SoCal Greenprint

Update to the SCAG Natural and Working Lands Group

Elizabeth Hiroyasu, Science Lead
The Nature Conservancy
October 15, 2020

in collaboration with

www.scag.ca.gov

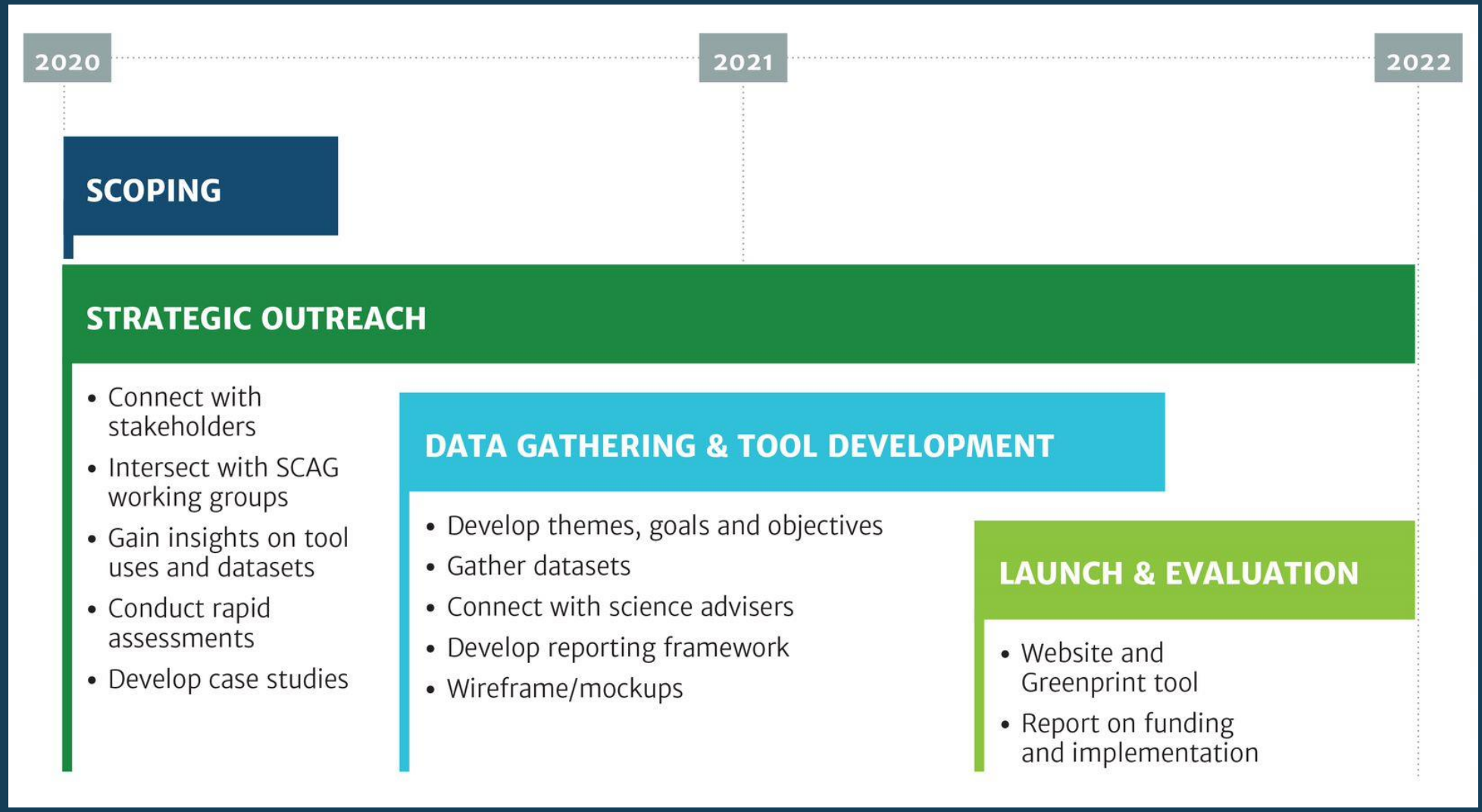
Goal of the SoCal Greenprint

To protect, restore, and enhance natural lands, public greenspace, working lands, and water resources and the benefits they provide to people and nature throughout the SCAG region.

The Greenprint provides relevant data and analyses to help prioritize and conserve our valued natural assets and working lands, ensure access to urban green spaces for all, and guide development to avoid conflicts with nature.

The Greenprint will support stakeholders in integrating public open space, natural and working lands resources into land use, conservation, and infrastructure plans and projects.

Project Timeline



Key Users of the Greenprint:

- Infrastructure agencies
- Conservation practitioners
- Community-based organizations
- Developers
- Planners - town, city, county, tribal

Steering Committee

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NAIC

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Audubon California

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PROTECT • CREATE • CONNECT

Stakeholder Newsletter

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VIEW IN BROWSER | FORWARD TO A FRIEND

Development of the SoCal Greenprint is underway! In this update, we're sharing the progress we've made including an overview and key themes of the SoCal Greenprint, an update on Connect SoCal and a highlight on steering committee member Frank Ruiz.

What is the SoCal Greenprint?

