

# Ecosystem Services Valuation for Natural Capital *Opportunities & Lessons Learned*



**Environmental Law Institute**

***Wetlands & Hazard Mitigation – Opportunities for Integration***

**Oct 31 – Nov 1, 2023**





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Project Management & Stakeholder  
Engagement



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Ecosystem Services Valuation & Analysis



### **Acknowledgements**

Ecosystem Sciences Foundation

Plan-It Geo

Colorado State Forest Service

Idaho Department of Lands

City of Snoqualmie, WA

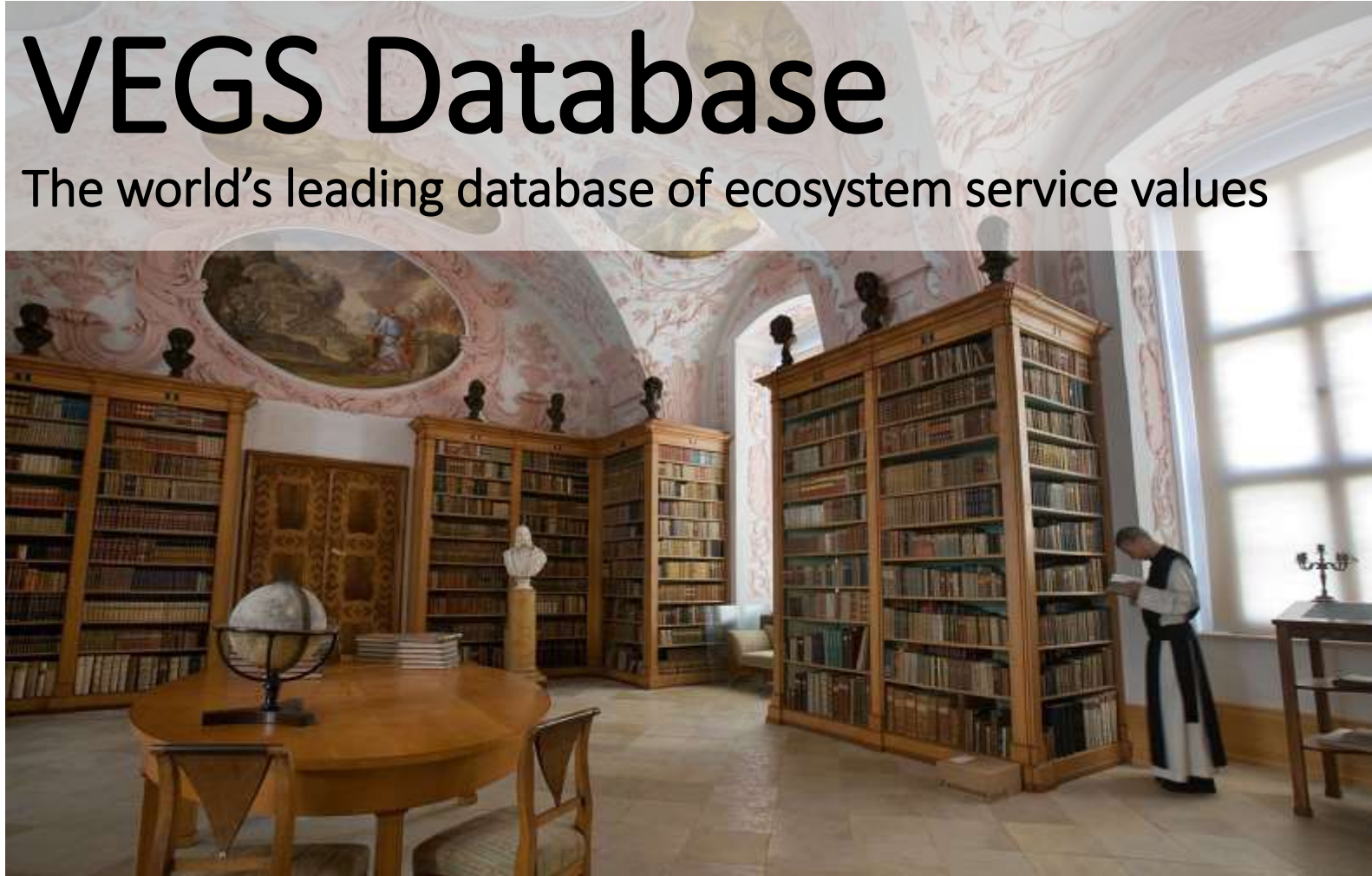
King County and City of Seattle

# Ecosystem Services Valuation

## *The Process*

# VEGS Database

The world's leading database of ecosystem service values



# Ecosystem Services Valuation

## *The Process*

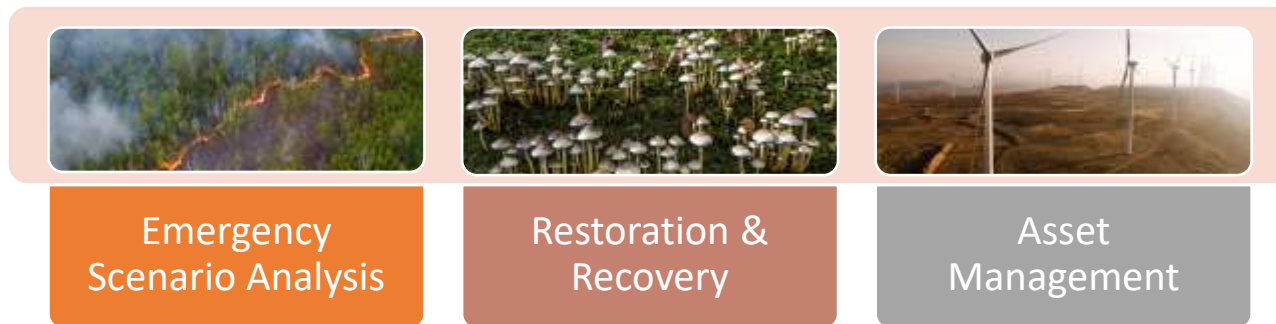
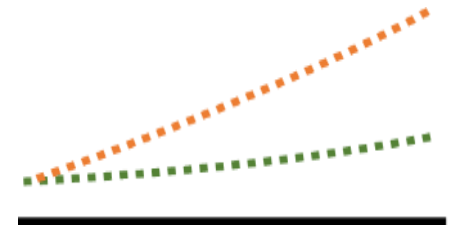
### Ecosystem Service Framework



