99 |
| Traffic Proximity | 99 | 96 | 99 | 99 |
| Nitrogen Dioxide | 99 | 98 | 99 | 99 |
| Lead Paint | 98 | 95 | 99 | 99 |
| Superfund Proximity | 97 | 97 | 99 | 98 |
| Hazardous Waste Proximity | 99 | 96 | 99 | 98 |
| Asthma | 99 | 97 | 95 | 94 |
| Heart Disease | 90 | 71 | 99 | 95 |
| Persons with Disabilities | 99 | 99 | 99 | 99 |

# Converging Crises

*"There is no delivery of the Paris Agreement of 1.5 degrees Celsius by only phasing out fossil fuels.* ***We must come back into the safe operating space by nature-based biodiversity, all of the planetary boundaries of nature.*** *The science is clear. The window is rapidly closing."*

- Johan Rockstrom, Potsdam Institute for Climate Research
*TED Talk: The Tipping Points of Climate Change*




# Polycrisis/Metacrisis

"Climate change is a big problem but it is a subset of the larger problem of overshoot. **We have exceeded the carrying capacity of the planet**. Continued economic and material growth based on renewable energy does not begin to resolve that fundamental reality."

- Arthur Berman, Energy Geologist

"Even if emissions drop to zero in a timely fashion, easing the planet back down toward its natural average temperature will require removing greenhouse gasses from the atmosphere. **That will take huge amounts of forest and ecosystem restoration for natural storage of carbon**, but also likely technological versions not yet ready for prime time."

– Arancha Gonzales, IPCC Commissioner

# Our Global Commons.
# Big biophysical systems that we all depend on for the stability of the planet

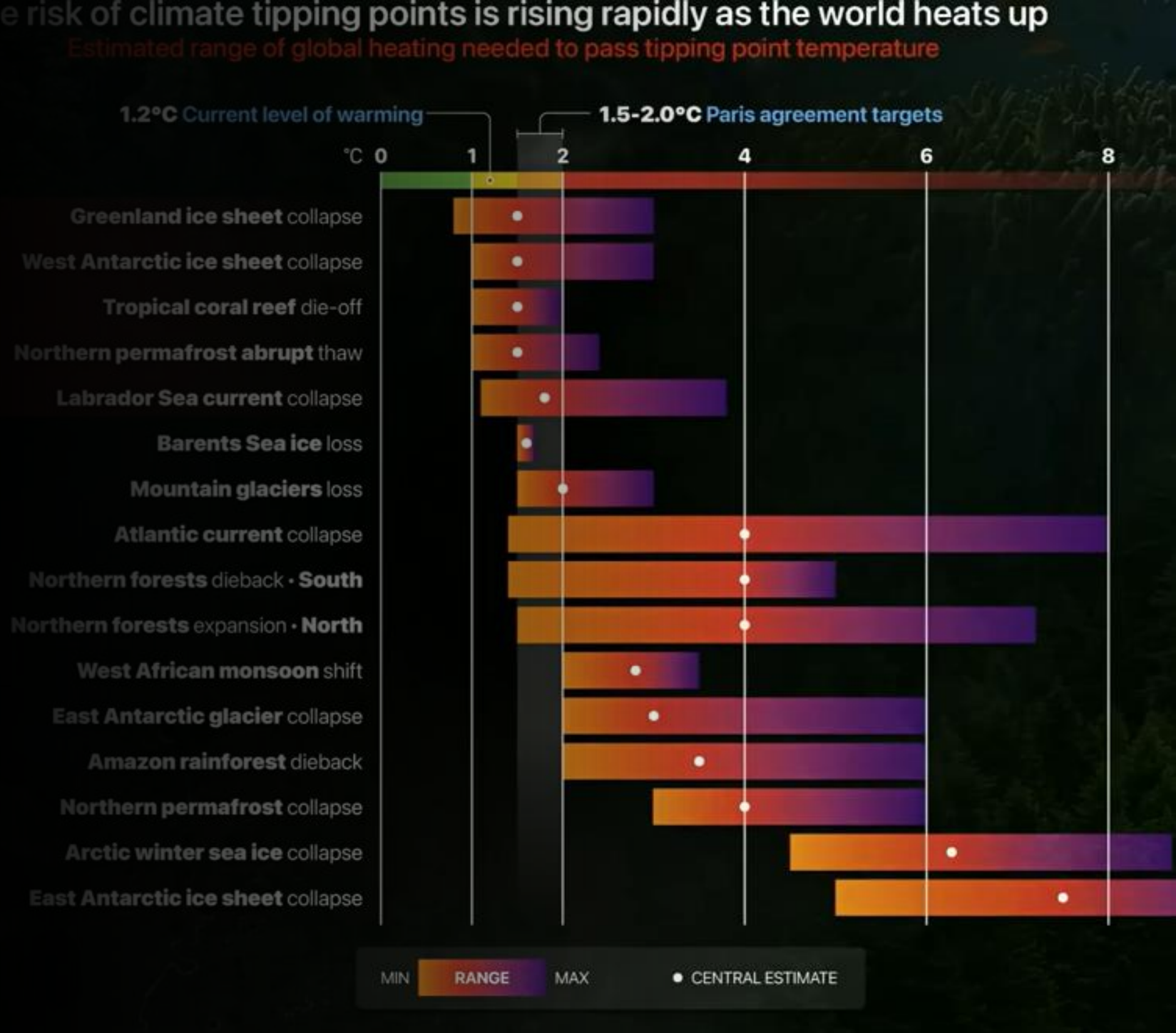



Image from Johan Rockstrom, Potsdam Institute for Climate Impact Research

# Fate of anthropogenic $CO_2$ emissions (2013–2022)

## Sources

35.3 $GtCO_2$/yr

88%

12%

4.7 $GtCO_2$/yr

## = Sinks

18.9 $GtCO_2$/yr

47%

31%

12.3 $GtCO_2$/yr

26%

10.4 $GtCO_2$/yr

Budget Imbalance:

(the difference between estimated sources & sinks)

4%

-1.6 $GtCO_2$/yr

Source: Friedlingstein et al 2023; Global Carbon Project 2023

# EU climate monitor warns global temperature rise breached 1.5 degrees Celsius for first time in 2024

Story by Paul Godfrey • 3w • 3 min read

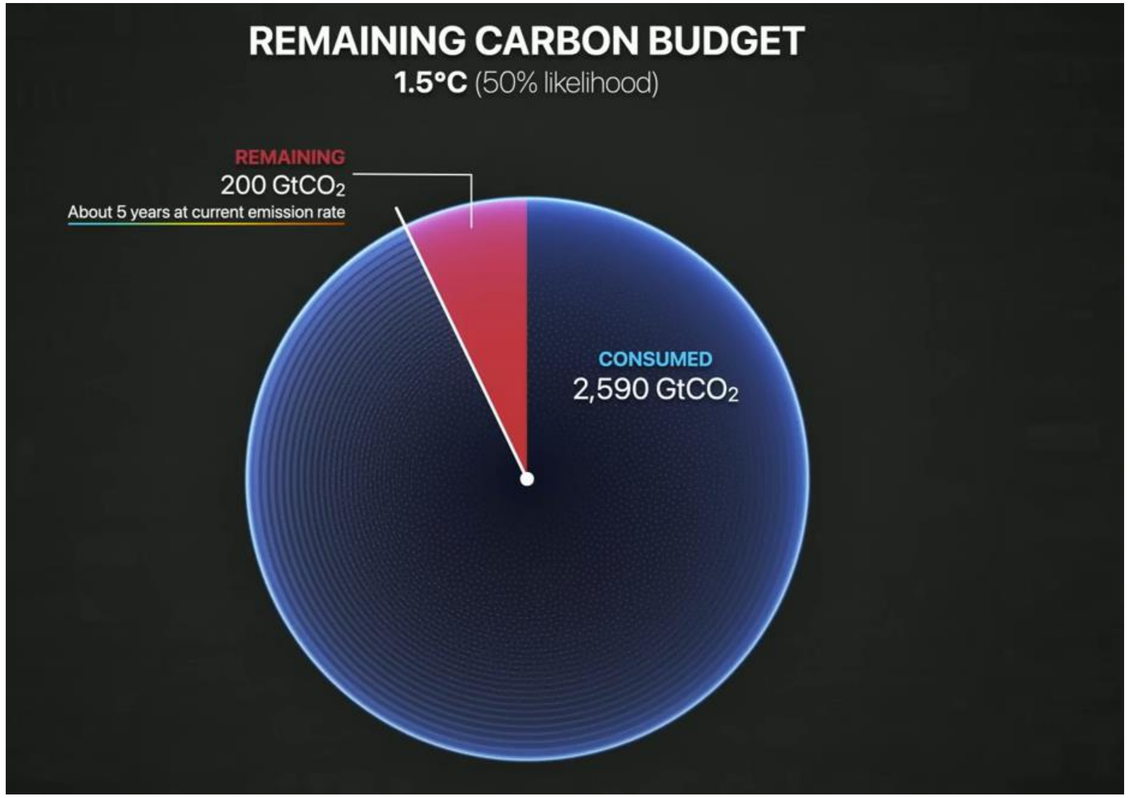
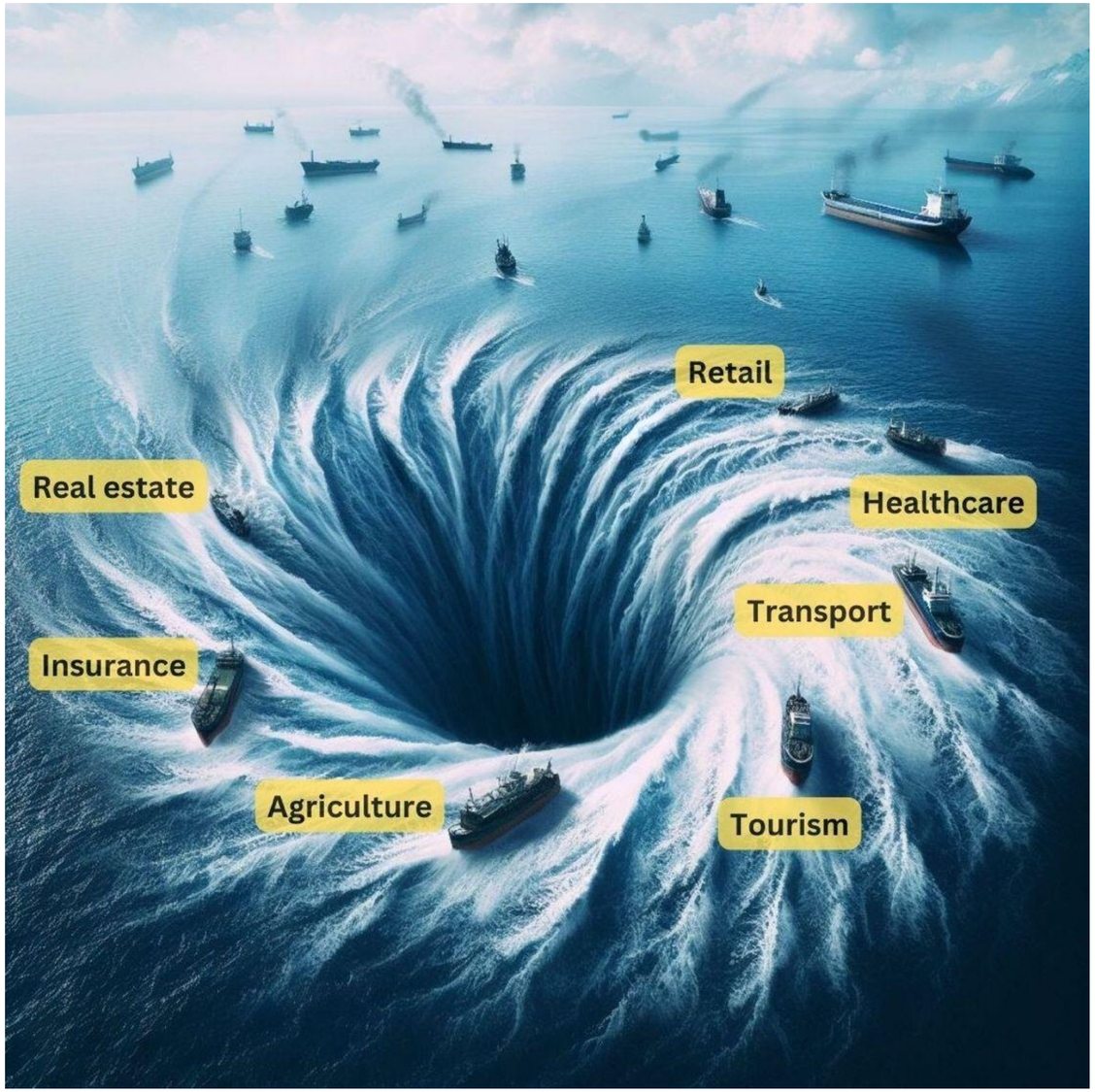



