

Putting Stewardship on the Map

Using Mapping Tools to Build Partnership

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An Introduction to the Denver Urban Field Station

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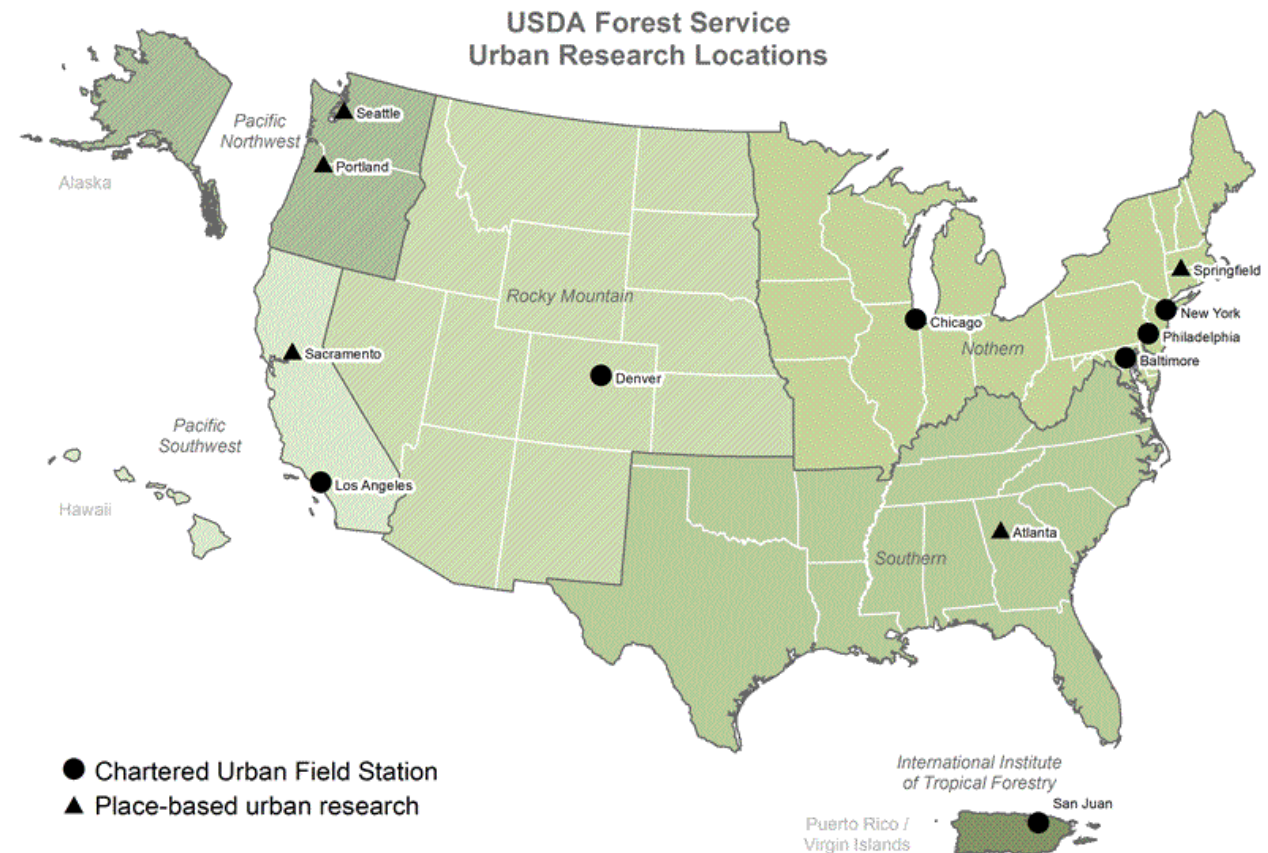


Urban Field Stations

- “ An **Urban Field Station** is both a physical place and an extensive network of interdisciplinary scientists and partners working on developing research, curating data, and advancing and delivering science to improve the quality of life and natural resources in urban and urbanizing areas, using an integrated socio-ecological approach.”

-USDA Forest Service

(<https://www.nrs.fs.fed.us/ufs/>)



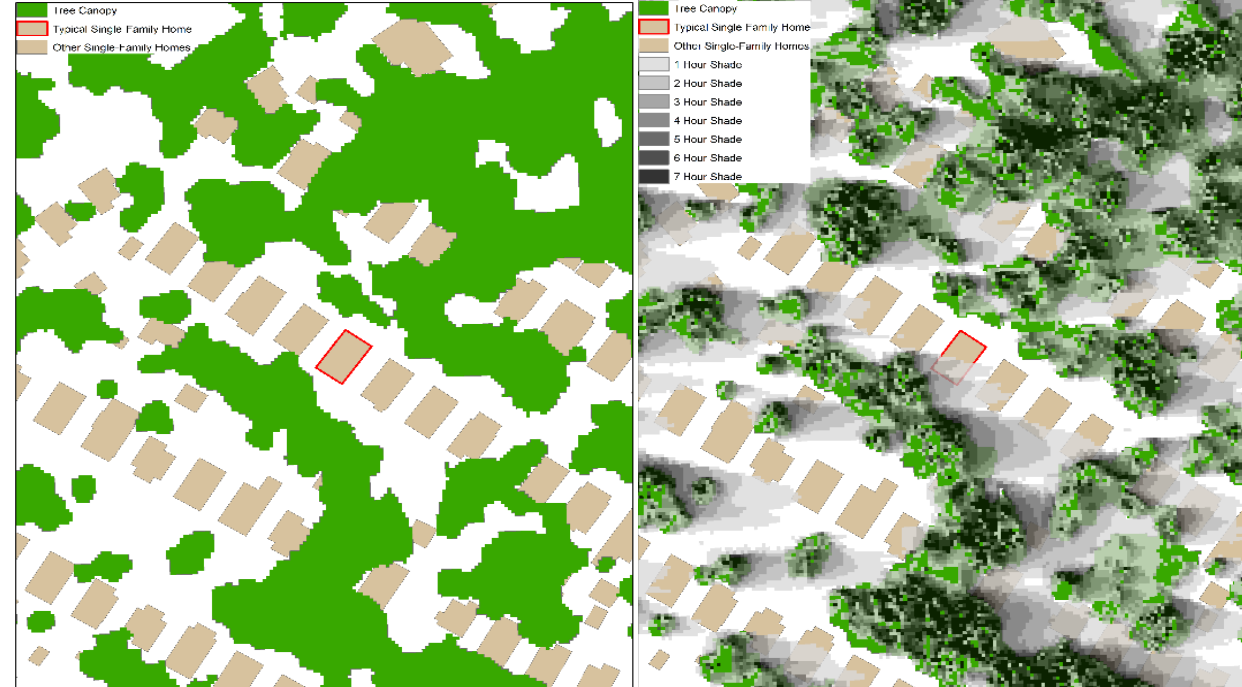
UFS mission

- Extends USFS mission and relevance to urban areas and broader segment of population
- Work to improve quality of life in urban areas
- Use place-based research and data to improve understanding of:
 - Biophysical
 - Socio-economic
 - Integrative
- Engage urban resident/organizations as stewards and collaborators
- Support goals through application of USFS urban forest planning tools



Common UFS topics

- Urban tree canopy mapping
- Urban forest planting and stewardship
- Urban park management and user experience
- Invasive species management
- River corridor restoration
- Recreation access
- Stormwater management
- Urban hydrology
- Cultural landscapes
- Urban agriculture and food systems
- Heat Island



DUFS role for Front Range

- Serve as hub for data, best practices, research results
- Help coordinate, enable and communicate research on critical topics related local and regional “urban socio-ecological systems and natural resource management” for Front Range
- Focus on topics such including those just mentioned, but also uniquely western issues such as....



DUFS role for Front Range

- WUI lands management and fire-smart planning, fuels treatment
- Large public lands recreation access and management
- Headwaters watershed management
- Water-smart landscapes
- Urban forestry for semi-arid region
- Drought management
- Urban dry gulch management



DUFS network role for Front Range

- Help build partnership and serve as a directory and clearinghouse for both **researchers** and **stewardship organizations**
- Two STEW-MAP surveys:
 - Environmental stewardship community (in process)
 - Research community (planned)





Denver Urban Field Station

DUFS Home

DUFS Team

DUFS Partners

STEW-MAP

Home / Denver Urban Field Station

Denver Urban Field Station



The Denver Urban Field Station (DUFS) is a collaborative research and practice unit of the USDA Forest Service (USFS) Rocky Mountain Research Station exploring the connections between people and nature and the role of vegetation in semi-arid cities, towns, and developing regions of the Intermountain West and Great Plains.

DUFS is part of the larger network of urban field stations producing place-based research with urban implications. More information about the network of urban field stations can be found at <https://www.nrs.fs.fed.us/ufs/>.