The SoCal Greenprint will be an innovative online regional mapping tool that will highlight the benefits of natural lands, waters and agricultural lands, in
and connectivity, clean water, clean air, food pro
The tool will support planners, conservation prac
stakeholders in integrating the protection of natu
infrastructure plans. In partnership with The Natu
stakeholders, SCAG anticipates having the SoC
testing in spring 2021, with a launch planned for

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The SoCal Greenprint will:

- Map, measure, and contextualize the values of nature's benefit and services within the region's ecosystem, economy and community.
- Aggregate existing data in an interactive online format.
- Help decision-makers plan for development with nature in mind.
- Encourage and highlight conserva multiple benefits for nature and pe SCAG region.
- Function as a resource for conser anyone can access for free.

CONNECT SoCal

CONNECT SOCAL PROVIDES A VISION FOR THE REGION

Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians.

Connect SoCal was prepared through a collaborative, continuous and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

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Meet our Steering Committee Member: Frank Ruiz

Frank Ruiz is the Salton Sea Program Director with Audubon California. He has been a pastor and mental health professional for over 14 years and 10 years of experience as a chaplain for law enforcement agencies. In addition, he has been a grassroots leader and community organizer. Frank co-founded Por la Creacion: A faith-based alliance with the purpose of enabling the Latino community in areas of education and public policy in regards to public lands and conservation initiatives.

Tell us about what you're working on at the Salton Sea.
I launched a program that combines four elements, public policy, science, education and community engagement with the purpose of developing awareness about the emerging environmental, economic and public health crisis arising at the Sea.

How will the SoCal Greenprint support your work and communities?
It is imperative to enfranchise diverse and, in many cases, destitute communities in areas of conservation, public health and economic equity to achieve sustainable goals. SoCal Greenprint could bridge the conversations from different sectors to find areas of common interest that could translate into feasible solutions.

In your opinion, what will be the most important benefit of the Greenprint?
Building awareness among diverse communities and governments of the need of quality outdoor places, urban greening and healthy initiatives that could transform the culture of nature for all.

Science Update

- Themes
- Metrics
- Rapid Assessments
- Advisory Committee Meeting

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Themes

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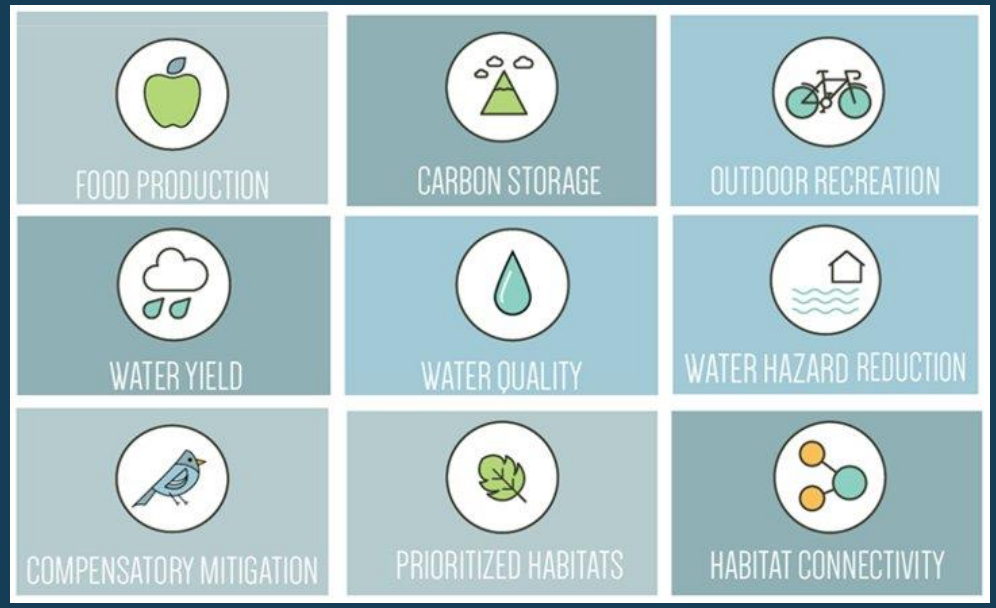
Common themes across all analyses

Themes provide a structure to organize the data in the Greenprint.
This allows users to quickly and easily access the information relevant to their project. With themes, users will be able to look at groups of data together and understand how they might impact their proposed project.



Proposed Greenprint Themes

- Agriculture
- Conservation/biodiversity/habitat
- Community and equity
- Infrastructure and the built environment
- Risks and resilience
- Water

Climate Change, urban greening, and equity are likely to be cross-cutting and represented across all themes

Methods: Full data set

- 194 different themes identified by advisors (162 unique)
- 70 topics
- 7 Science advisors
- 7 strategic advisors
- 7 Steering committee membe
- 6 core team members

Clu r Den gra
Height
0
40
80
120
Land use and conservation
Biodiversity and conservation
Water
Ecosystem Services/NBS
Risks and resilience
Communities
Agriculture and Food
Climate Change and resilience
Vegetation
Connectivity
Infrastructure
Recreation and community