Image from Johan Rockstrom, Potsdam Institute for Climate Impact Research




The Hill + Follow 373.7K Followers

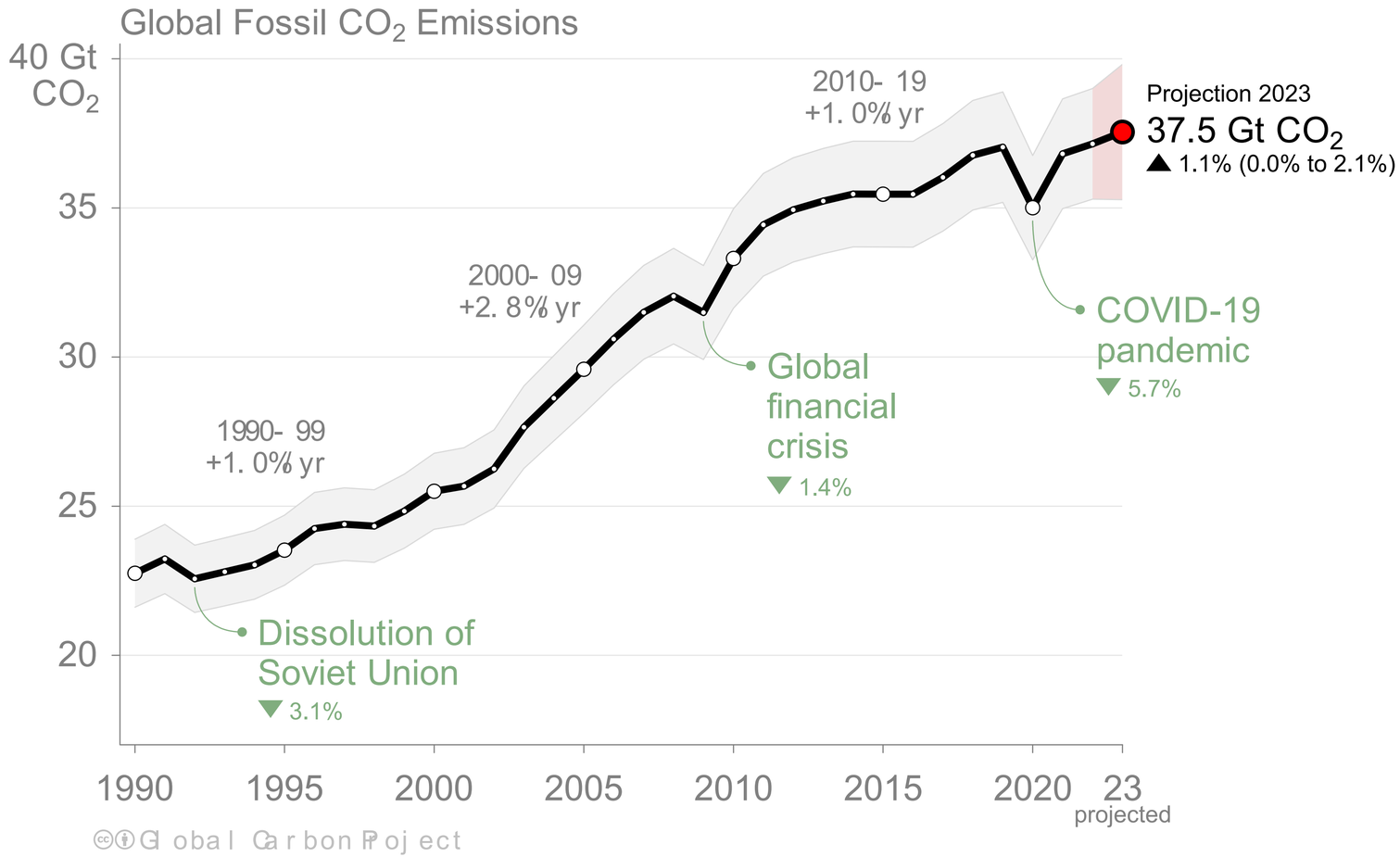
## Climate change-fueled extreme weather could cost real estate market $1T-plus: Study

Story by Zack Budryk • 4h • 2 min read


Image from Johan Rockstrom, Potsdam Institute for Climate Impact Research

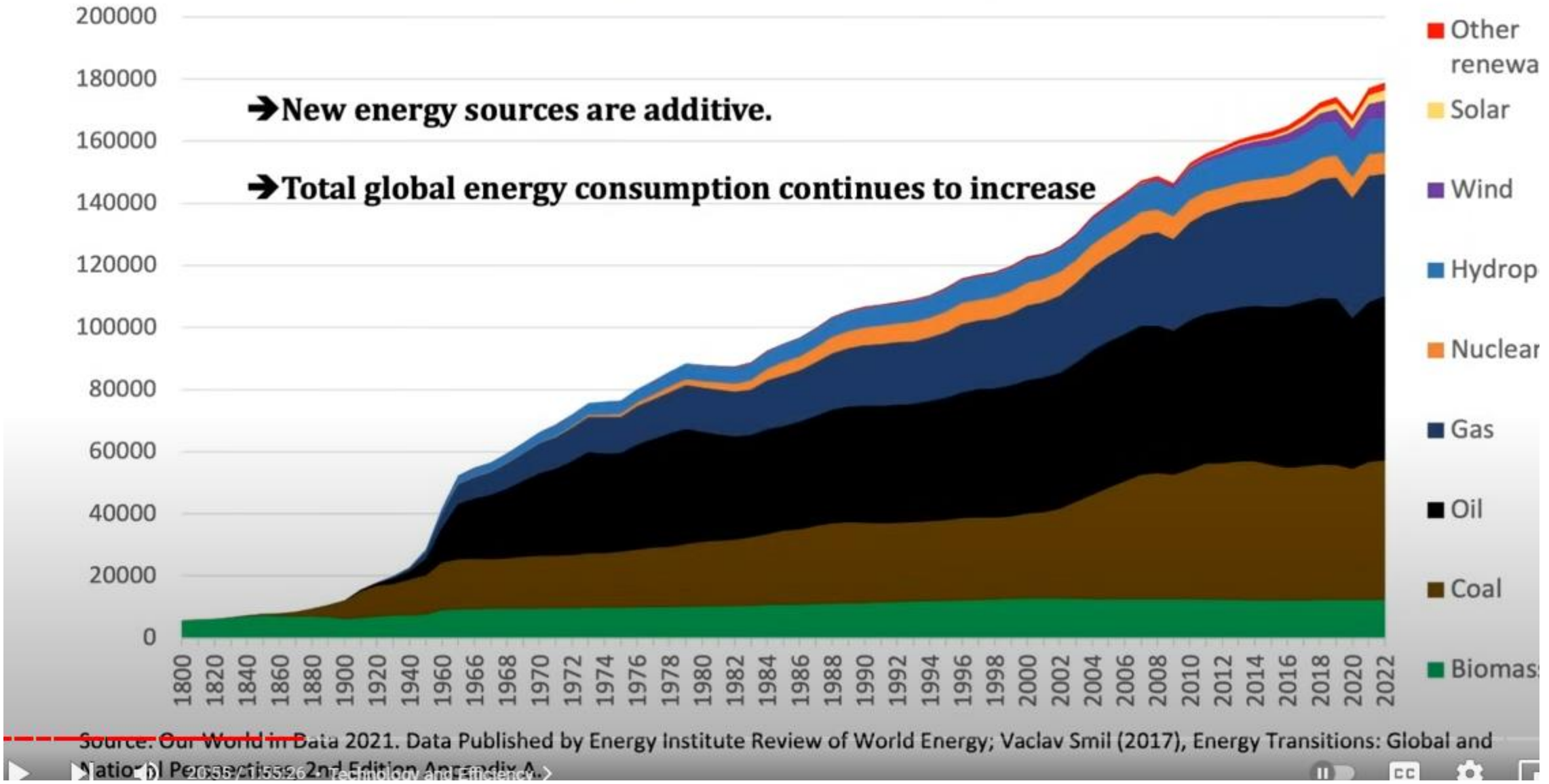
# Global Fossil $CO_2$ Emissions

Global fossil $CO_2$ emissions: 37.1 ± 2 $GtCO_2$ in 2022, 63% over 1990
Projection for 2023: 37.5 ± 2 $GtCO_2$, 1.1% [0.0% to +2.1%] higher than 2022




Uncertainty is ±5% for one standard deviation (IPCC "likely" range)

When including cement carbonation, the 2022 and 2023 estimates amount to 36.4 ± 2 $GtCO_2$ and 36.8 ± 2 $GtCO_2$ respectively
The 2023 projection is based on preliminary data and modelling.
Source: Friedlingstein et al 2023; Global Carbon Project 2023