Research at DUFS emphasizes the following:

- Urban Ecosystems
- Stewardship and Civic Engagement
- Ecosystem Services
- Resilience, Health, and Well-being

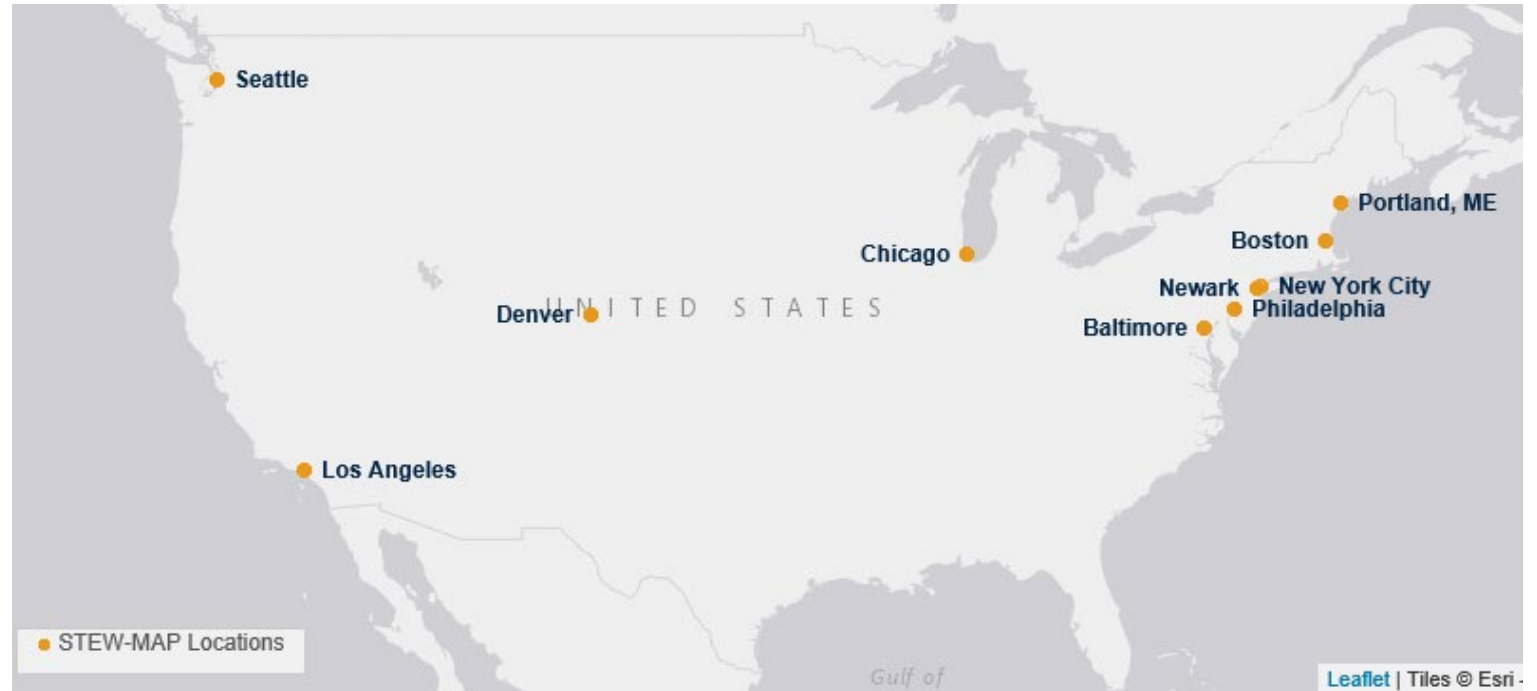
Highlighted projects

STEW-MAP

The Denver Environmental Stewardship Mapping (STEW-MAP) Project is the first DUFS collaborative research project. Based on methodology developed by the New York City Urban Field Station and implemented in numerous cities nationwide and internationally, the Denver STEW-MAP is designed to paint a picture of the region's environmental stewardship "landscape", documenting where the many private and public sector organizations

<https://www.fs.usda.gov/rmrs/Denver>

STEW-MAP locations



STEW-MAP locations



Putting stewardship on the map:
Using mapping tools to build
partnerships

Denver Urban Field Station

Travis Warziniack, PhD

USFS Rocky Mountain Research Station

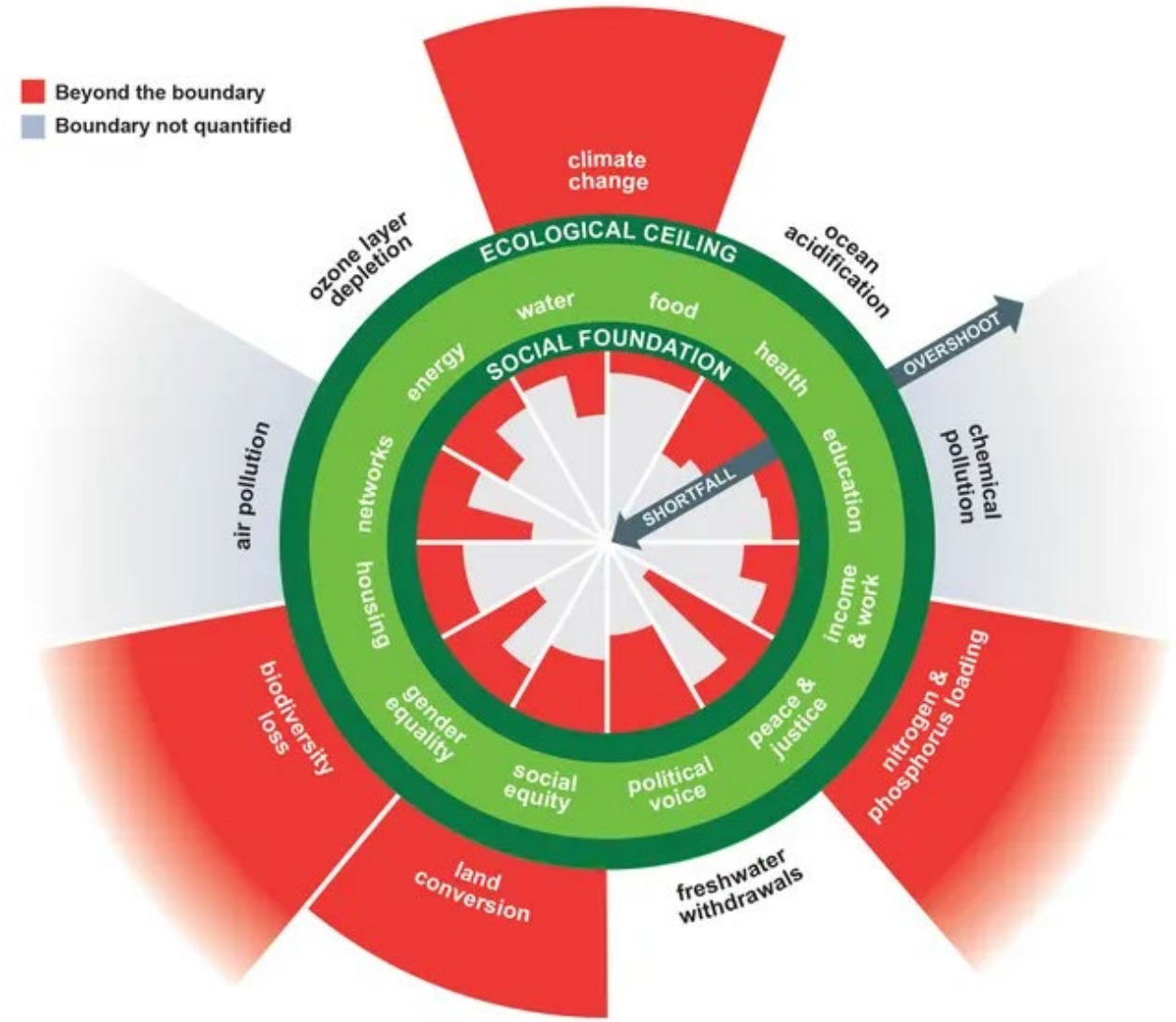
Denver Urban Field Station

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Doughnut Economics

Kate Raworth



Shared Stewardship



Working together to achieve
common goals and objectives



Stewardship groups are on the
front lines of most issues



Extend the reach of everyone



What is stewardship?

- Conserving
- Managing
- Transforming
- Monitoring
- Advocating for
- Educating the public about

the environment in the Metro
Denver area.

Who takes care of Denver?

STEW-MAP Data Include:



Organizational Characteristics

STEW-MAP provides information about the organizational characteristics of each group including year founded, mission, primary work sites, services offered, budgets and staff. At the same time, STEW-MAP allows you to better understand how each group functions through their expressed goals, impacts and modes of communication.



Geographic Turf

STEW-MAP displays the area of activity, or 'stewardship turf,' of each group. Stewardship turf could be an entire park, a forest patch, or a watershed. These geographic data can demonstrate the overlaps and gaps in stewardship capacity across a landscape and can be analyzed in concert with demographic and environmental characteristics of communities.