Full Sample

Cluster plot
Dim1 (13.2%)
Dim2 (10.6%)
cluster
1
2
3
4
5
6
7
8
9
10
11
12
Representation
land use
Conservation.1
natural resource conservation
Natural environment
Habitat
Wild species and habitats
benefits of wildlife corridors
Conservation
Species & habitats
Biodiversity.3
conservation
Species protection and cultural sites
Habitats and Species
Biodiversity.2
Biodiversity.4
Conservation practitioners
Environment/Conservation
Access
Open Space Preservation
Connectivity.1
cross cutting
Change
open space, linkages, and more
Public Health.2
Agriculture and Land Use
Wildland urban interface
Biophysical attributes
Equity/Access
Healthy Communities
Healthy Communities.1
DEI + Community
Urban environment
equity/environmental justice
Environmental Justice, Equity, and Equality
Working communities
Human dimensions
Community Based Orgs
Community
Development
Community.1
Equity.2
Equity.3
Land use and transportation planning
CBO
Neighborhood
Cross-Cutting Considerations
Transportation and access
Tags-cross cutting all themes
Infrastructure
Public Health.3
Public Health
Climate
water stuff
Ecosystem Services
Green infrastructure
Climate Change and Adaptation/resilience
Fire
Development Hazards
Climate change adaptation
Natural Risk
Emergency Management
-5
0
5

Themes Proposal 2

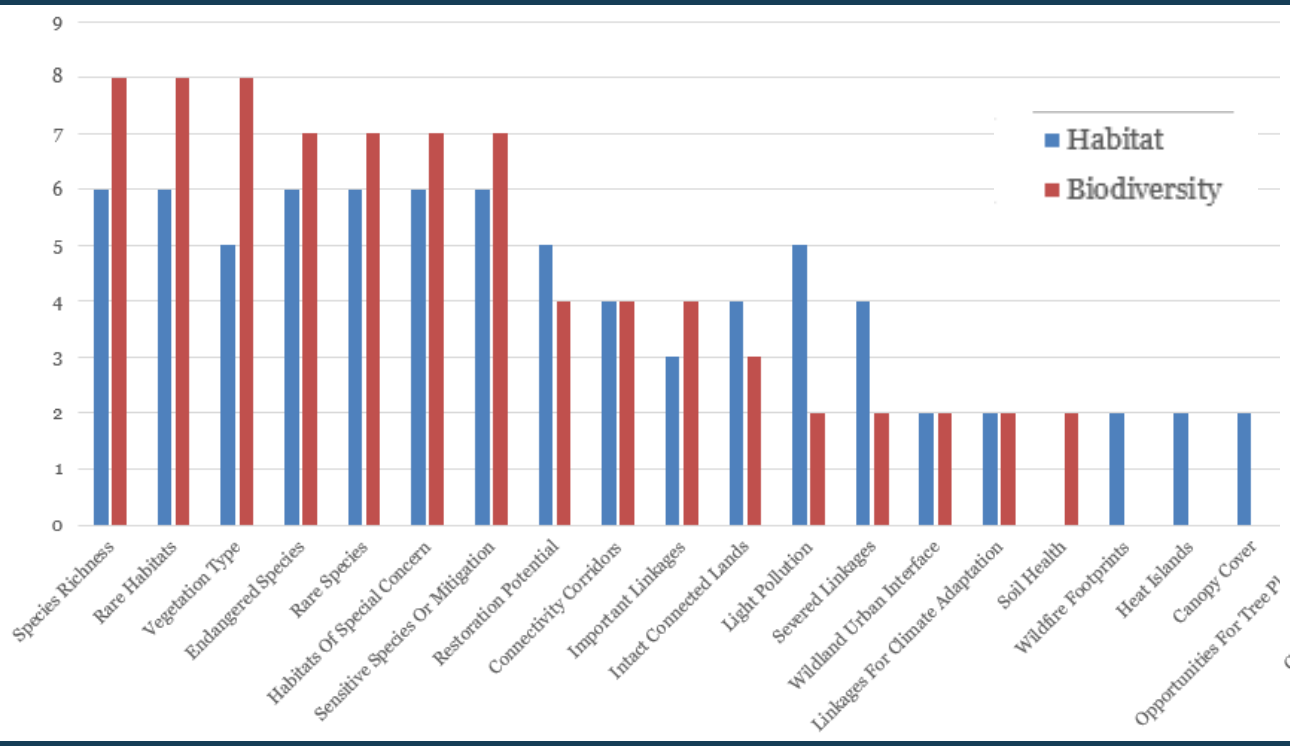
- Health, Equity, Access, and Community
- Biodiversity and Habitat
- Connectivity
- Agriculture
- Water
- Built Environment: Transportation, Housing, Jobs
- Resilience, Threats, and Nature-based solutions

Cross cutting:
Green Infrastructure (existing and need)
Additional equity metric across themes (% resource within DAC)