➔New energy sources are additive.
➔Total global energy consumption continues to increase
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1800
1820
1840
1860
1880
1900
1920
1940
1960
1966
1968
1970
1972
1974
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1978
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1982
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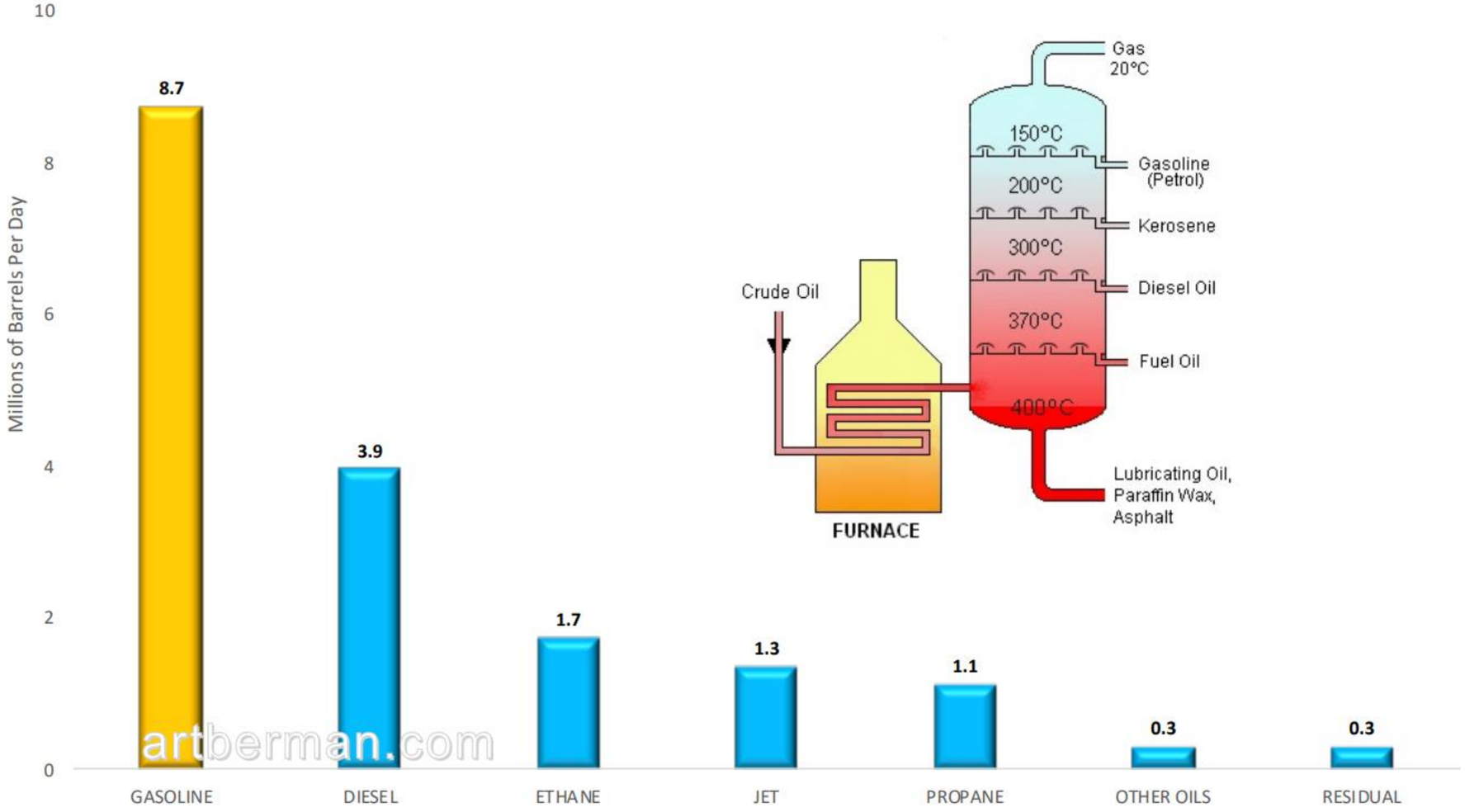
2006
2008
2010
2012
2014
2016
2018
2020
2022
Other renewa
Solar
Wind
Hydrop
Nuclear
Gas
Oil
Coal
Biomas
Source: Our World in Data 2021. Data Published by Energy Institute Review of World Energy; Vaclav Smil (2017), Energy Transitions: Global and

# Gasoline accounts for 45% of U.S. refined products in 2021
# If U.S. consumes *less* gasoline because of EVs, it will still be produced
# Cannot produce diesel, jet fuel, ethane or propane *without also producing gasoline*

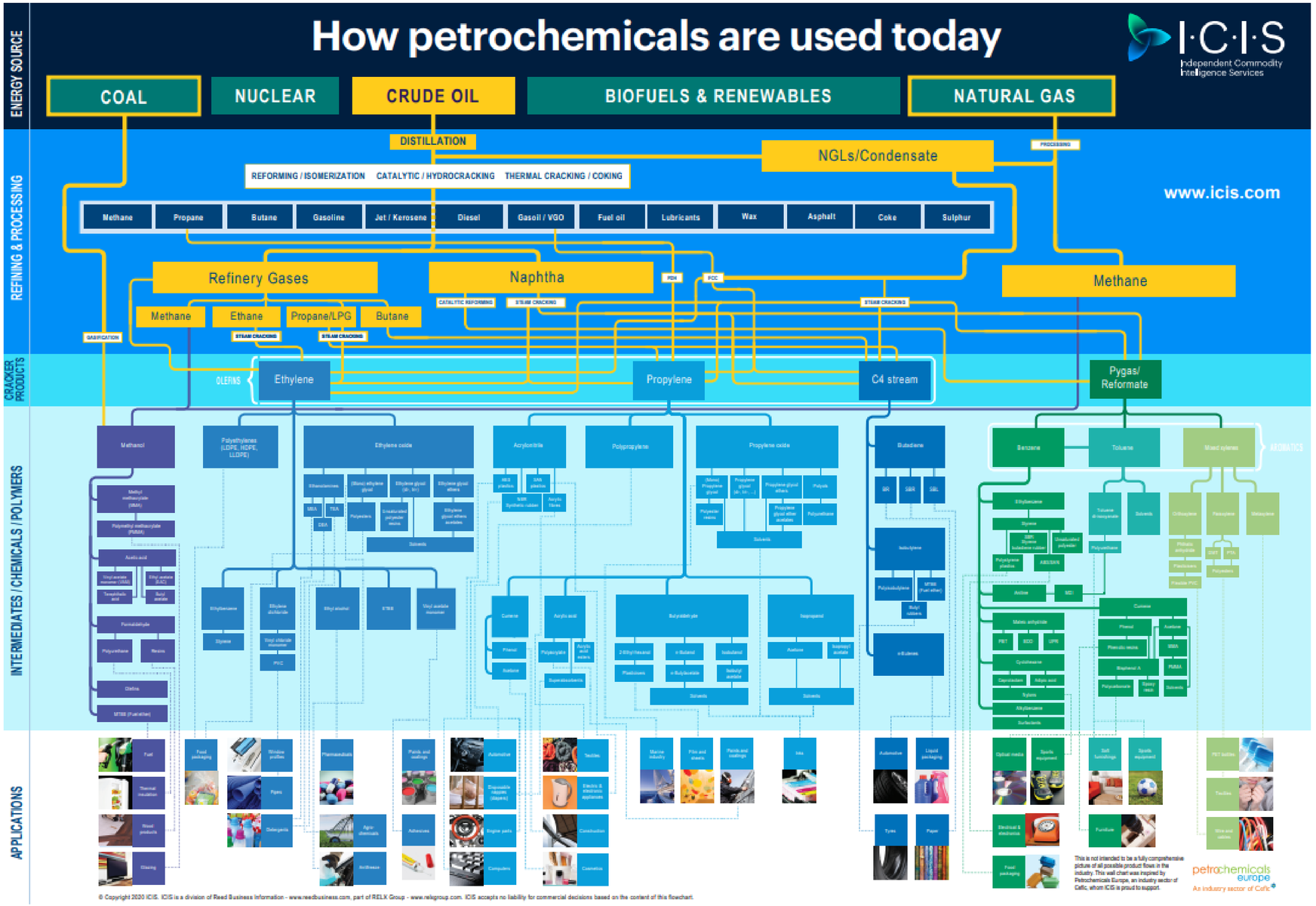






Source: EIA & Labyrinth Consulting Services, Inc.

EIA Current/Monthly Updates/U.S. Product Supplied Master


How petrochemicals are used today
I·C·I·S
Independent Commodity Intelligence Services
ENERGY SOURCE
COAL
NUCLEAR
CRUDE OIL
BIOFUELS & RENEWABLES
NATURAL GAS
REFINING & PROCESSING
DISTILLATION
NGLs/Condensate
PROCESSING
REFORMING / ISOMERIZATION
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Propane
Butane
Gasoline
Jet / Kerosene
Diesel
Gasoil / VGO
Fuel oil
Lubricants
Wax
Asphalt
Coke
Sulphur
Refinery Gases
Naphtha
Methane
Methane
Ethane
Propane/LPG
Butane
GASIFICATION
STEAM CRACKING
CATALYTIC REFORMING
PDH
FCC
CRACKER PRODUCTS
OLEFINS
Ethylene
Propylene
C4 stream
Pygas/ Reformate
INTERMEDIATES / CHEMICALS / POLYMERS
Methanol
Polyethylenes (LDPE, HDPE, LLDPE)
Ethylene oxide
Acrylonitrile
Polypropylene
Propylene oxide
Butadiene
Benzene
Toluene
Mixed xylenes
AROMATICS
APPLICATIONS
Fuel
Thermal insulation
Wood products
Glazing
Food packaging
Window profiles
Pipes
Detergents
Pharmaceuticals
Agro chemicals
Antifreeze
Paints and coatings
Adhesives
Automotive
Engine parts
Computers
Textiles
Electric & electronic appliances
Construction
Cosmetics
Marine industry
Film and sheets
Paints and coatings
Inks
Automotive
Liquid packaging
Tyres
Paper
Optical media
Sports equipment
Electrical & electronics
Food packaging
Soft furnishings
Sports equipment
Furniture
PET bottles
Textiles
Wire and cables
This is not intended to be a fully-comprehensive picture of all possible product flows in the industry. This wall chart was inspired by Petrochemicals Europe, an industry sector of Cefic, whom ICIS is proud to support.
petrochemicals europe
An industry sector of Cefic
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Fuel


Thermal insulation


Wood products


Glazing


Food packaging


Window profiles


Pipes


Detergents


Pharmaceuticals


Agro-chemicals


Antifreeze


Paints and coatings


Adhesives


Automotive


Disposable nappies (diapers)