Networks

STEW-MAP displays a group's social network to understand how civic environmental organizations are connected. This enables us to examine the structure and function of environmental stewardship across a city or region. From social network analyses, we can assess which organizations are operating as brokers of information, funding, and services; the role of government in relation to these civic stewardship organizations; and which organizations are more isolated than others.

Data overview



209 GROUPS SURVEYED



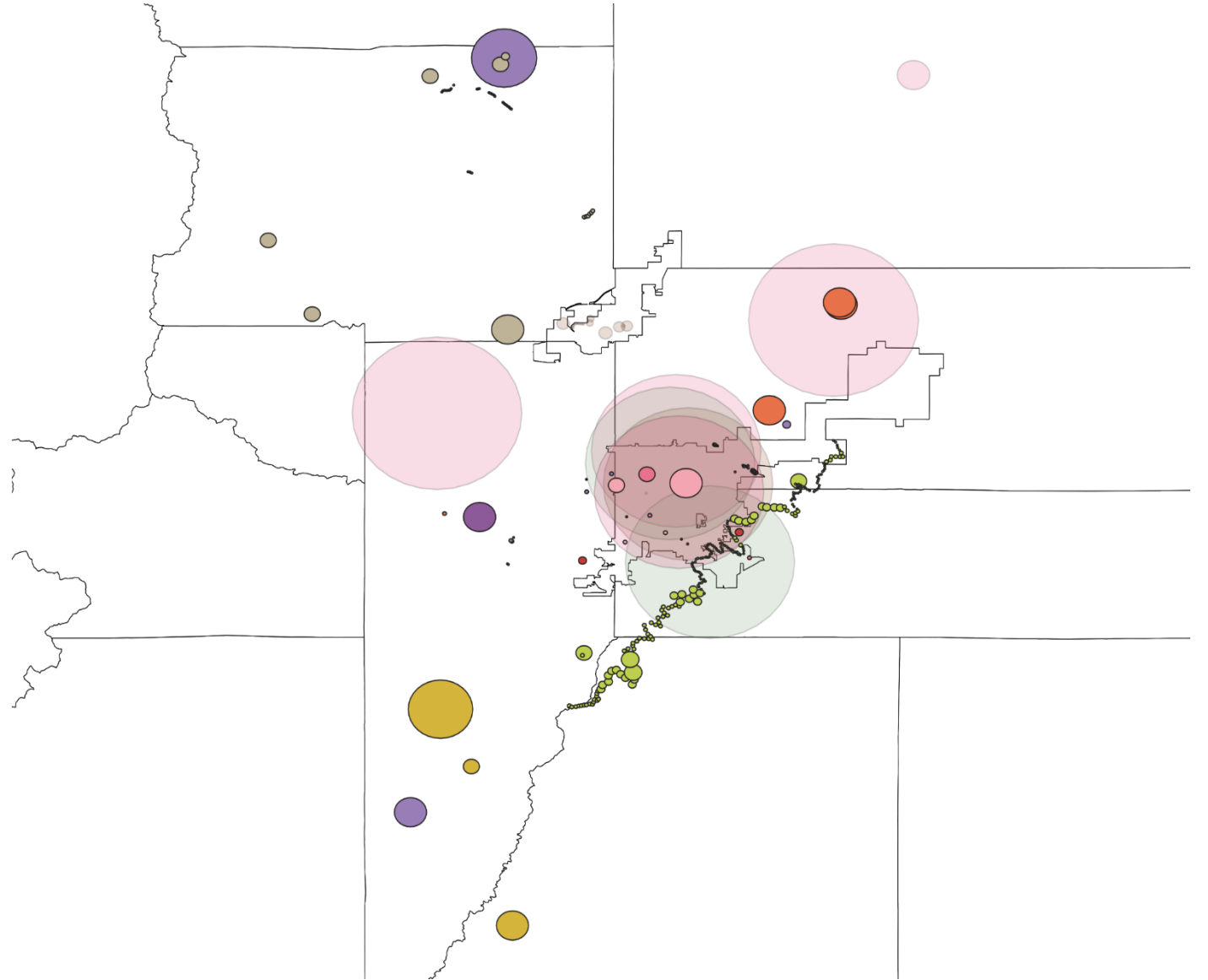
RESPONSES:
30 COMPLETE – 46 STARTED



22 PERCENT RESPONSE
RATE

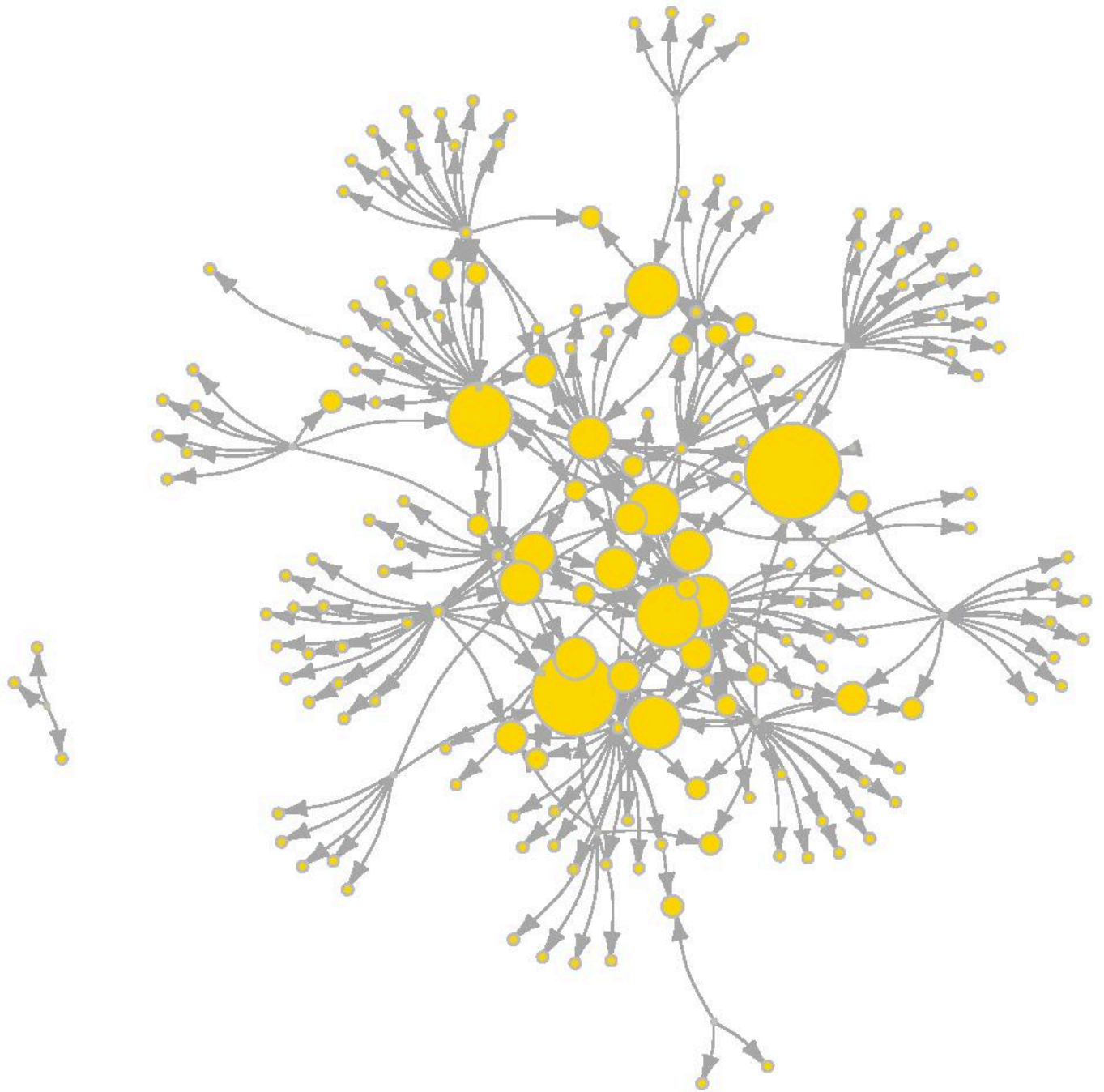
Where does stewardship happen?

24 mapped areas



Network Visual

24 respondents named at least one group for a total of 183 different named groups.