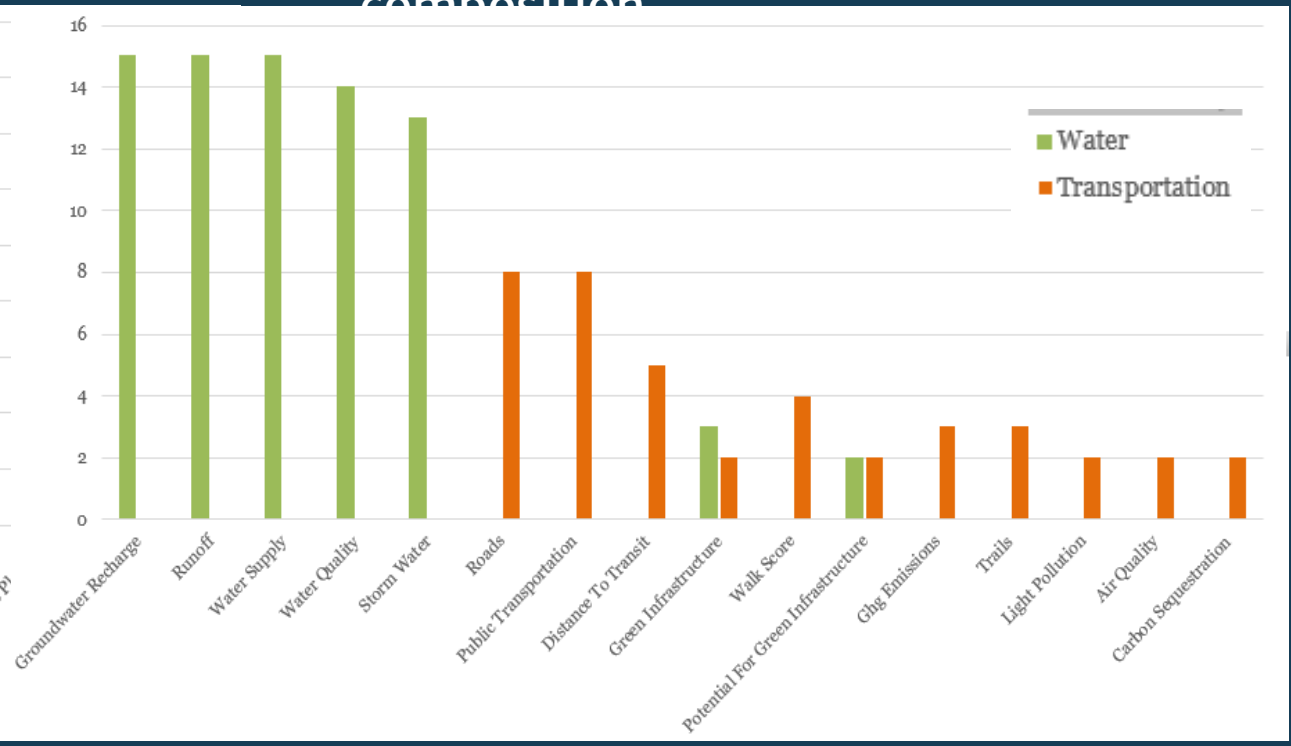
Methods 2: Themes analysis

Further collapse 'like' themes

Biodiversity vs. Habitat
Collapsed to single theme – similar composition

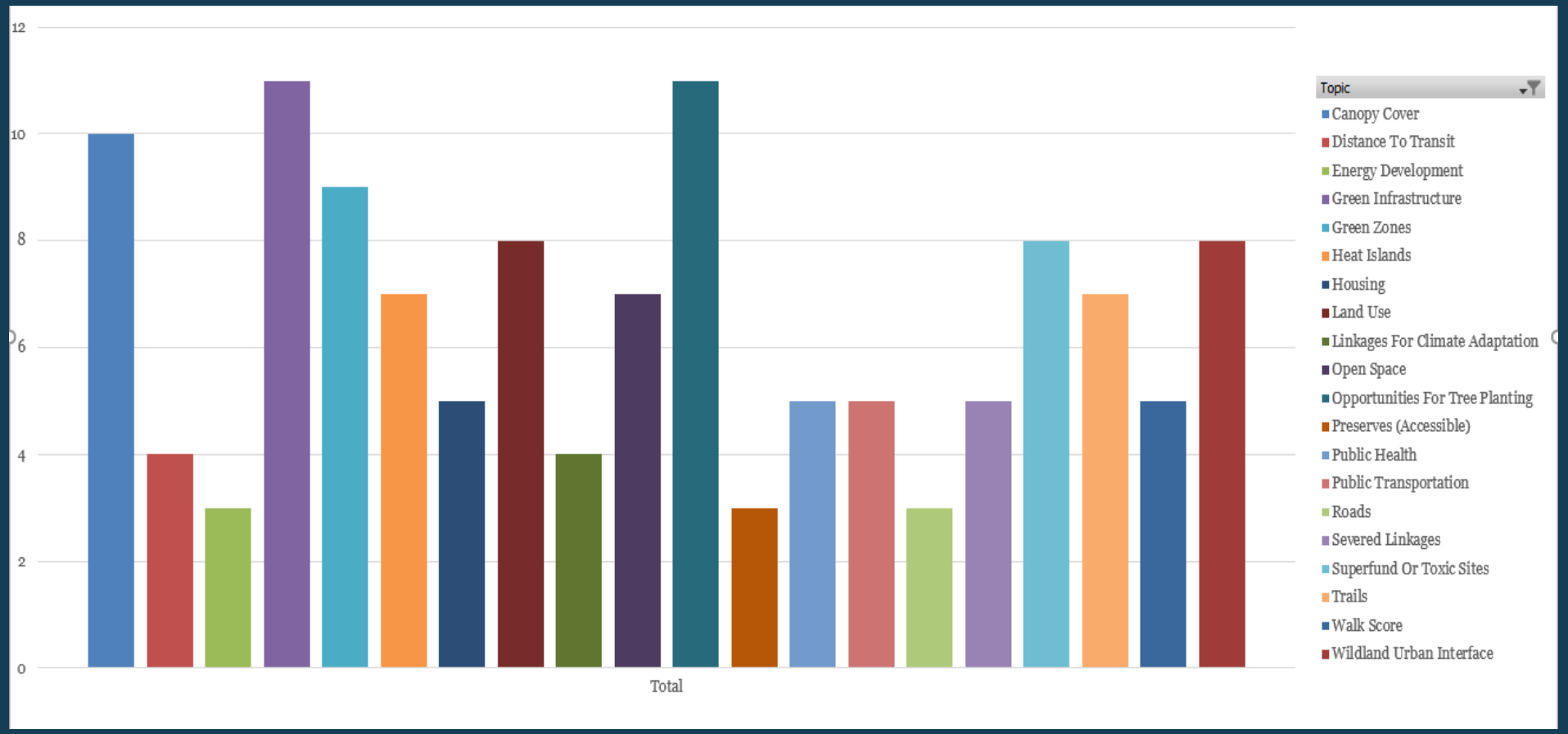


Water vs Transporation
NOT collapsed – unique composition



Methods 2: Cross-cutting topics

After all the card/theme manipulation – several cards still were spread across themes. Height represents # of themes a card was found in - magnitude of disagreement