Engine parts


Computers


Textiles


Electric & electronic appliances


Construction


Cosmetics


Marine industry


Film and sheets


Paints and coatings


Inks


Automotive


Liquid packaging


Tyres


Paper


Optical media


Sports equipment


Electrical & electronics

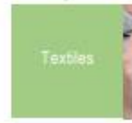

Food packaging


Soft furnishings


Sports equipment


Furniture


PET bottles


Textiles


Wire and cables

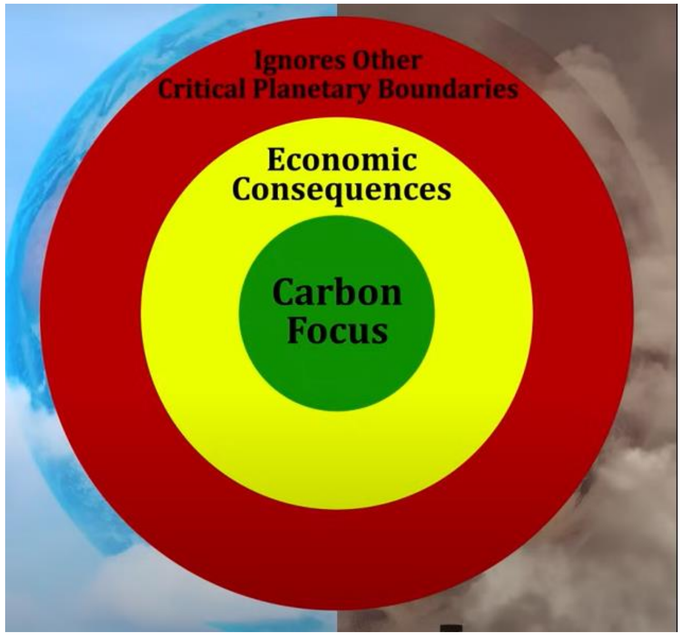
This is not intended to be a fully comprehensive picture of all possible product flows in the industry. This wall chart was inspired by Petrochemicals Europe, an industry sector of Cefic, whom ICIS is proud to support.

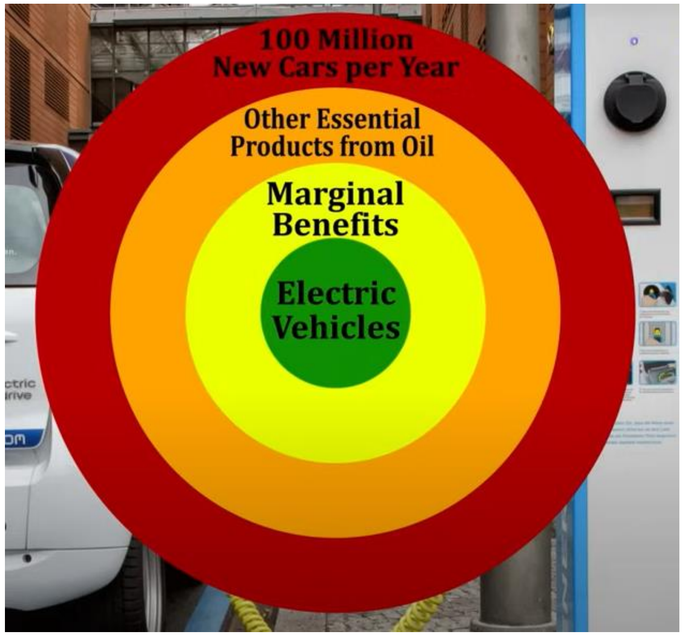
petrochemicals europe

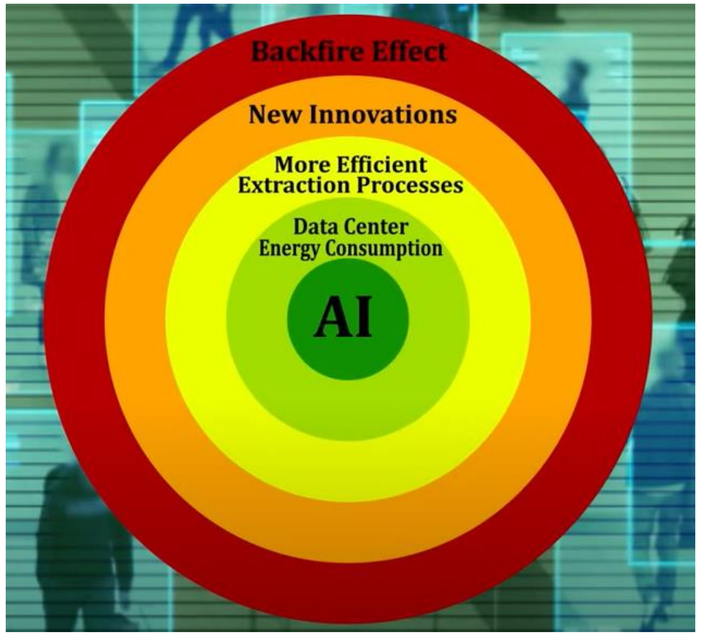
An industry sector of Cefic

# Using a Wider Boundary Lens

Source: Nate Hagens, The Great Simplification




** 80 million babies born per year*

“We live in a competent universe, we are part of a brilliant planet, and we are surrounded by genius. Nature is incredibly generous, and it has learned to live gracefully on this planet for billions of years.”

– Janine Benyus,
Founder, Biomimicry Institute

# How we are Destabilizing the Planetary Water Cycle

Industrial Agriculture
Impermeable Surfaces
Destructive Forestry Practices

- 56% of World's population lives in cities
- Cities account for more than 70% of global CO2 emissions
- Cities are highly vulnerable to the impacts of climate change due to Impervious Surfaces
- Impervious Surfaces in the US:
  - 43,000 square miles (14% of total land)
  - 1/3 of the above is buildings
  - 2/3 is pavement; 4 million miles of roads

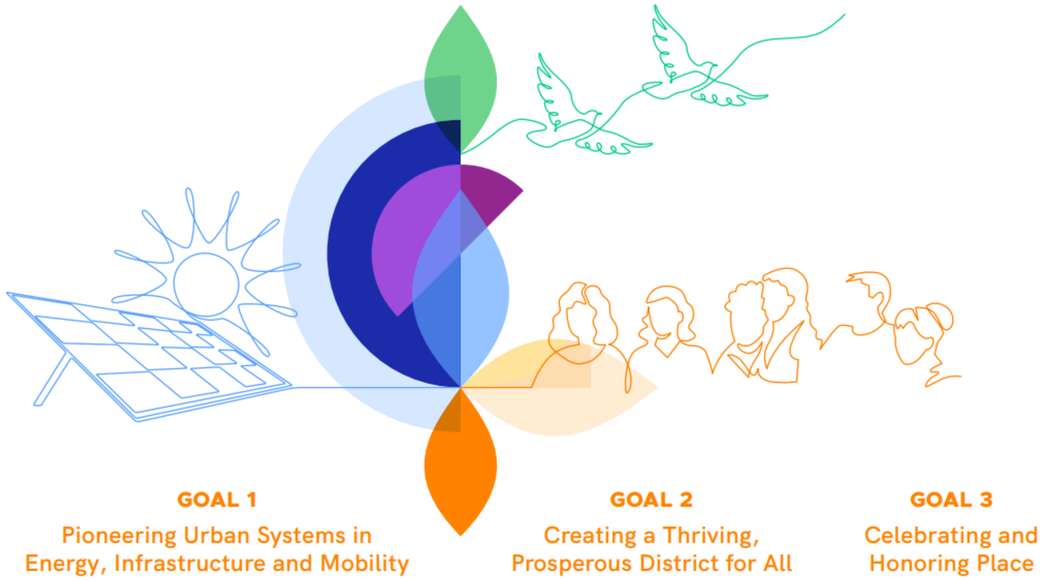
# Cities Helping Nature capture Carbon

- Soils globally sequester **1.5 gigatons** of carbon
- Trees and other types of vegetation sequester **7.9 gigatons**
- Wetlands: 3% of earth's surface but contain **2x carbon as all forests**
- Estimates are that we could capture an additional **20 gigatons** via regenerative agriculture, urbanism and carbon farming.

# What is Nature Positive Urban Design?

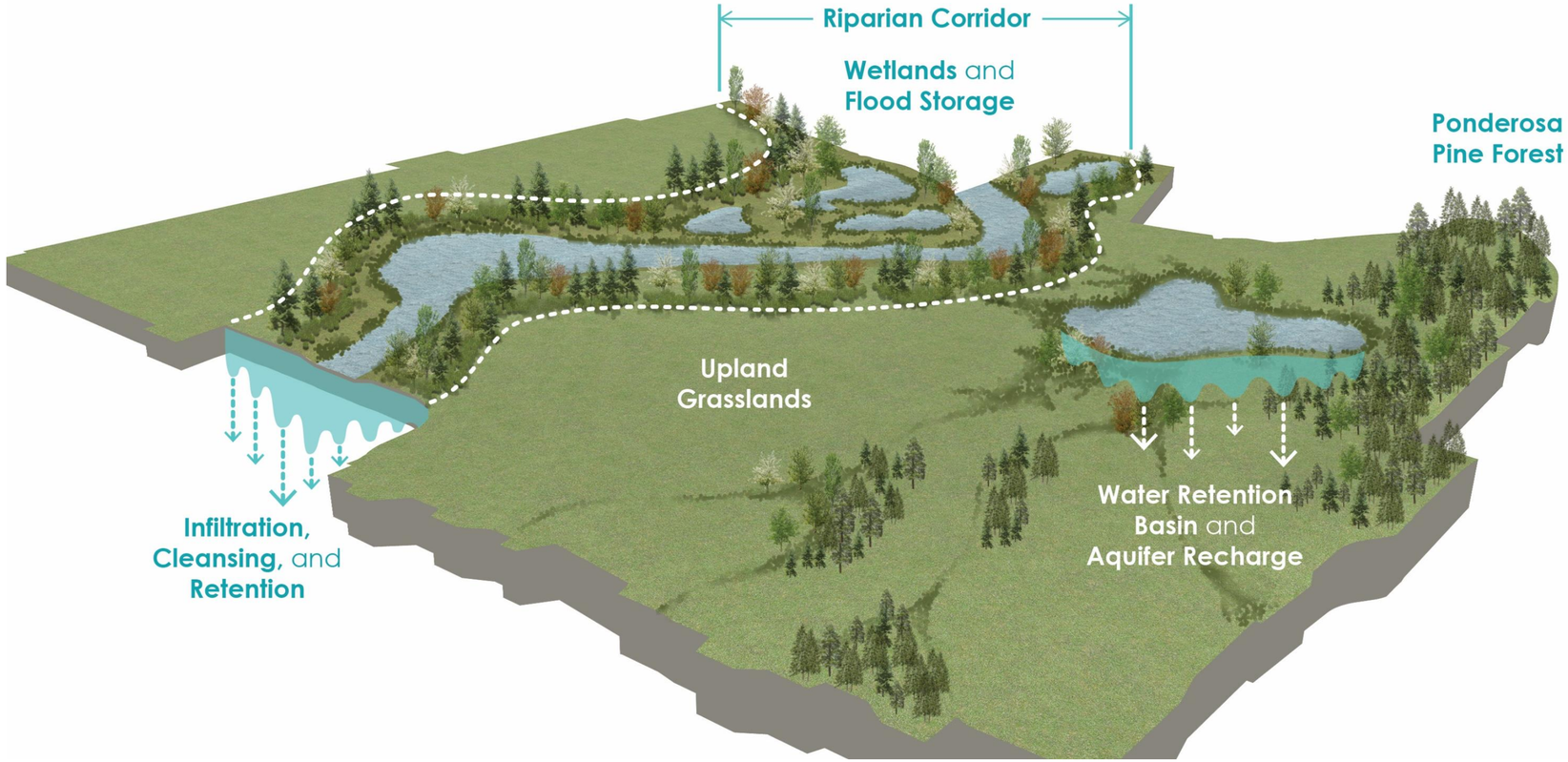
"The Sustainable Development Goals set by the United Nations stress the importance of local ecosystems and suggest that **all aspects of a city - its buildings, infrastructure, and natural surroundings - should actively contribute to environmental health**. This includes maintaining clean air and water, healthy soil, sequestered carbon, cycled nutrients, reduced erosion, reduced heat, and supporting biodiversity."