Network of respondents



Average number of connections:
9.17 groups

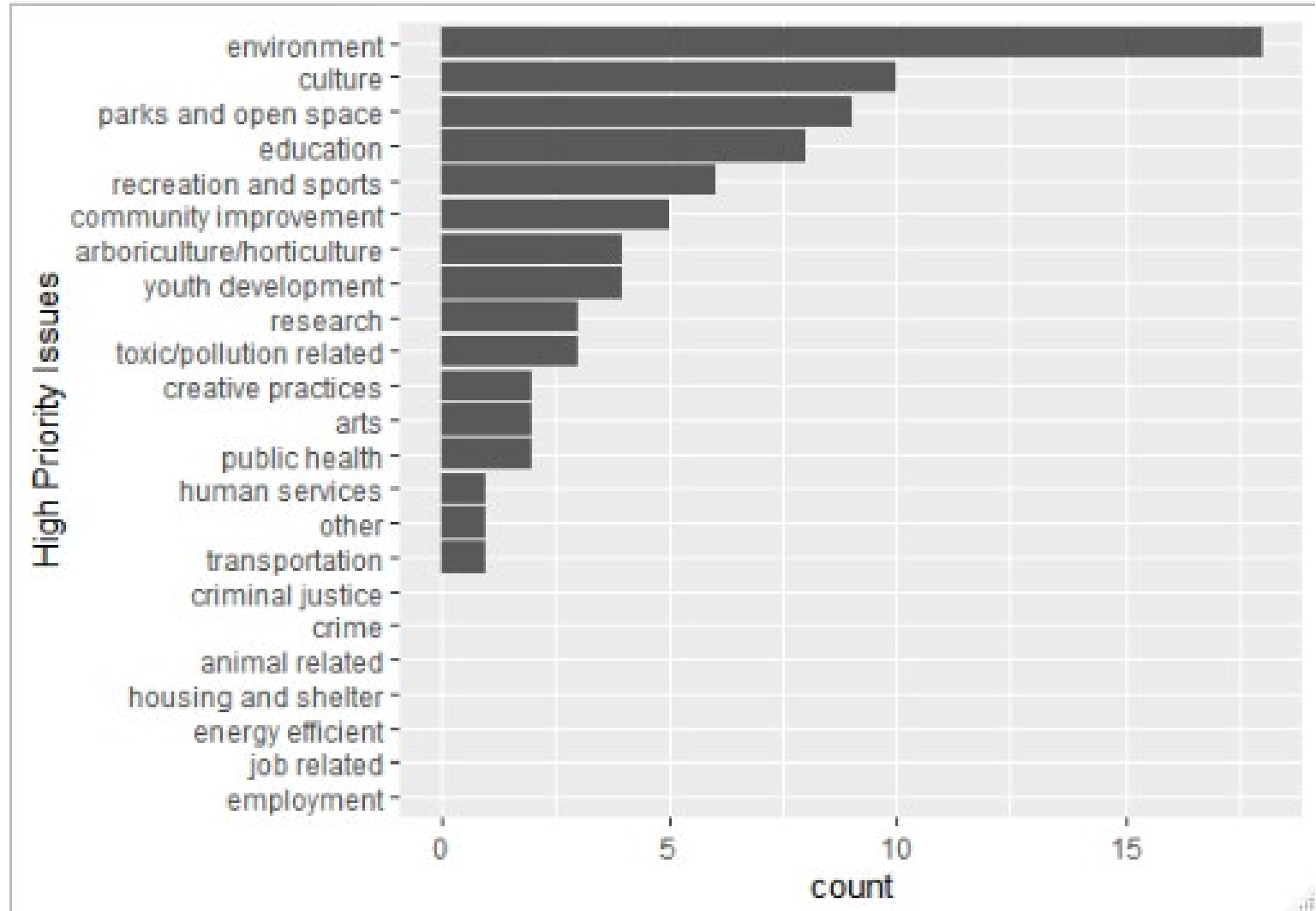


Top 4 named organizations:

City and County of Denver	9
US Forest Service	8
Colorado Parks & Wildlife	6
Metro DNA	6

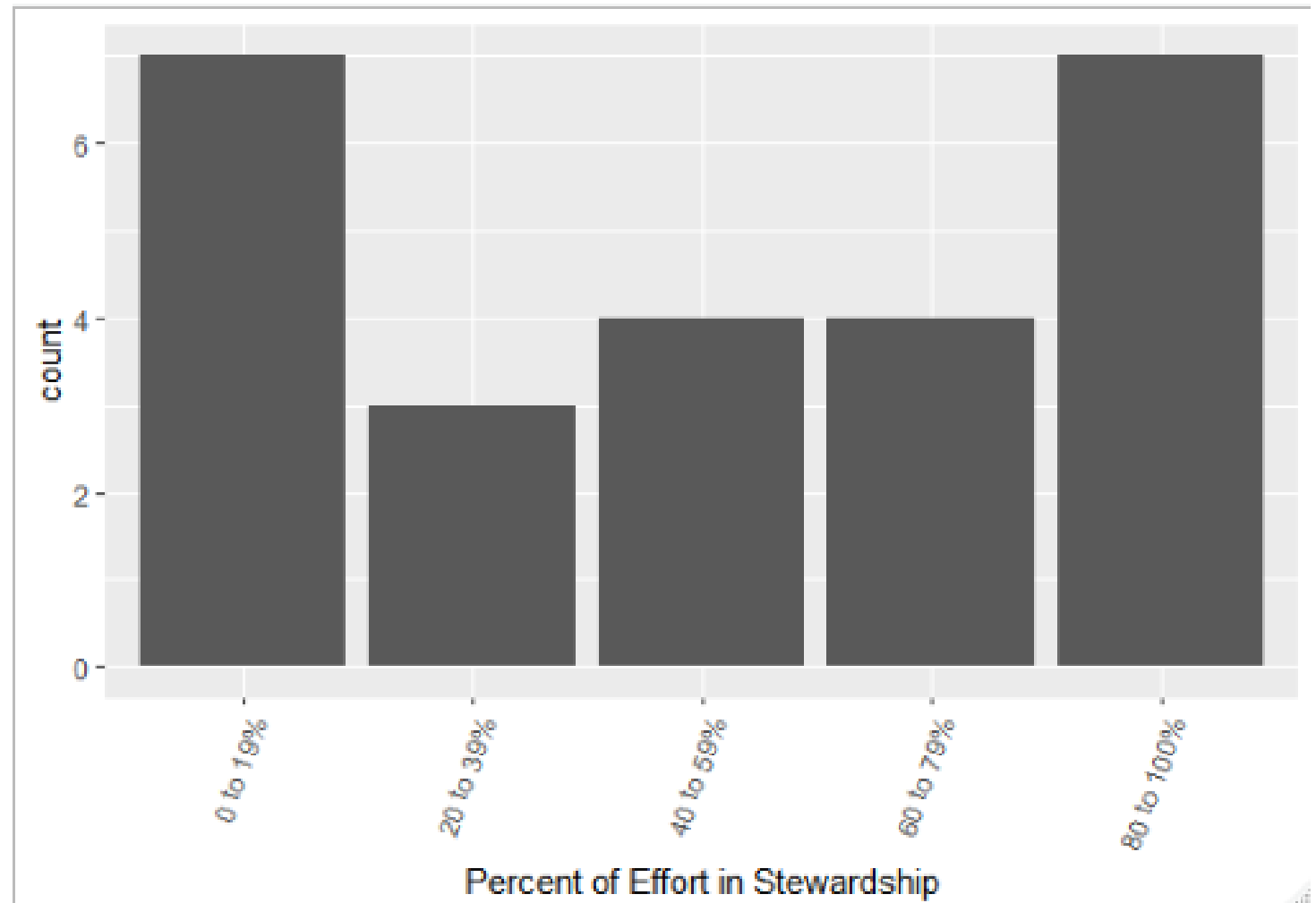
Survey results:

- Of these what are your group/organization's top three priorities?