Top 4 topics of theme disagreement

- Green Infrastructure
- Opportunities for tree planting
- Canopy Cover
- Green Zones

'Green Infrastructure' like topics seems to be cross-cutting Participants sorted into the most different themes

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Metrics

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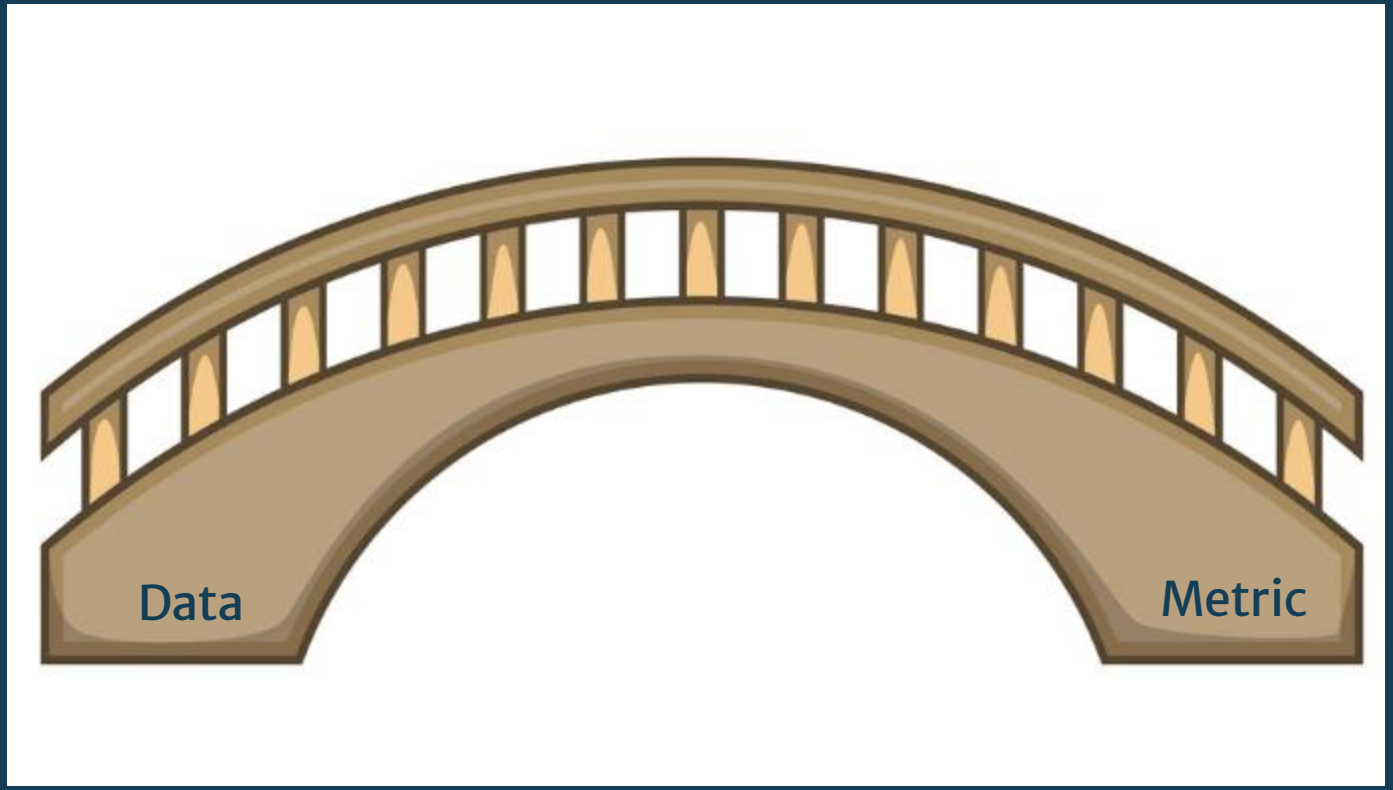
Metrics: Background