- Dayna Baumeister and Nicole Miller,
- Innovation for Ecological Transformation



# Design Premise: Ecological Context and Historical Indigenous Practices

- The Spokane River is **the center of life** for region
- **Four distinct ecosystems** present in the region encompassed: pine/ponderosa savanna, shrub-steppe grassland, riparian corridor, and floodplain.
- River provided food, water, a means of transportation and a meeting place for **indigenous people**
- The system is characterized by **grassy-floored open forests with ponderosa pine**, Douglas-fir, western larch, western white pine, and quaking aspen
- System provided **water retention, flow regulation, carbon sequestration, erosion control, soil warming, microbial activity and pollinator habitat**
- The dominant native trees species, Ponderosa pine supports **116 bird species, 70 mammals and 17 species of reptiles and amphibians**
- Coniferous Forests, Ponderosa Pine, historically sequestered up to **260 metric tons of carbon per acre**

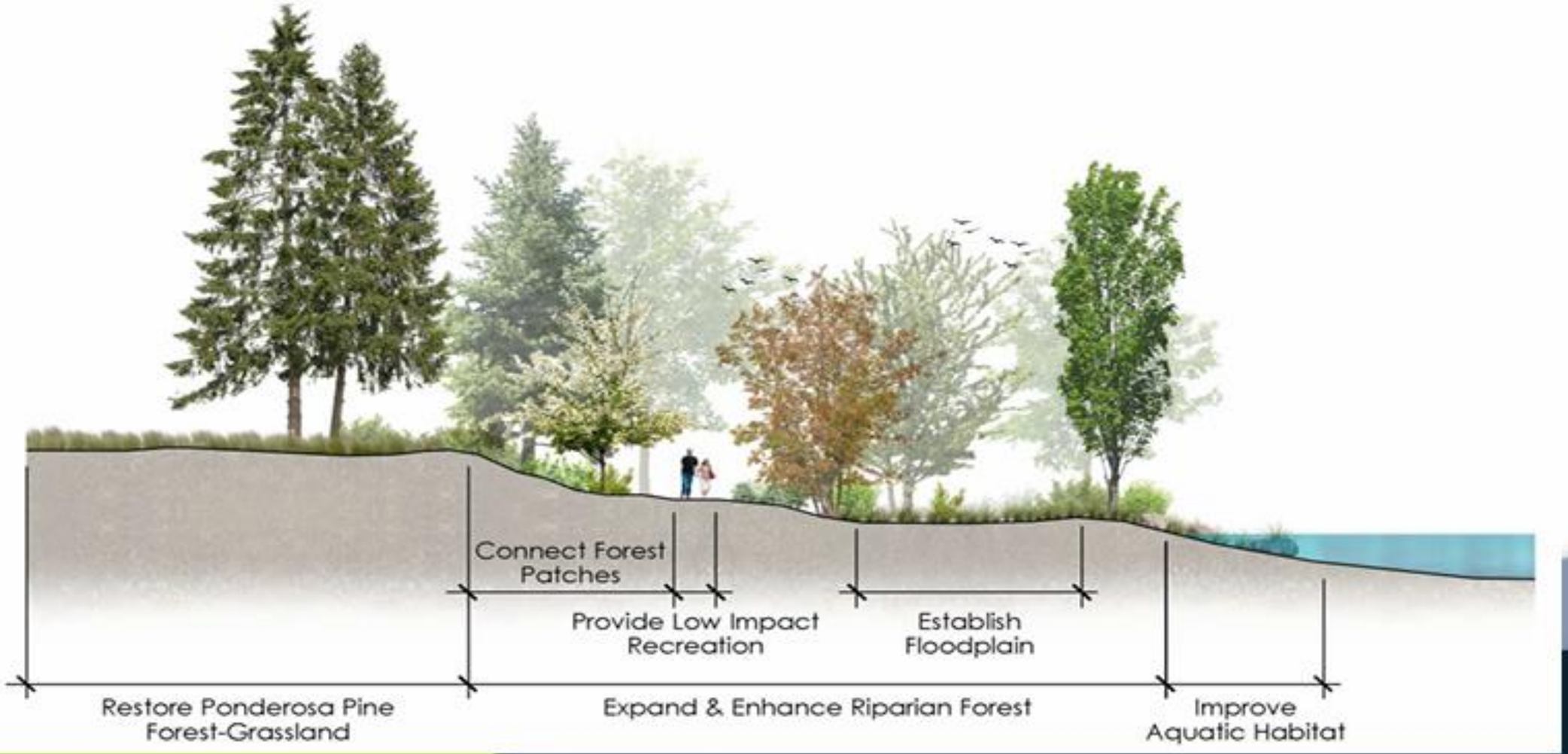



## UD Core Ecosystem Services

1. Air Filtration
2. Biodiversity
3. Carbon Sequestration
4. Energy Provision
5. Fire Adaptation
6. Nutrient Cycling
7. Pollination
8. Stormwater Management
9. Temperature Regulation
10. Waste Generation and Management
11. Water Cycling
12. Human Health and Wellbeing

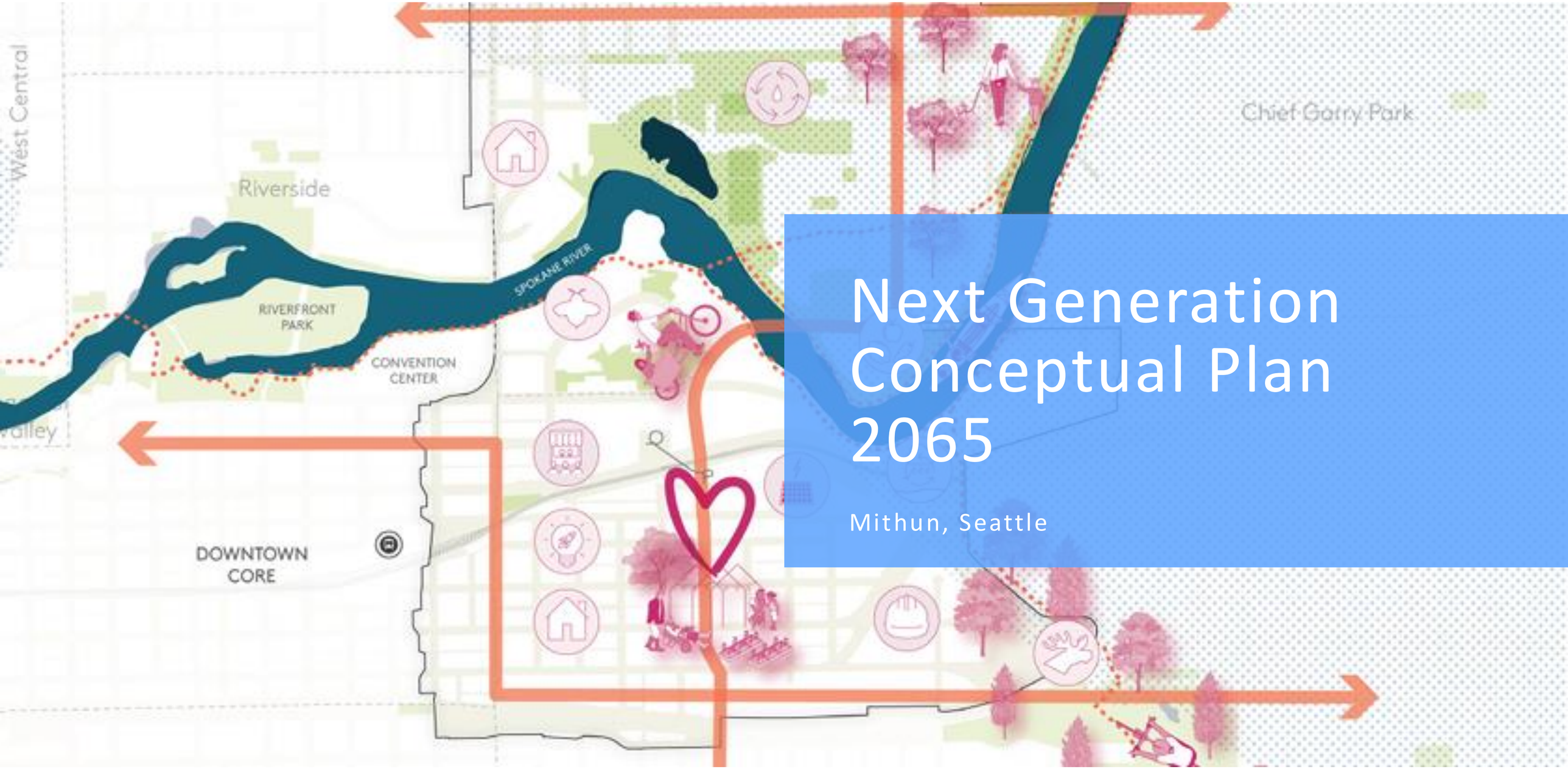
| Ecosystem Service | Target |
|---|---|
| Air filtration | AQI $PM_{2.5}$ and $PM_{10}$ in the urban core should not exceed that of native ponderosa pine savanna (in fire-free conditions). |
| Biodiversity | Environmental restoration activities will use species native to the ecosystem in appropriate locations in ratios similar to the original landscape. |
| Carbon Sequestration | $CO_2$ emissions from energy generated from fossil fuels and building construction should not exceed the net primary productivity (Mg C/ha/year) of the surrounding landscaping/vegetation including any engineered sequestration that may become feasible, and/or offset credits. |
| Energy Provision | Energy produced by rooftop solar and other distributed energy sources (geothermal and wind) should produce the equivalent net primary productivity of a mature ponderosa pine savannah. |
| Fire adaptation | Plant and maintain native fire-adapted vegetation that produces a fuel load similar to savanna grasses that burns quickly to reduce the incidence of and/or damage caused by catastrophic fire. Structures should have fire -retardant outer materials like the Ponderosa bark, and vegetation should emulate the quick-burning grasslands. |
| Nutrient Cycling | Open space areas should have the same ratio of trees to shrubs and grass as the ponderosa pine savanna ecosystem to enhance nutrient interception by roots and protect the system against nutrient losses. Artificial media in non-vegetated areas can also be used to absorb and retain nutrients. |
| Pollination | UD vegetation should mimic native perennial grasslands by including plant species known to host native pollinator communities represented in ponderosa pine savanna. |
| Stormwater Management | Zero percent impervious services or equivalent. |
| Temperature Regulation | The amount of shade in the developed urban ecosystem should be the same as what was provided by the ponderosa pine savanna. Shade targets could be met by both vegetation plantings and built structures. In addition, shade trees should be distributed equitably, as low-income areas tend to have fewer trees, and arguably less income to pay for air cooling. |
| Waste Generation & Management | The ecosystem assets and features of the pre-development UD site would have managed waste in a closed loop, meaning that all waste created would have been decomposed and recycled back into the ecosystem. |
| Water Cycling | Water withdrawals should be calibrated to protect the aquifer and limit water withdrawal to support historic aquifer recharge rates. |
| Human Health & Wellbeing | The ongoing development theme is to preserve the "winter camp" status of the area, as it was a meeting place for indigenous people where people come to share knowledge and food and culture. |