### Spatial Data

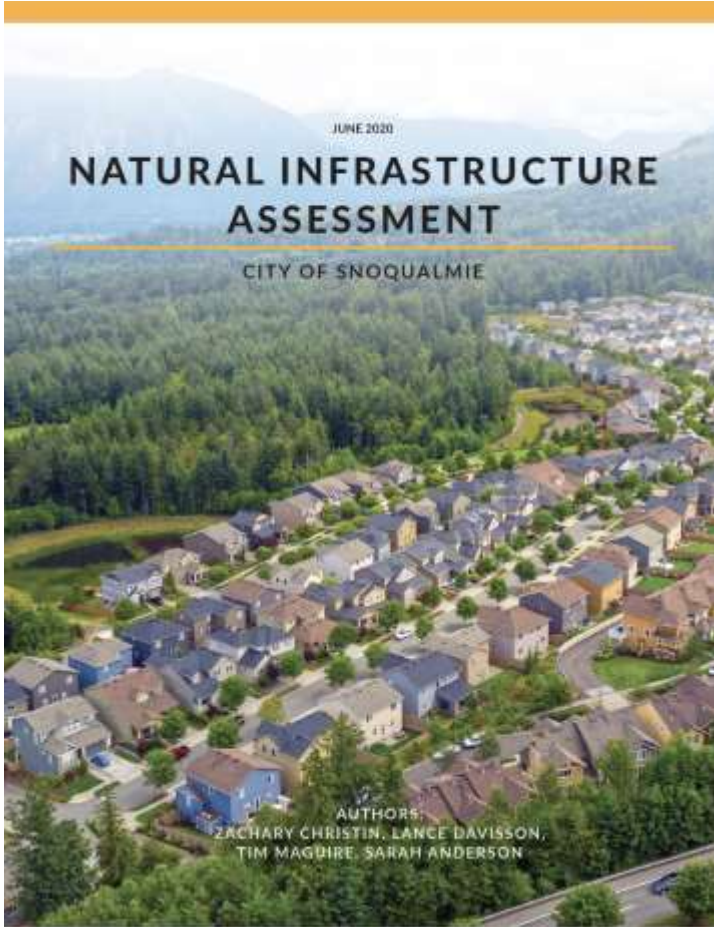


### Asset Value



# Ecosystem Services Valuation

## The Value of Natural Capital -- Results



### EXECUTIVE SUMMARY VALUING SNOQUALMIE'S NATURAL INFRASTRUCTURE

The Snoqualmie National Wetlands and Forests Inventory establishes the wetlands, riparian, water quality, and timber standing values of Snoqualmie's urban forest. Using geographically referenced land cover and a proven Ecosystem Service Valuation method, this assessment analyzed the natural infrastructure benefits delivered by the City's urban forest to the community at large. Recommendations and resources are provided. This assessment supports Snoqualmie's urban forest management and investments in the City's overall environmental and forest health.

**+70%**  
FOR BEST MANAGEMENT PRACTICES (BMP) TO BE ADDED TO THE CITY'S LAND COVER DATA

**\$5.8M TO \$7.3M**

ANNUAL VALUE OF ECOSYSTEM SERVICES PROVIDED BY THE CITY'S URBAN FOREST TO SNOQUALMIE'S URBAN FOREST

Ecosystem Service	Low	High
Wetland Services	\$1,900,000	\$1,075,000
Forest Services	\$3,900,000	\$6,225,000
<b>Total</b>	<b>\$5,800,000</b>	<b>\$7,300,000</b>

### NATURAL INFRASTRUCTURE IN ECONOMIC DECISION MAKING

In addition to providing important ecosystem services for streambank protection, water quality and riparian stability, the Riparian Forest Inventory (RFI) has provided a public decision tool for the City of Snoqualmie. It is a key tool for managing, with funding, in their forest and riparian forest.

#### IMMEDIATE OPPORTUNITIES

Key future investments for funding in Snoqualmie include riparian forest, water quality and riparian stability. The Riparian Forest Inventory (RFI) has provided a public decision tool for the City of Snoqualmie. It is a key tool for managing, with funding, in their forest and riparian forest.

#### ADDITIONAL OPPORTUNITIES

- These opportunities, listed in no priority, will have additional benefits and will increase in importance.
- Improve riparian forest health, including County Forest Lands and local riparian forest, to support riparian forest and riparian forest projects.
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### WHEN ACCOUNTING FOR ECOSYSTEM SERVICES VALUE RESULTS SHOW THAT PUBLIC FORESTS IN THE CITY OF SNOQUALMIE GENERATE