One of the roles of a Greenprint is to act as a 'bridge' between the data creators and practitioners

Data Creators / Academics, Researchers

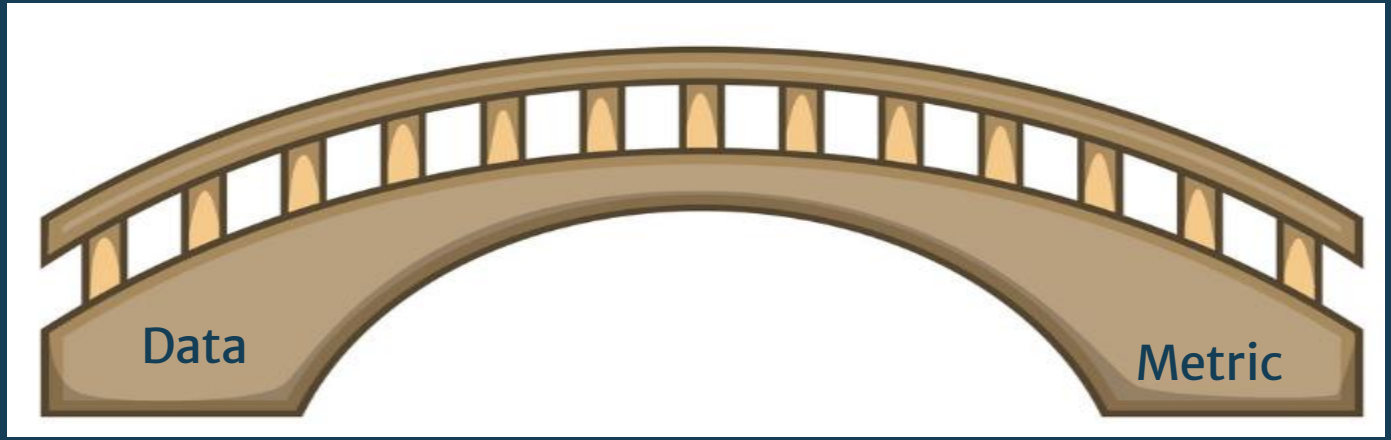


Data Users / Practitioners

Example: The Bay Area Greenprint curates and delivers 'Climate Water Deficit' projection data into a metric on 'how climate change may impact food production'

Data: climate water deficit

The term climatic water deficit defined by Stephenson (1998) is quantified as the amount of water by which potential evapotranspiration (PET) exceeds actual evapotranspiration (AET).



Metric in the Bay Area Greenprint:

30-year summary time periods	GCMs and ES/RCP combinations (for futures only)	
		CMIP 5:
Historic:	CMIP 3:	MIROC5-RCP26
1921-1950	GFDL-A2	MIROC-RCP45
1951-1980	GFDL-B1	MIROC-RCP60
1981-2010	PCM-A2	MIROC-RCP85
	PCM-B1	GISS-RCP26
Projected:	MIROC3_2 -A2	MRI-RCP26
2010-2039	CSIRO-A1B	MPI-RCP45
2040-2069	GISS_AOM -A1B	CCSM4-RCP85
2070-2099		IPSL-RCP85
		CNRM-RCP85
		FGOALS-RCP85

How will climate change impact food production?

A warmer and/or drier climate may require additional irrigation to maintain the same crop in the same location.

In your area, 168,904 acre-feet per year of additional irrigation will be needed to offset climate change under the 'hotter, drier' scenario and 65,362 acre-feet per year of additional

Metrics: Background

Metrics provide interpretation and context to make data **useful**, **understandable**, and **influential** to our users

Question to consider as we evaluate types of metrics:

How can we deliver data so it will influence the way a key-user makes a decision?

Descriptive Metrics vs Action Oriented Metrics

Descriptive metrics provide just the facts. The user then will bring their own values and toolset to the Greenprint to determine what action to take.

There are X acres of urban heat island

X acres of this area are priorities for street tree planting

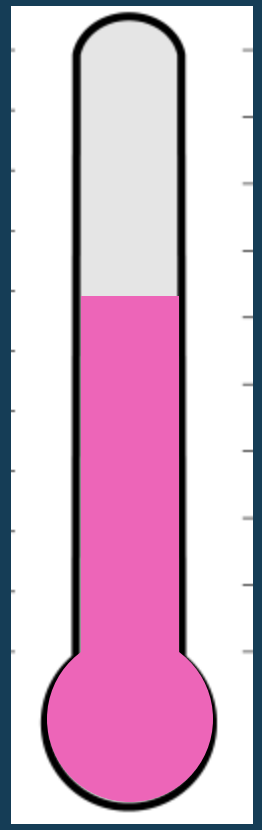
Tree canopy is inequitably distributed in this area

Action-oriented metrics may suggest actions a user can take based on quantities of resources and geographic and jurisdictional context

Planting street trees in this area can address urban heat islands, help sequester air pollutants, and can start to address the inequitable distribution of tree canopy

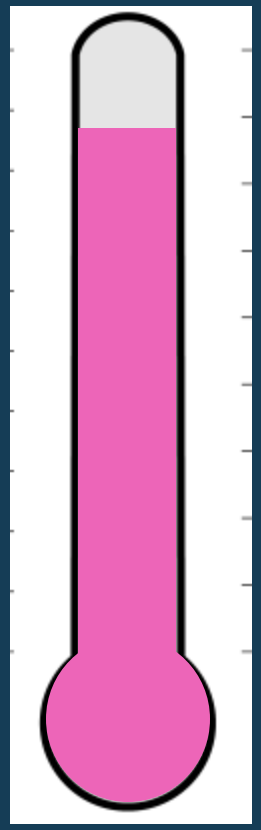
Is the quantity locally or regionally significant?

