

Tallgrass Prairie and Oak Savanna Regional Fire Conference

January 30, 2013



Landscape Conservation Cooperatives – Addressing Science Needs Across the Prairie

State Lake

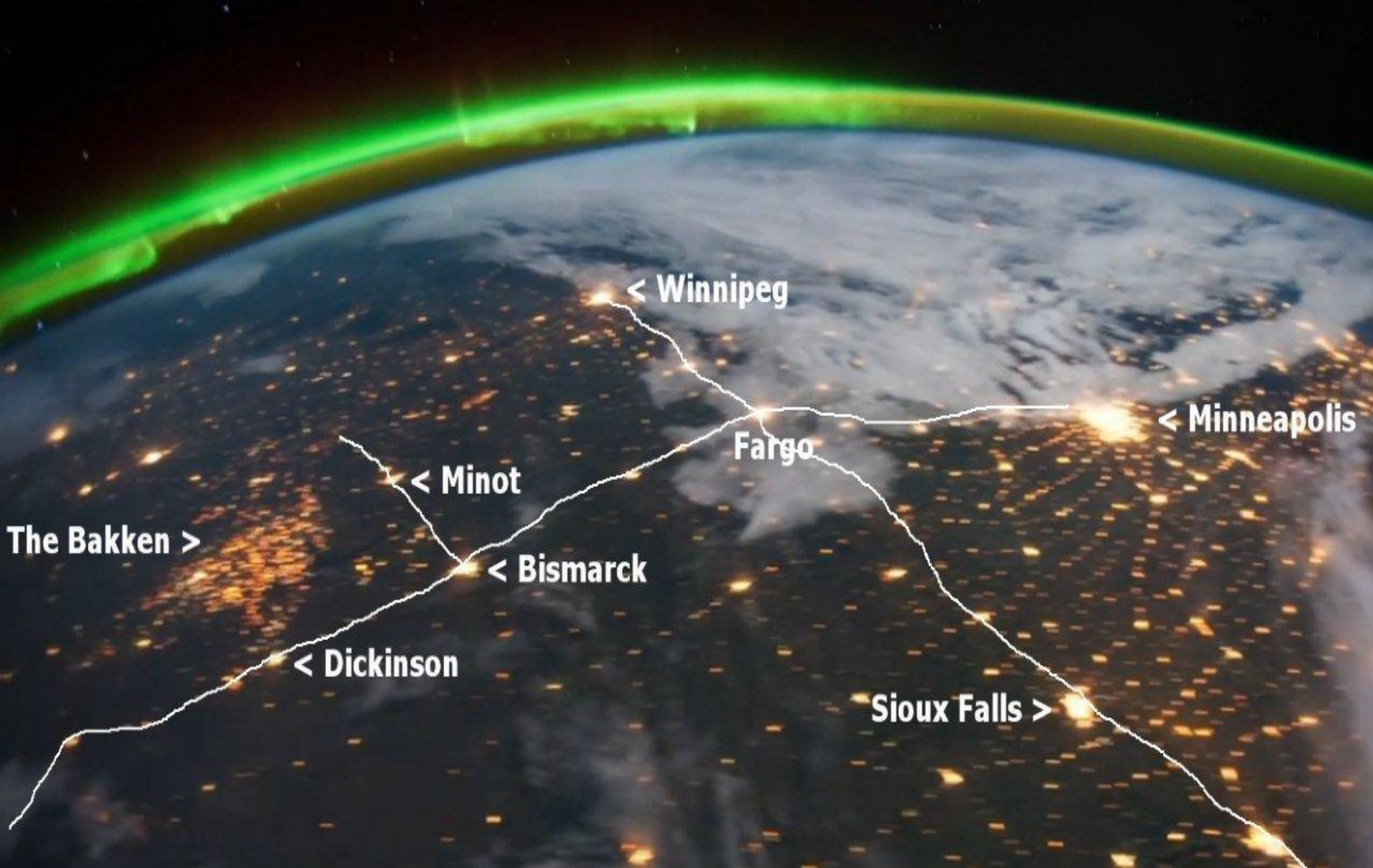
The place where I thought learned everything about prairie...

Olson Family Farm

Why Are “We” Doing This?

- The future in the modern imagination has always stretched out ahead like a broad highway drawing us onward with the promise of tomorrow. Now rather suddenly, as it becomes impossible to ignore dramatic physical changes taking place across the Earth, the future looms like an urgent question. Whatever the coming century brings, it will not unfold smoothly as some improved but largely familiar versions of life as we know it. This is the only thing that seems certain.

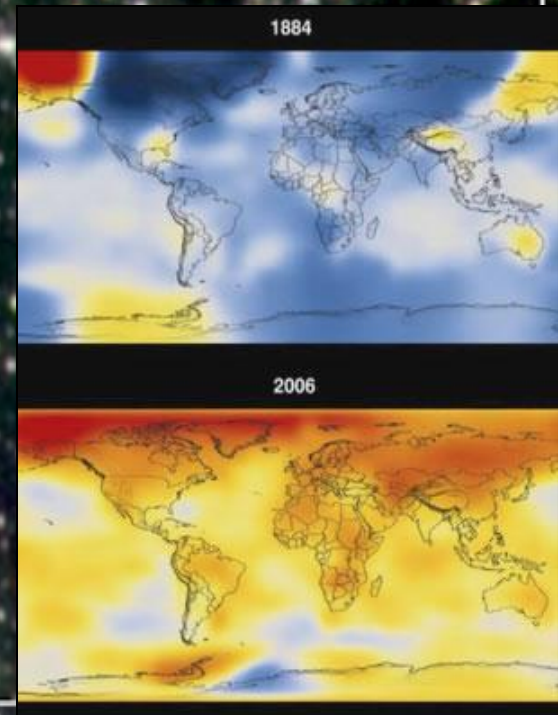
Dianne Dumanoski, *The End of the Long Summer*