# Riparian Ecosystem Conceptual Cross Section




GREENE ECONOMICS

CASCARA LAND DESIGN




# Next Generation Conceptual Plan 2065

Mithun, Seattle

Partnership for Southern Equity™
TOGETHER WE PROSPER

JUST COMMUNITIES

# A Bold Reimagining of How Communities Grow

**Just Communities is helping neighbors and practitioners worldwide co-create more just, liberatory, and green communities.**

## 1. CENTERING RACIAL AND CLIMATE JUSTICE

The Protocol starts with an unwavering commitment to Racial Equity and Climate Resilience in every phase of organizing, planning, and implementing neighborhood-scale community development. We call these our *Just Communities Pillars* and they form the key imperatives that every community must address. The legacy and impact of structural and spatial racism and environmental injustice in land use policy and development – in the form of segregation, disinvestment, and displacement – has led to trapping millions of Black and historically disinvested communities of color in generational poverty (while others sustain wealth and privilege) and at constant risk from the growing impacts of climate change. This framework seeks to begin the important and necessary task of putting justice at the center of community development.

## 2. POWERFUL METRICS TO SHAPE EQUITY AND RESILIENCY OUTCOMES

The Protocol includes a set of seventeen comprehensive *Just Communities Commitments* organized into the five essential categories – Belonging, Opportunity, Wellbeing, Mobility, Environment – to help communities tackle the most entrenched and complex challenges facing communities today – poverty, blight and deteriorating infrastructure, lack of economic opportunity, environmental pollution, climate disruption, and health inequities.

## 3. FOUR IMPLEMENTATION PHASES TO ADVANCE THE WORK

The Protocol includes seventeen discrete and practical *Just Community Actions* organized into four implementation phases. Each action includes guidelines, engagement tips, and templates to help stakeholders move community-scale projects from vision to reality. They include: 1) Groundwork, 2) Governance, 3) Roadmap, and 4) Implementation.

## WHAT WE HEARD

**60+ Stakeholders**

**2 Open Houses**

**1 Focus Group**

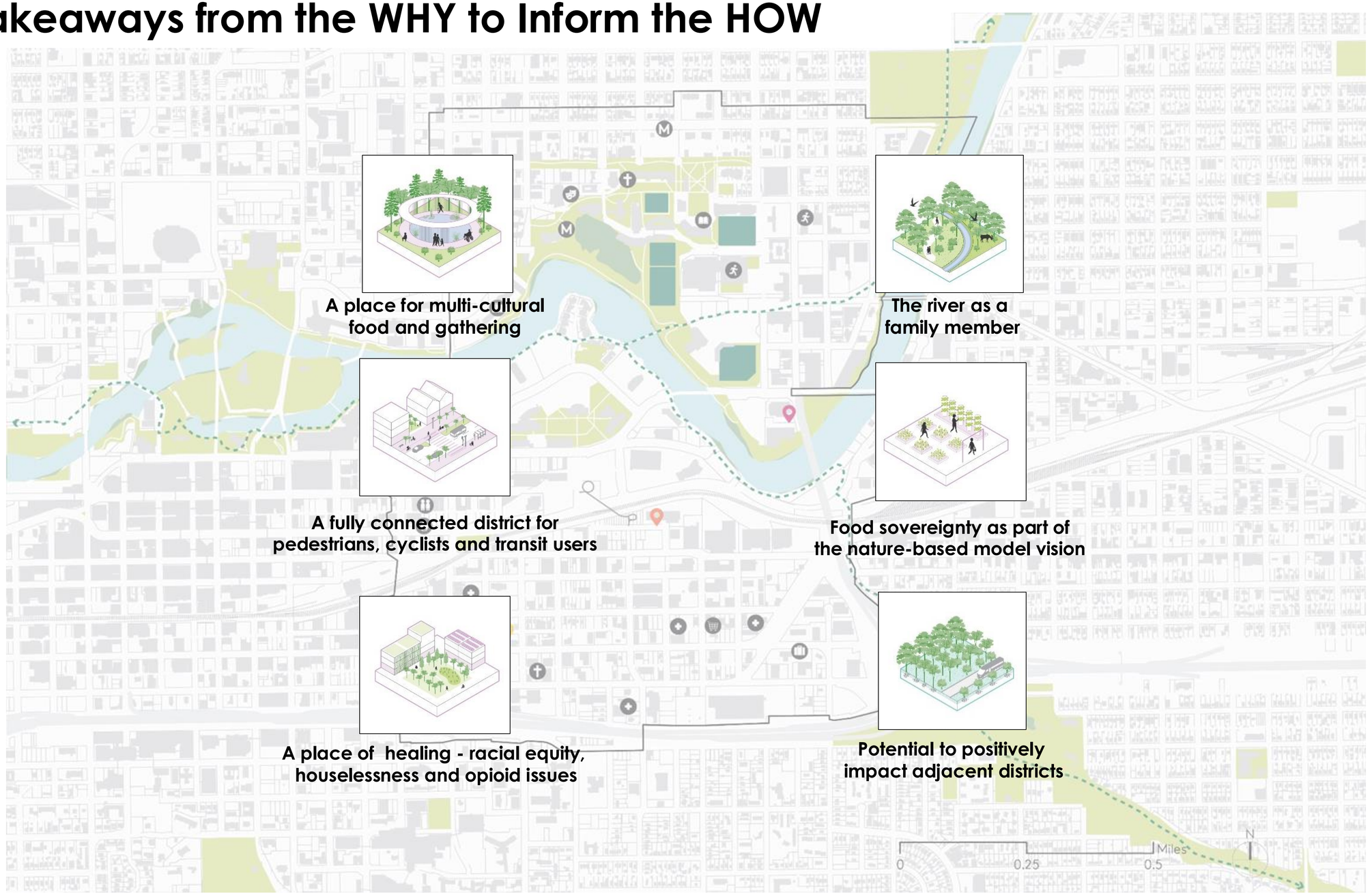
**5+ Interviews**

### Key Themes

- Create a District Heart
- Connect to the River
- River as a family member
- Restore Liberty Park
- Multicultural Center
- Food Markets
- Integrate Art
- Improve water quality and restore river health
- Food Sovereignty and Community Gardens
- Connect to Downtown
- Support and grow local businesses
- More cover and shelter
- More water throughout the UD
- More Trees
- Limit Displacement
- The houseless do not feel welcomed in UD
- Increase infrastructure such as benches, lights and trash cans

## ENGAGEMENT

# Main Takeaways from the WHY to Inform the HOW



# NATURE-BASED STRATEGIES PALETTE

**Coulee (Blue-Brown) Water**
Urban coulee streets for water conveyance, xeriscaping, and basalt gardens, with potential for deep-infiltration wells

**Blue-Green**
Infiltration and stormwater infrastructure including greenways /curbless streets/ rain gardens and permeable pavement

**Energy Independent Buildings**
Electrification and battery islanding which can be combined with resilience hub elements

**Urban Forests**
Areas for planting Ponderosa Pine groves, or micro forests such as Miyawaki Tiny Forests

**Clean Water Parks**
Accesible stormwater parks that slow the stormwater and reduce combined sewer overflows

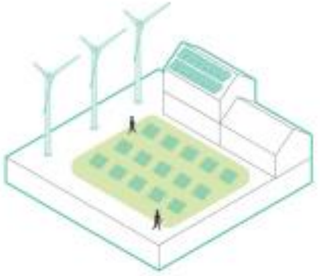
**Rainwater Harvesting**
Water efficiency programs at buildings/sites

**Multi-modal Mobility**
Ride shares, shuttles, and accessible transit programs

**Microgrids**
Renewable energy including community solar

**District Parking**
Coordinate parking and transportation demand management

**Shared Energy Systems**
Geothermal and ground coupling of water pipes to facilitate heat and cold transfer and reduce waste



**District Renewable Energy Production**
District renewable energy and micro-grids, solar on land or buildings

**Clean Soil Parks and Trails**
Bioremediaton of brownfield areas highlight phytoremediation of soils with artist program and research innovation

**Biodiversity Corridors**
Connect people, pollinators, animal habitat, and flyways for birds to and from the river and to parks

**Pixelation Across the District**
Green factor code infrastructure for planting both on land and buildings

**Street Tree Canopy**
Using silva cells or planters on basalt

**Water Storage**
Aquifer recharge ponds

**Recreation**
Active park improvements. Play areas, Kayak launch, basketball courts, pickle ball and active sports

**Mobility Hubs**
Micromobility stations, EV charging stations

# EQUITY, INCLUSION AND BELONGING STRATEGIES PALETTE

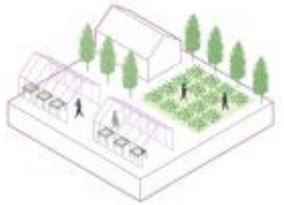
**Inclusive Childcare**
Early education and childcare choices including home based, care centers and education for all

**Inclusive Housing Choices**
More housing choices including rental, ownership, multi-generational, affordable, and middle housing

**Multi-Cultural Gathering**
Inclusive gathering spaces with arts and culture, public realm improvements both indoors and outdoors, with shade structures for people of all ages, abilities, and cultures to meet

**Multi-Cultural Market**
Multi-vendor marketplace, or pop-up markets for place-making and community connection. Could be day or night

**Rehabilitation and Infill**
Existing building retrofits and vacant lot infill to support and complement existing businesses and community orgs including energy, sustainability, public art upgrades



**Food Production and Distribution**
Multi-cultural food production and distribution opportunities for small businesses, job training, and workforce development

**Community Resilience Hub**
A network of community-serving facilities to support residents, distribute resources, coordinate communication, and reduce carbon pollution for both on-going social connection and emergency support services

**Inclusive Wayfinding + Storytelling**
Placekeeping in the public realm with public art, signage, furnishings, new plazas and viewpoints. May include multi-cultural and indigenous representation or interpretive storytelling.