Quantity of resource in area of interest within **watershed**



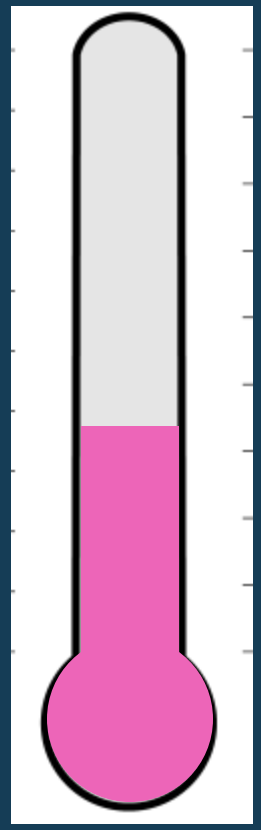
60 % of feature

Quantity of resource in area of interest in **landscape unit**



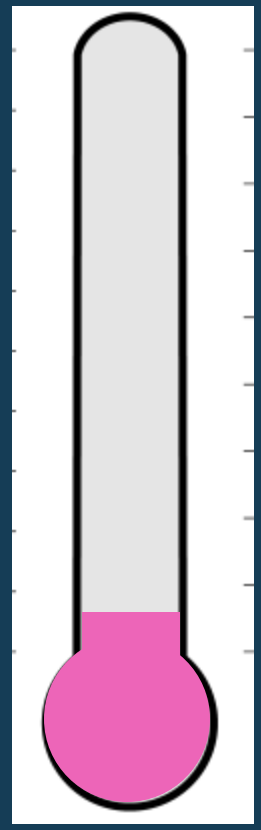
90% of feature

Quantity of resource in area of interest in **county**



30% of feature

Quantity of resource in area of interest in **SCAG region**



3% of feature

Is the quantity locally or regionally significant?

EXAMPLE:

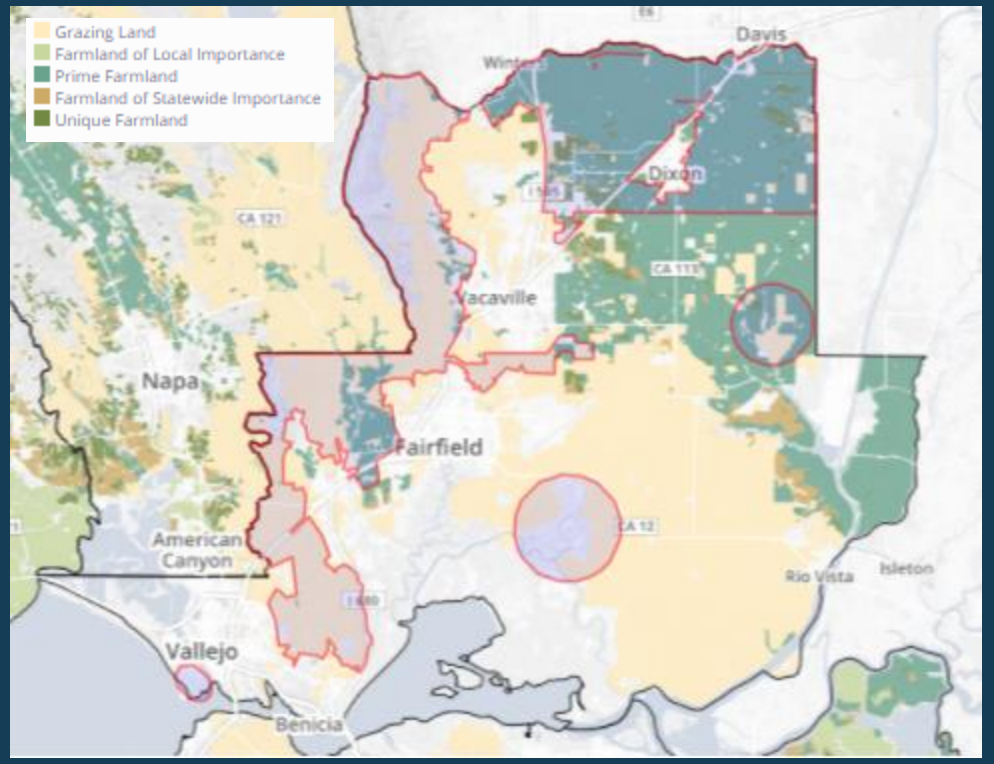
BAY AREA GREENPRINT

How much prime farmland?