**\$158M TO \$195M OVER 50 YEARS**



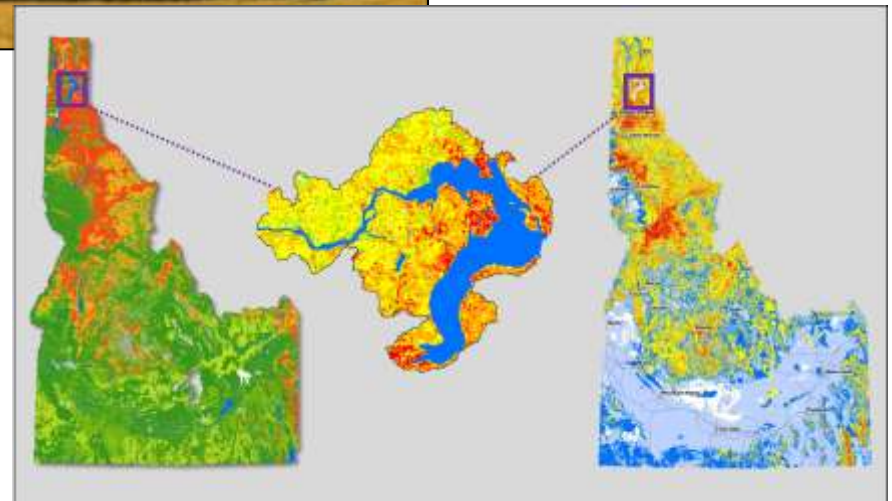
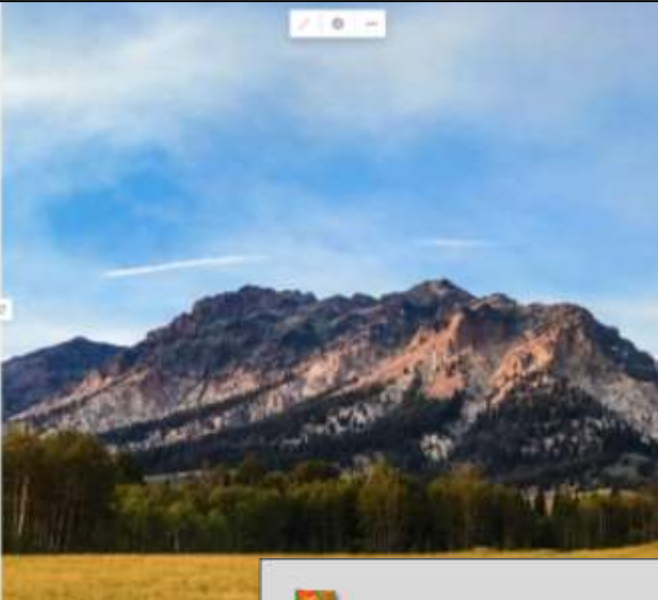
# Ecosystem Services Valuation

## *The Value of Natural Capital -- Results*

**Idaho's Ecosystem Services Valuation (ESV) Explorer**

Examine Idaho's Natural Capital and the Value it Provides to Idahoans.

This project is funded in part by the Idaho Department of Lands in cooperation with the USDA, NR, Grant.



# Ecosystem Services Valuation

## *The Value of Natural Capital -- Results*

**South Platte River Urban Waters Partnership**

**Natural Capital Asset Map and Decision Support Tool**

Colorado's South Platte River Watershed encompasses approximately 4 million acres and includes upper watershed, urban and plains natural assets, critical to the environment and people of the watershed. Under the leadership of the South Platte River Urban Waters Partnership (Colorado State Forest Service, US Forest Service and US Environmental Protection Agency (EPA)), the Natural Capital Resource Assessment maps the natural assets and values the ecosystem services provided within the watershed.

**Natural Capital Asset Map and Decision Support Tool**

**Natural Assets Ranking**

High

Low

Layers

Cities

Project Areas

**NATURAL CAPITAL ASSET MAP**

**ECOSYSTEM SERVICES VALUATION**

**PROJECT RESOURCES**

**EARTH ECONOMICS**

**the keystone concept.**  
sustainable strategies.

# Valuing Natural Capital

## *Lessons Learned*

- Helps to have ***deeply invested partners*** – co-creation of project, report, tools
- ***Policy concepts at the front***
- ***Outputs and results in stakeholder's business case document/process***
- Scoping – **“Discovery Phase”**
- **Simplify, communicate, target** key policy goals / desired outcomes
- **Scale matters**





# Valuing Natural Capital *Opportunities*



- The value of ***organic amendments*** – current project with King County & City of Seattle Project
- ***Climate Action***: natural capital accounting; carbon sequestration; functional landscapes
- ***Asset Management***
- ***FEMA Mitigation Grants***



# THANK YOU!

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