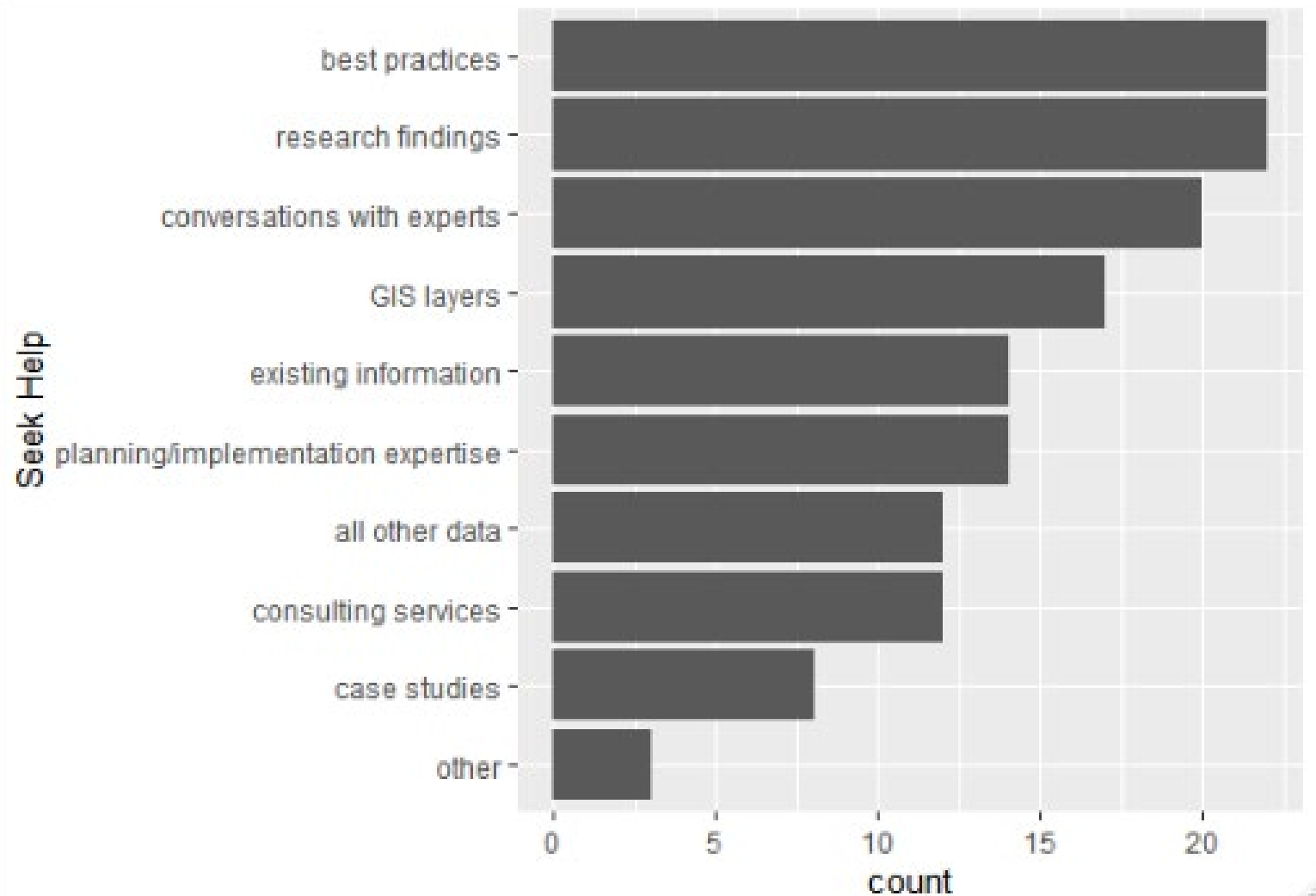
Survey results:

- What percentage of your group/organization's effort has been for stewardship during the past year?



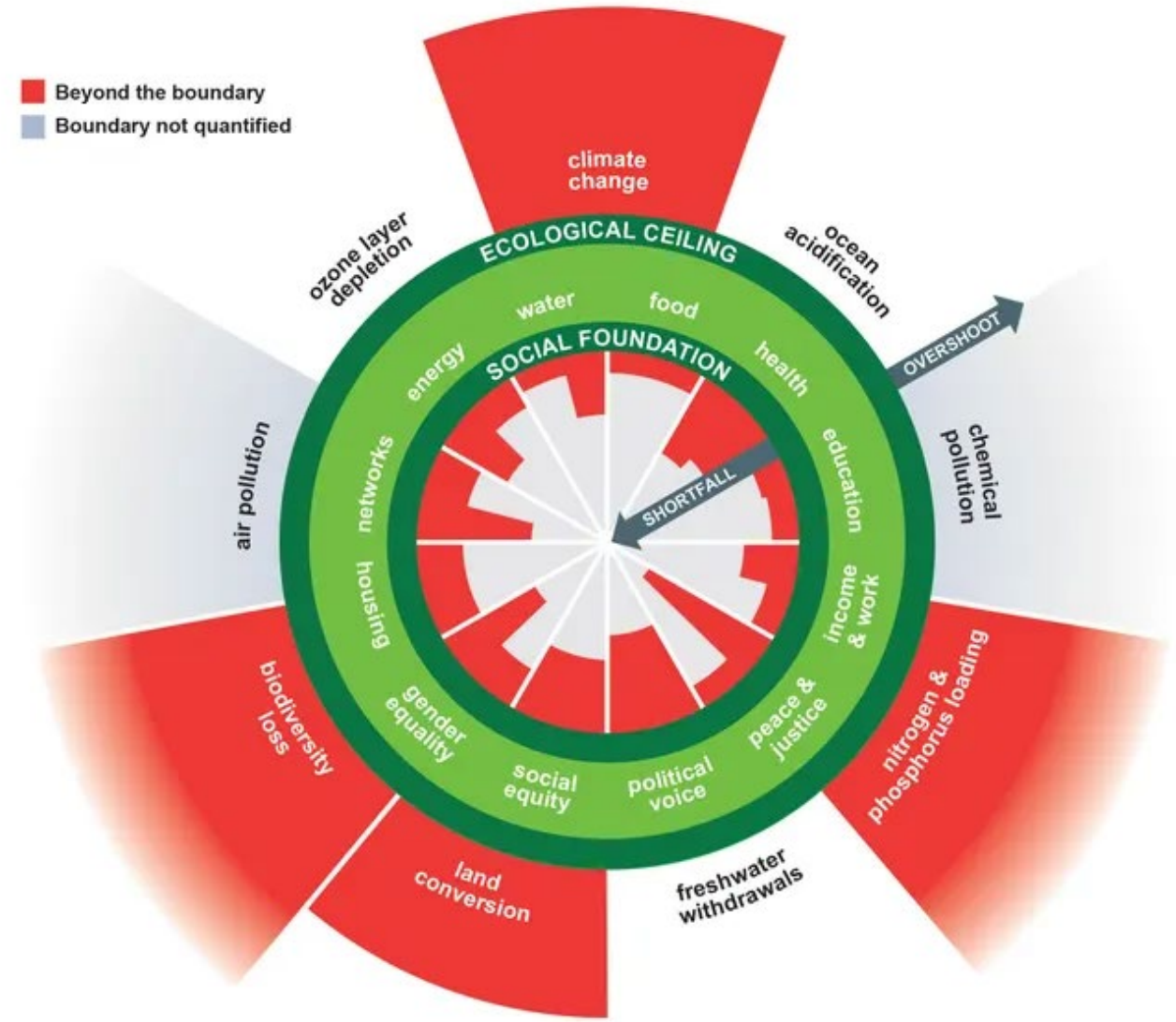
Survey results:

- Types of information regularly **sought from** other groups
- Same results for information **provided to** groups



Doughnut Economics

Kate Raworth



Implementing Stew-Map in your Community or Region

Colleen Donovan

Social Science Strategies LLC

Denver Urban Field Station

cdonovan@socialsciencestrategies.com

STEW-MAP Data Include:



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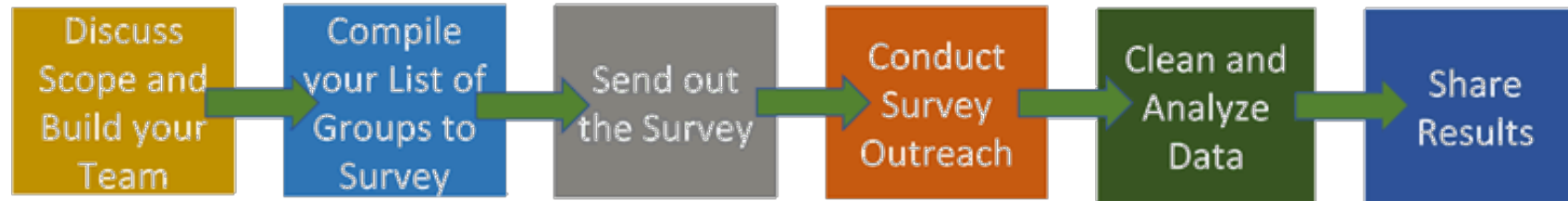
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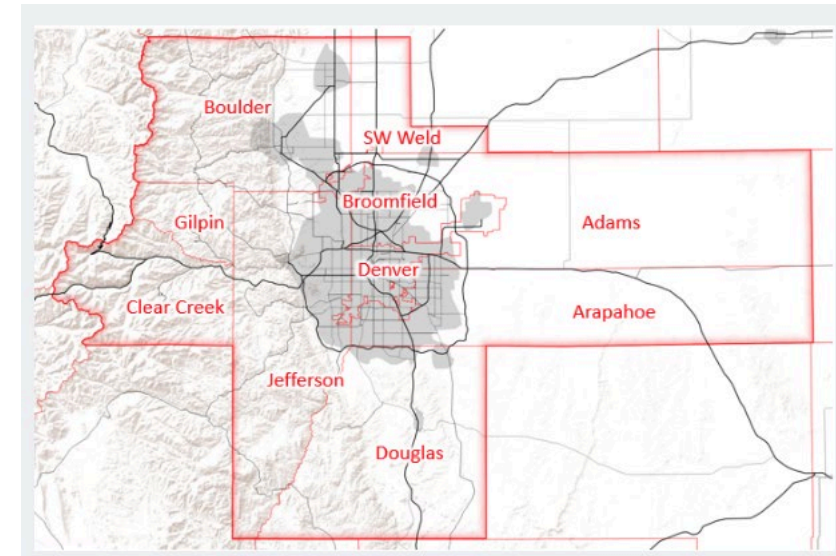
Why Stew-Map?