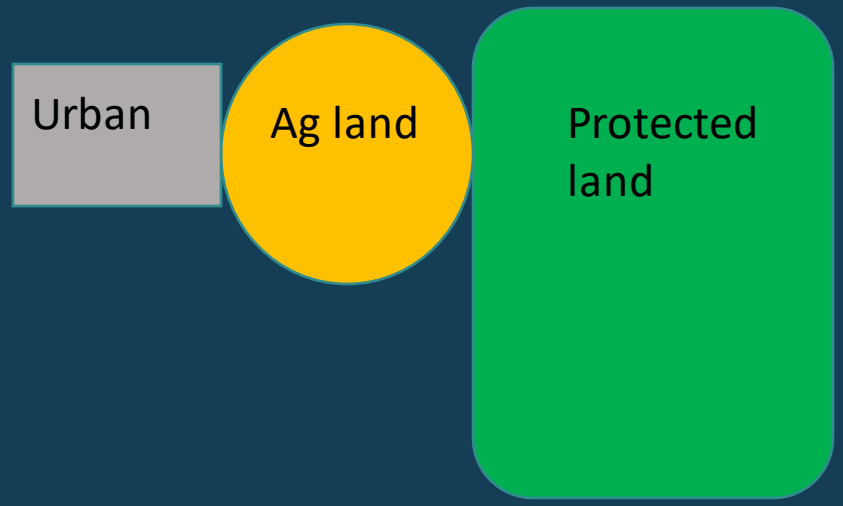
68,000 acres

Is that a lot?

More than **half** of the county's prime farmland



Does the landscape context make the impact significant?



Does the landscape context make the impact significant?

EXAMPLE: Local

Does the landscape context make the impact significant?

EXAMPLE: Local

In Context A:

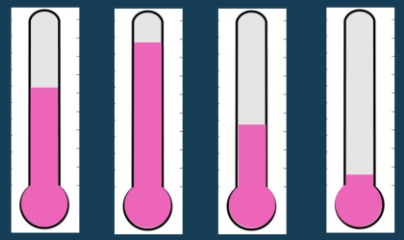
Does the landscape context make the impact significant?

EXAMPLE: Local

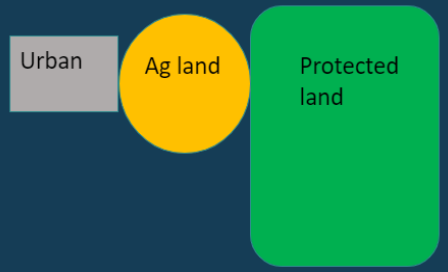
In Context B:

How can we deliver data so it will influence the way a key-user makes a decision?

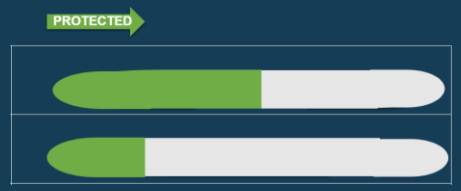
Regionally significant?



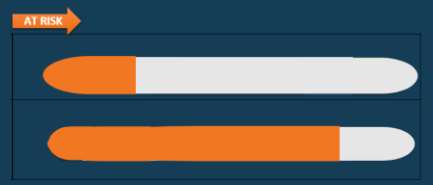
Neighborhood Context?



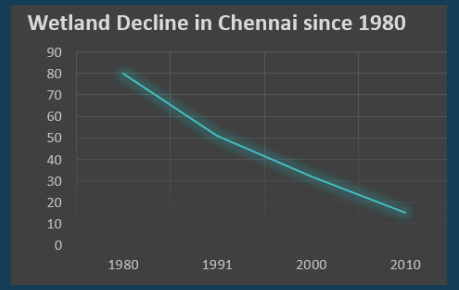
Protected?



At Risk?

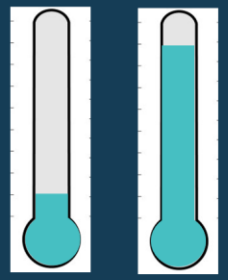


Historic Trend?

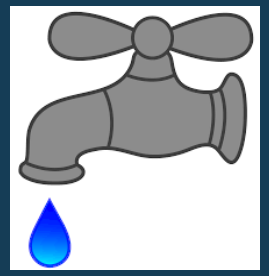


Desired Future?

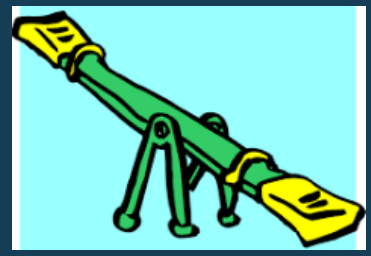
Inequitable Distribution?



Equivalence?



Threshold?

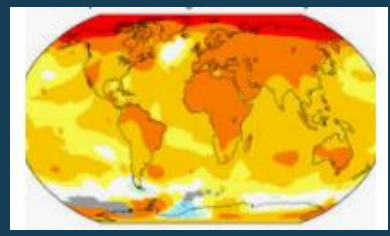


Historic Context

Local Interest?

Who works here?

Climate change impacts?



Rapid Assessments

An early case-study exercise to help us design the Greenprint to meet the needs of our targeted user groups and on-the-ground practitioners.

They are conducted early in the development/design process to gather concrete feedback from key users on:

1) the information proposed to be in the Greenprint for a real-world use-case, and
2) how that information is analyzed and communicated

Joint Science & Strategy Advisory Committee Meeting

- November 5, 2020
- Advisors will work in teams to create a mock conservation assessment
- Provide feedback on themes, metrics, and data

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Thank you! Any questions please reach out!

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