**Food Growing and Access**
Individual and community gardens, urban agriculture, and access including fresh food markets, CSO pick ups serving multi-cultural needs

**Community Engagement and Research Center**
Community-serving facility to support civil participation and community based research advancing district goals

**Placekeeping**
Focus on enabling social connections with ample wayfinding, arts and culture elements, street furniture, wider sidewalks for outdoor uses, and universal design / complete streets

**Inclusive Services and Shelter for All**
Healthcare, childcare, early childhood education, shelter for people who are houseless, and other services and programs

**Anti-displacement Programs**
For businesses, community organizations, and residents

**Inclusive arts and culture Festivals and Events**
Arts, culture, education and community organization events

**Inclusive District Business**
Arts, culture, education, and business directory and marketing programs with a focus on enabling networking opportunities for small and startup businesses

**Inclusive Workforce Development**
Job training programs prioritizing historically marginalized populations

**Inclusive Educational Opportunities**
Programs, schools, and lifelong education

**Holistic Health and Wellness Festival**
As part of the U Vision 2044

**Equitable Business Incubator**
Life sciences and institutional partnerships supporting marginalized business enterprises

**Inclusive Public Realm**

Public spaces that encourage social mixing advance economic opportunities and community resilience

**Blue-Green Infrastructure**

City of Vancouver, Canada
Photo credit: City of Vancouver

**Coulee Green Infrastructure**

21st Street Redesign, Paso Robles, California
Photo credit: MIG/SVR

**Clean Soil Parks and Trails**

Hunters Point Park, Brooklyn, New York
Photo credit: Hunters Point Park Conservancy

**Clean Water Parks**

San Francisco, California
Photo credit: Nazanin Mehrin

Alberta Street, Vancouver, Canada
Photo credit: City of Vancouver

21st Street Redesign, Paso Robles, California
Photo credit: MIG/SVR

Sunset Park, Vancouver, Canada
Photo credit: City of Vancouver

# REWILD AND RECHARGE THE RIVER

## GREEN BLUE INFRASTRUCTURE, HABITAT, AND PUBLIC REALM

Purpose: Heal the Spokane River and improve the health of Spokane. Create more space for stormwater cleaning and infiltration to recharge the aquifer and create more people, flora, and fauna habitat and access to the river.

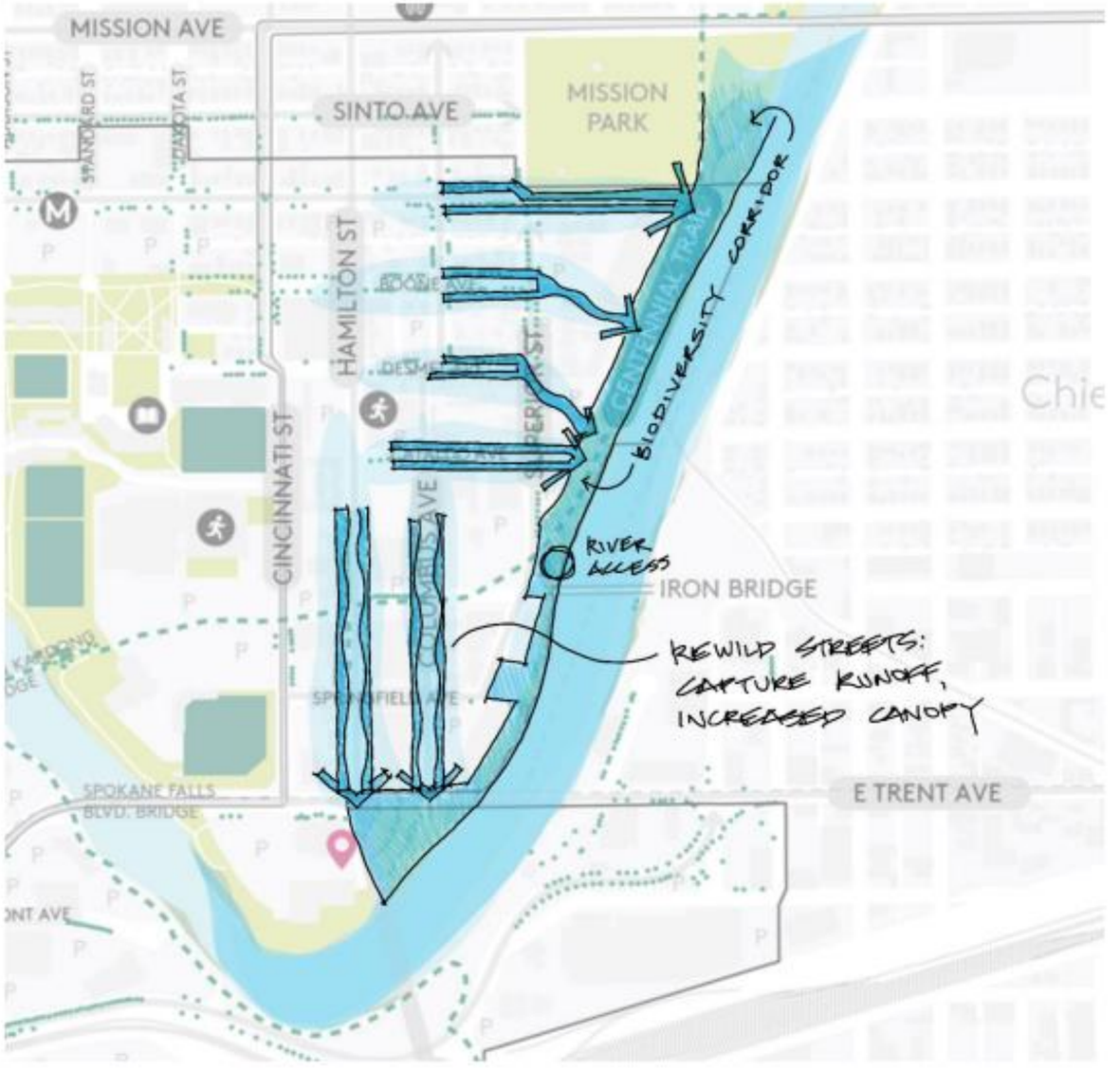
Blue-Green Streets

Biodiverse Corridors

Building Integrated Green Infrastructure

Clean Soil Parks and Trails

Urban Forests



# REVIVE WITH COULEE SYSTEM

## URBAN SPILLWAYS AND WATER CONVEYANCE INFRASTRUCTURE

Purpose: Create a new system to transform the South UD scablands into a more productive place for people and planet to thrive with physical, social, and economic networks and connections.

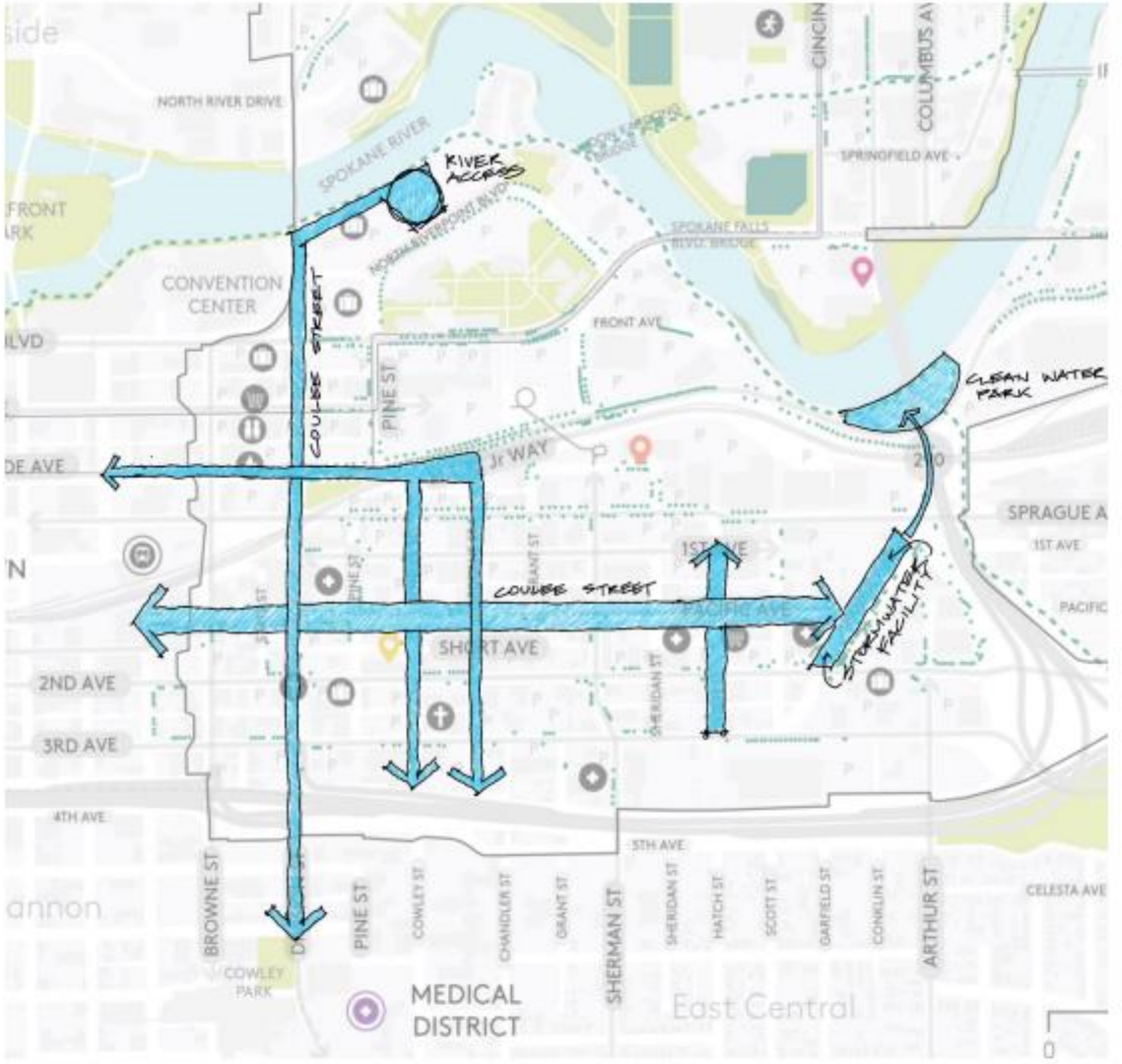
Blue-Green Streets

Biodiverse Corridors

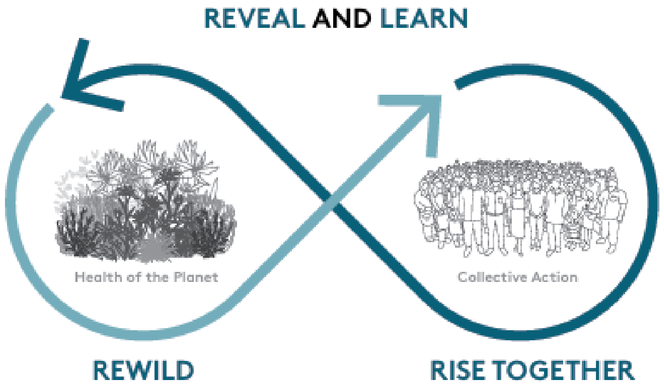
Building Integrated Green Infrastructure