- Provides a comprehensive way to understand and map stewardship capacity to care for the local environment.
- Creates publicly available maps and databases to help support community development and engagement.
- Has been used by local government and civic organizations to support policymaking and natural resource management activities.
- The methodology and tools are standardized and can be adapted for localized needs.

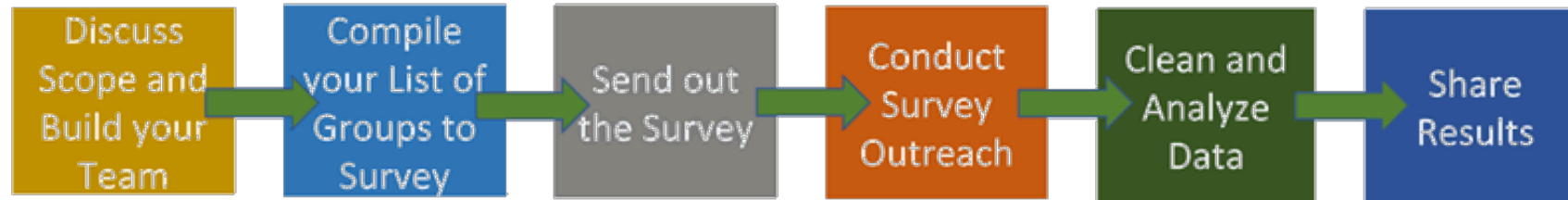
Stew-Map Implementation



- **Step 1. Discuss scope and build your team**



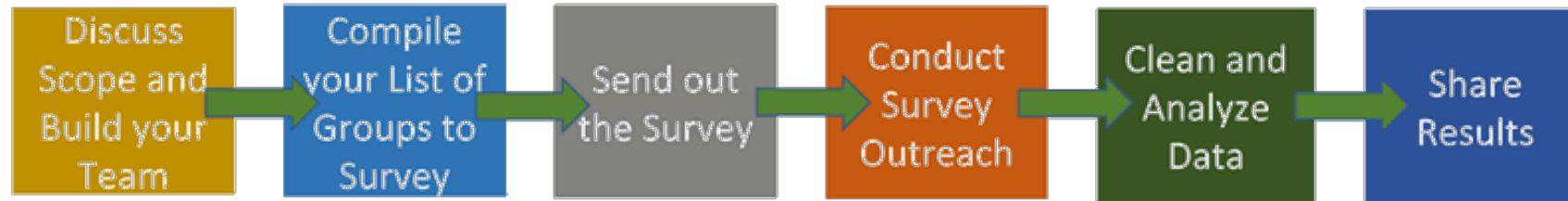
Stew-Map Implementation



- **Step 2: Compile your list of groups to survey**

- Partner with organizations
- Combine mailing lists and databases to create final list of groups
- Build up the sample using snowball sampling
- Census of stewardship groups/organizations NOT individuals

Stew-Map Implementation

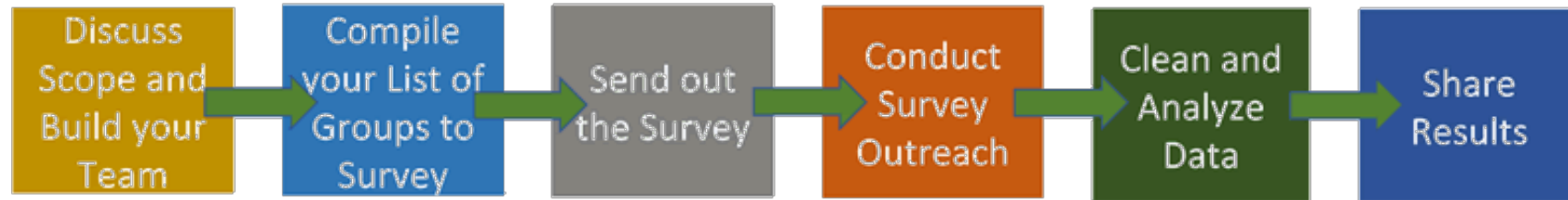


- **Step 3: Send out the survey**

- Determine administration mode (mail, email, combination)
 - Build off existing surveys already programmed (ex. Qualtrics)
- Finalize questions, balancing the need for standardization across Stew-Map locations and local needs
- Develop a cover letter with a good hook
- Get IRB approval if working with a college or university (already have OMB approval)



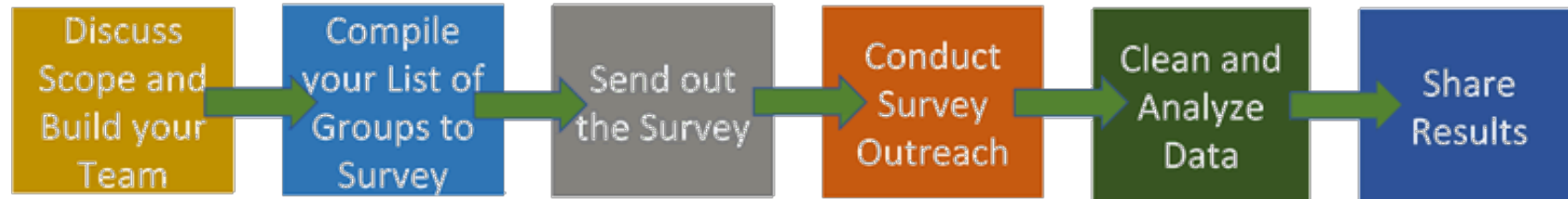
Stew-Map Implementation



- **Step 4: Conduct survey outreach**

- Once survey is in the field, have partners share info about Stew-Map in newsletters or at conferences
- Conduct follow-up telephone calls with groups who have not yet responded

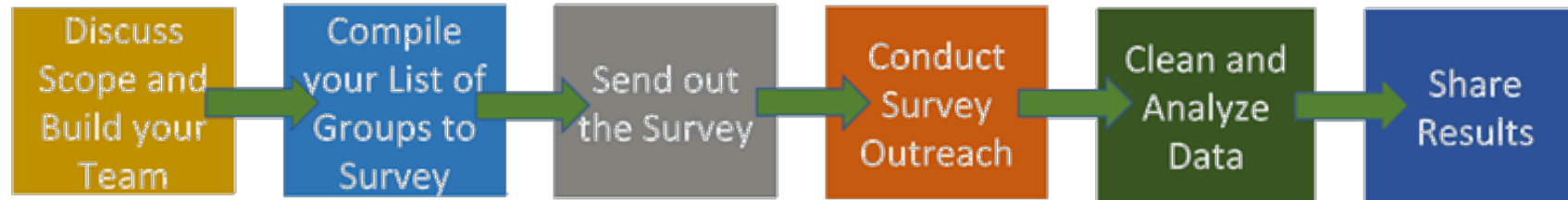
Stew-Map Implementation



- **Step 5: Clean and analyze data**

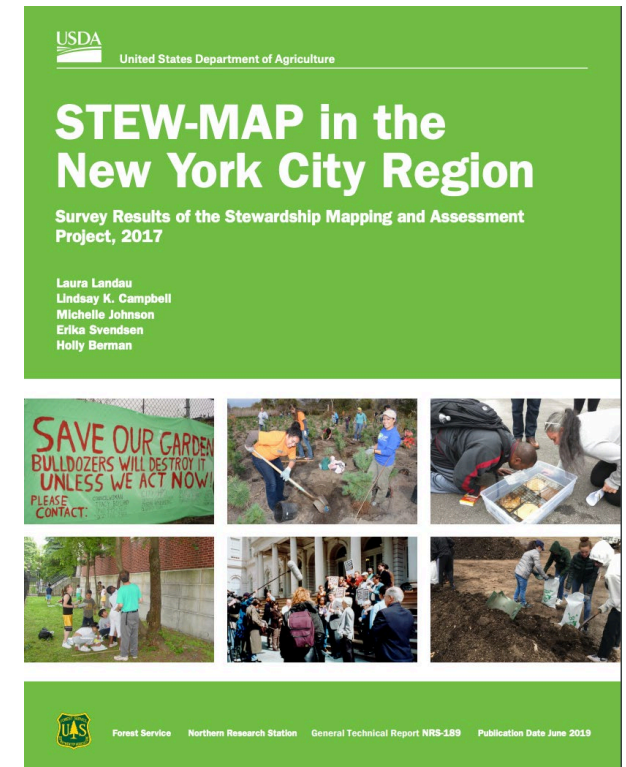
- Organizational characteristics
- Geographic turf
- Networks

Stew-Map Implementation



- **Step 6: Share results**

- With data providers and survey participants
- Through social media, blog post, white papers, and peer reviewed publications



Using and Stewarding the STEW-MAP Data

Dana Coelho

Alliance Director

Metro Denver Nature Alliance

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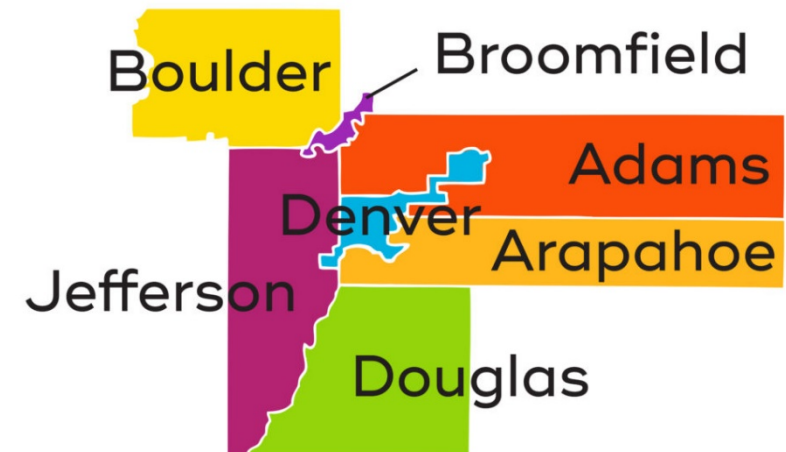
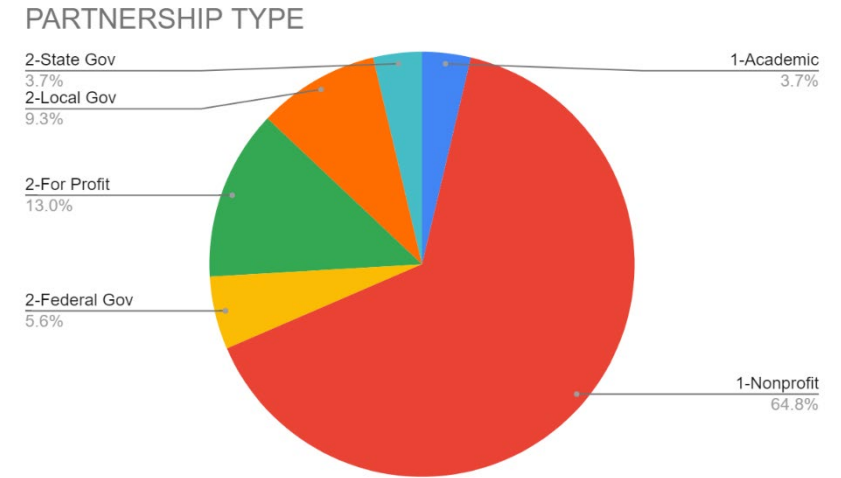


Metro Denver Nature Alliance

Connecting people. Championing Nature.

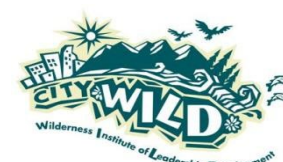
We are: a growing coalition of non-profit, government, research, and private sector partners active in the seven-county Metro Denver region.

Our mission is: to align nature-based efforts to ensure more equitable access to nature and to promote healthy people, communities, and natural places.





ROCKY MOUNTAIN WILD



SOUTHWEST DENVER
COALITION

DENVER BOTANIC
GARDENS



The Nature
Conservancy



UNIVERSITY of
DENVER



Colorado Public Health
Parks and Recreation
Collaborative



Barr Lake & Milton Reservoir
Watershed Association



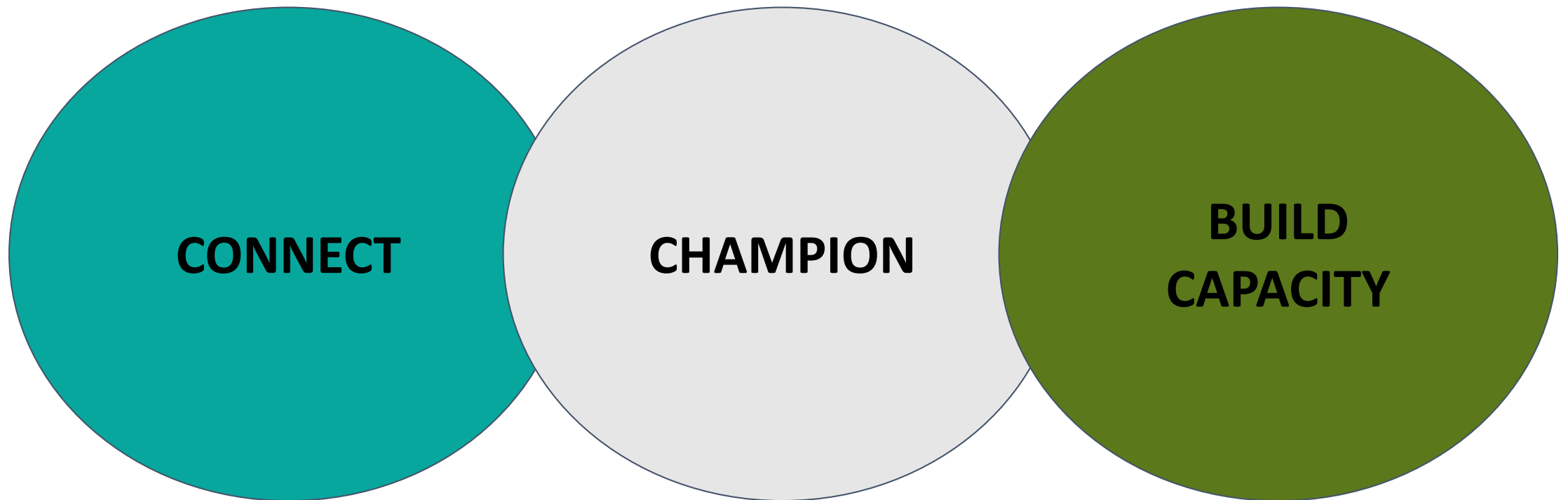
Climate Courage
Heart of the West Counseling
Jo Burns Consulting



Metro Denver Nature Alliance

Core Roles

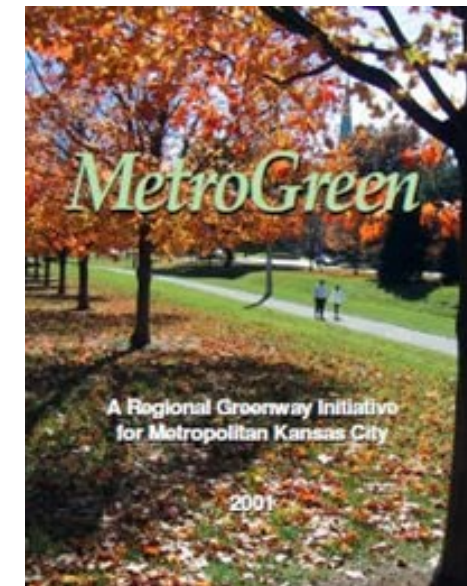
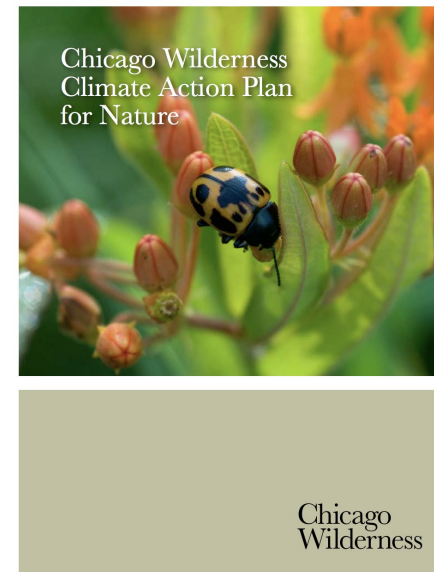
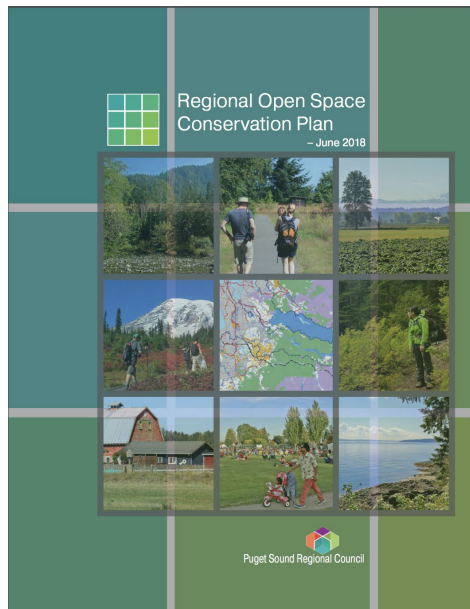
In support of our mission & vision, Metro DNA performs three mutually reinforcing roles. Our work is rooted in both conservation + equity.