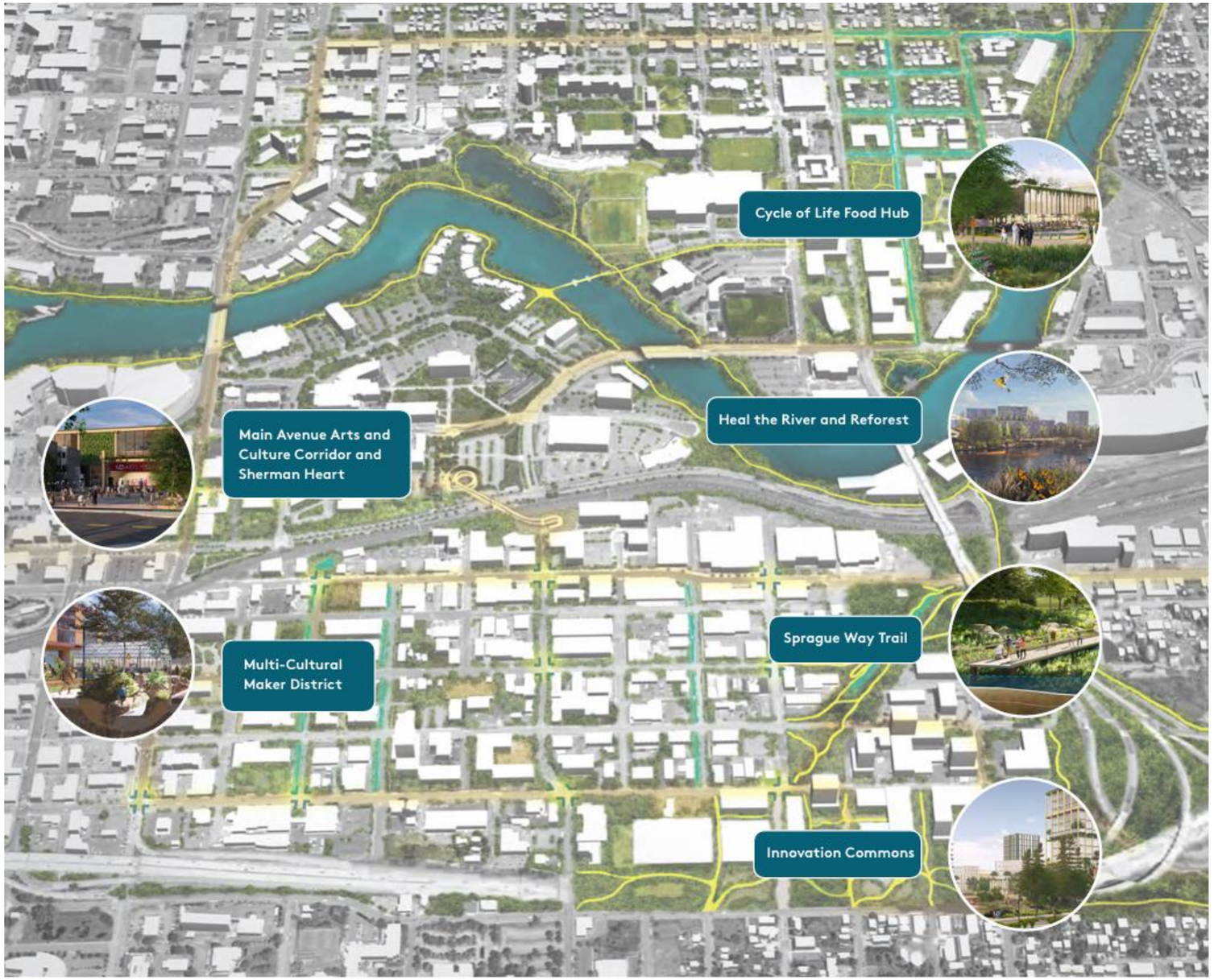
Coulee (Blue-Brown)

Placekeeping



# Six Key Nodes




N SUPERIOR STREE
FOOD R+D INNOVATION HUB
FOOD PRODUCTION AND DISTRIBUTION
VIBRANT PLAZA
TRAILS AND GARDENS
CENTENNIAL TRAIL
BLUE-GREEN STORMWATER INFRASTRUCTURE

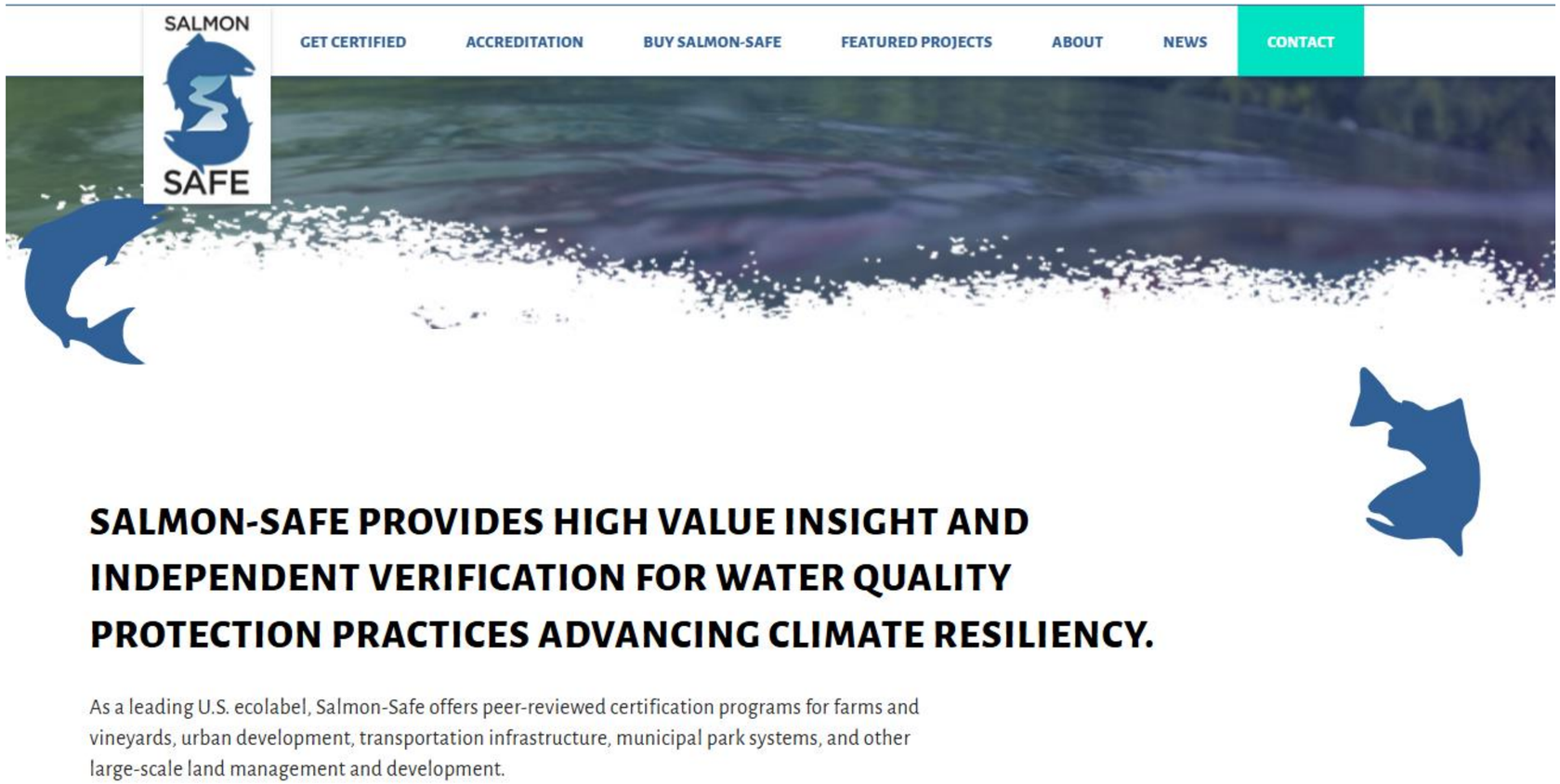

SPRAGUE WAY
PEDESTRIAN TRAIL AND PROMENADE
COULEE INFRASTRUCTURE
MULTI-USE PATH AND PACIFIC AVE CONNECTION
OVERLOOK
FILTER MEDIA
MULTI-USE PATH
TRAIL
FORMER N SPRAGUE WAY
BASALT SLOPE
FORMER S SPRAGUE WAY


COMMUNITY GARDENS
POLLINATORS
GREEN JOBS AND TRAINING
MAXIMUM WATER LEVEL
EFFECTIVE DEPTH
WALK
COULEE GREEN INFRASTRUCTURE
ROADWAY
PLANTING / XERISCAPING AT CURB EXTENSIONS
GROWING MEDIUM
FILTER MEDIA
BASALT BOULDERS


ARTHUR STREET OVER I90 LID
LIFE SCIENCE RESEARCH CAMPUS
MIXED USE AND RESIDENTIAL
PONDEROSA PINE GROVES
OFFICES AND LABORATORIES
MIYAWAKI FOREST
LEGACY LOOP
ARTHUR ST

# Certification:

Urban Development
Corporate and University Campuses
Golf Courses
Infrastructure
Parks and Natural Areas
Vineyards
Farms



# Salmon Safe Review: UD Next Generation Plan

| Support for existing plan | Additional Recommendations |
|---|---|
| Bioretention ponds; **returning the land to hydrologic functions and proposed Stormwater Park** along Trent and Hwy 290. Supports riparian and habitat restoration | Water conservation:<br>• Additional vegetation recommended to be **drought tolerant**<br>• **Reutilize all stormwater** and wastewater (grey and black) |
| Restoring Sprague Way into a **reforested Trail; eliminating vehicular traffic from existing roads and waterways** | Riparian Corridors: Look to **expand buffers** where possible |
| "Rewilding" – **remove unnecessary impervious surfaces and proposes nature-based infrastructure** | **Avoid materials that contaminate run-off**: uncoated copper, zink, galvanized steel and pressure-treated wood |
| **Green open space doubles** from 127.5 acres to 231 acres (NIC university open space) | Ensure all contractors commit to adhering to **Salmon Safe's zero sediment runoff goal** |
| | Operations and Management: Review, amend and adopt **integrated pest management and pesticide free practices** |

# Thank you!

Juliet Sinisterra, CEO

jsinisterra@spokaneudistrict.org