Metro Denver Nature Alliance

Learning Networks

We are building on successful models of regional planning from around the country and **working across multiple scales** to better understand and support our ecosystems and natural resources and diverse human communities.



Metro Denver Nature Alliance

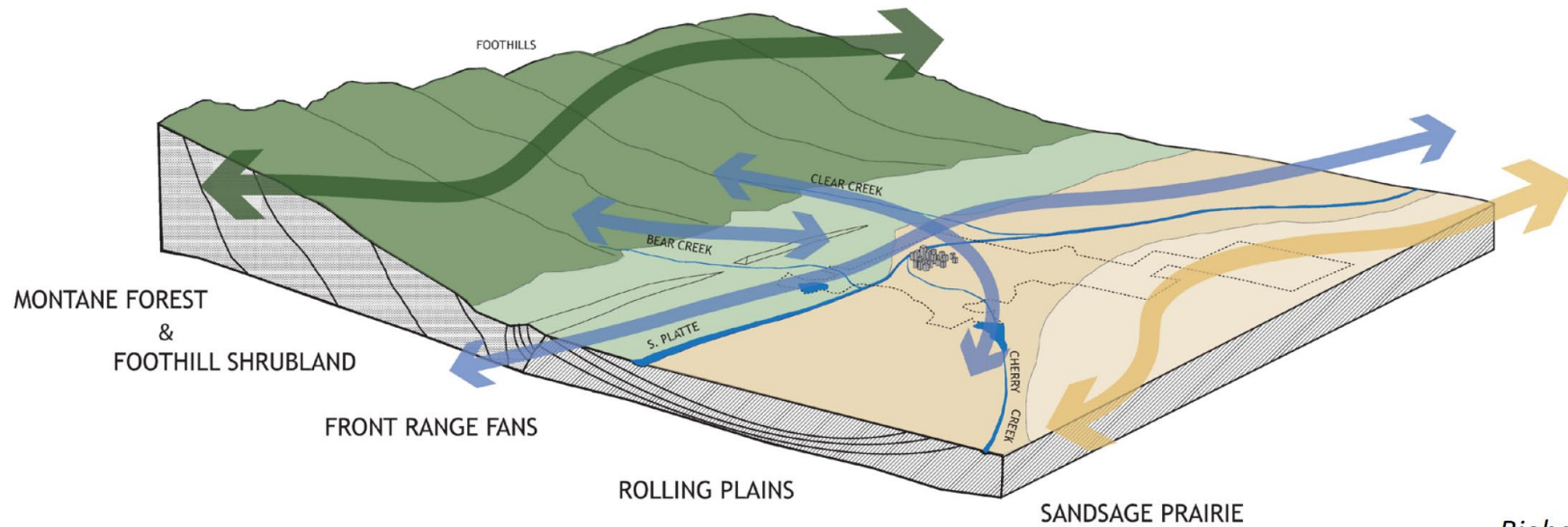
Co-Creating a Regional Vision for People + Nature

We are working toward a future in which:

- Metro Denver residents have equitable access to parks, open spaces, and other kinds of nature meaningful to them.
- Metro Denver communities integrate nature to promote healthy, active residents.
- The metro Denver region protects, restores, and stewards natural systems that support people, wildlife, and ecological function.

Metro Denver Nature Alliance

Co-Creating a Regional Vision for People + Nature



Metro Denver Nature Alliance

Co-Creating a Regional Vision for People + Nature



Defining the ecological and community goals we share and articulating strategies to achieve those goals is critical to our success in building an active and aligned network of partners and empowering strategic, equitable, and conservation-forward land use decision-making in our region.



Network for Landscape
CONSERVATION



Artist | Artista: David Ocelotl Garcia; "Cultivating Our Community," 2017

How can public art reflect your community?
¿Cómo puede el arte público reflejar tu comunidad?

Bring your ideas and perspectives!
¡Aporta tus ideas y perspectivas!

Who? 16 Denver youth will be invited to work with acclaimed artists David Ocelotl Garcia (Denver) and Piloto (Chicago) in an all-day workshop on Friday, December 27, 2019. Each participant will receive \$50 upon the successful completion of the workshop. You don't need to be an "artist" to participate, just interested.

When/Where? Friday, December 27, 2019, 9 am - 5 pm in Denver (address to be sent to those selected).

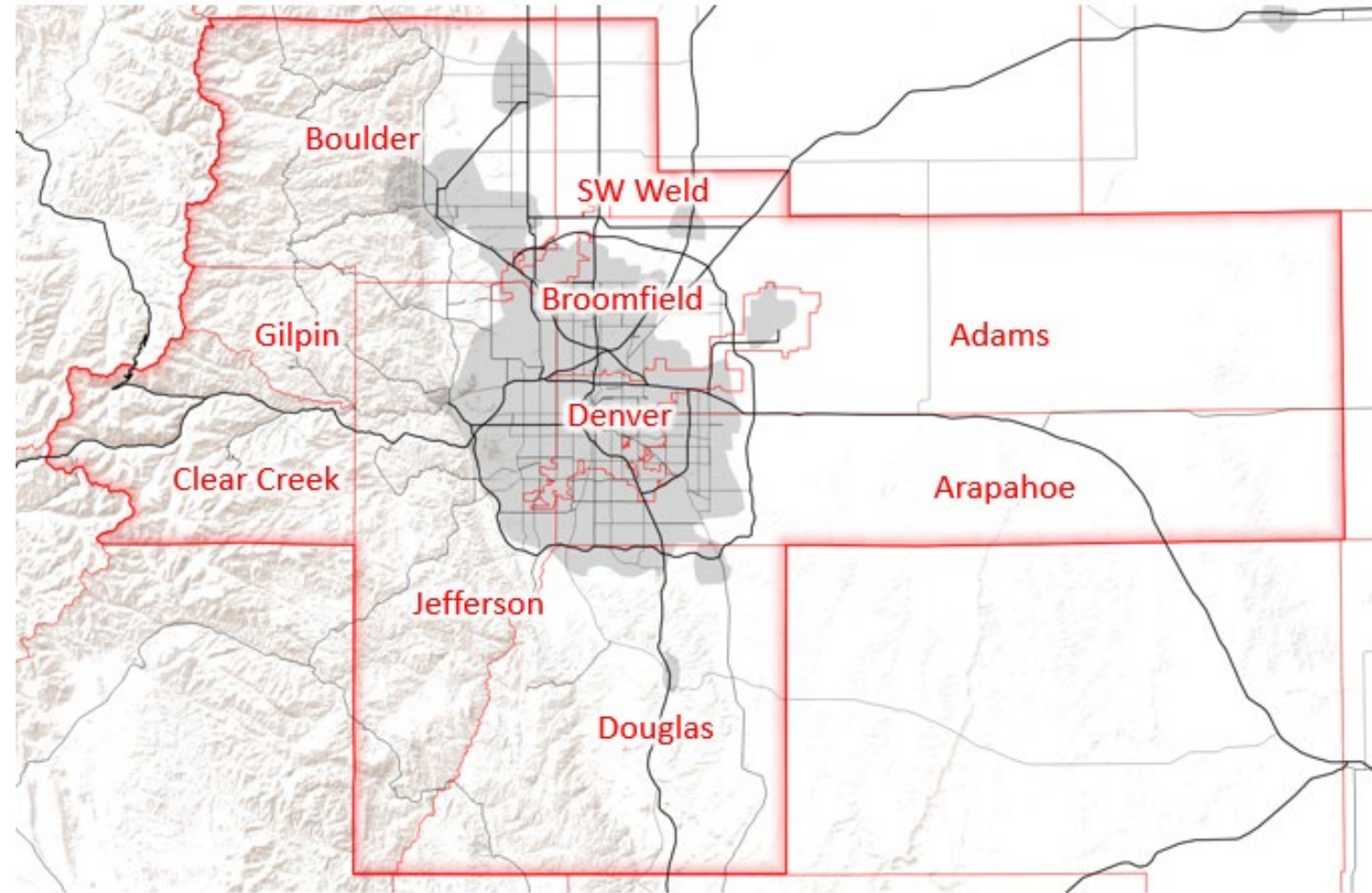
¿Quien? 16 jóvenes de Denver serán invitados a trabajar con los aclamados artistas David Ocelotl García (Denver) y Piloto (Chicago) en un taller de todo el día el viernes 27 de diciembre de 2019. Cada participante recibirá \$50 al finalizar el taller. No necesitas ser "artista" para participar, solo interesado.

¿Cuándo/dónde? Viernes, 27 de diciembre de 2019, 9 am - 5 pm en Denver (la dirección se enviará a los seleccionados).





STEW-MAP aims to put our region and your organization's great work "on the map" -- to document, understand, and deepen our shared capacity to create and sustain stronger, healthier, greener, and more resilient communities through environmental stewardship.



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