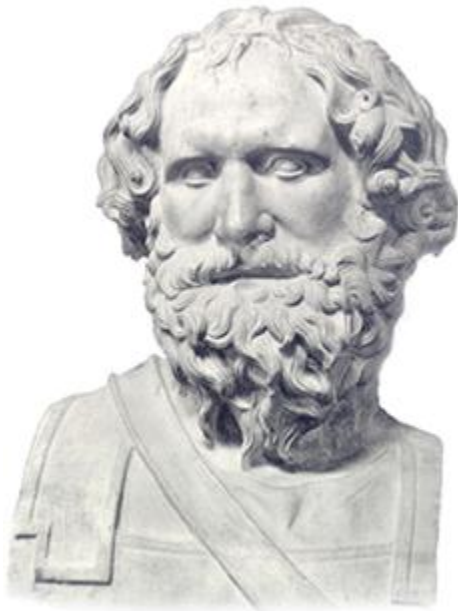
“No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be”

Isaac Asimov

Yes, we've got issues like never before...



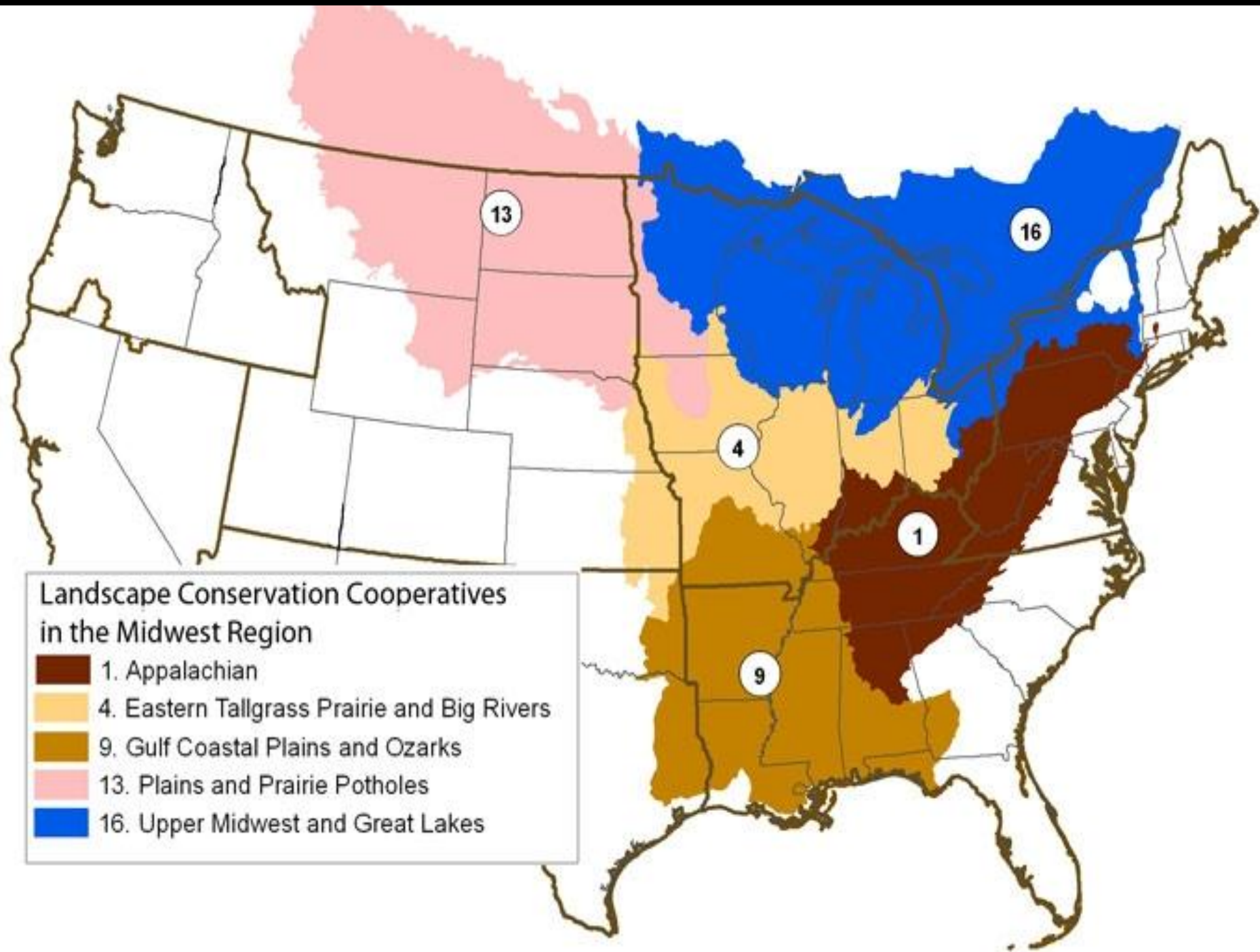
"Give me a place to stand and I shall move the Earth"



- A great weight can be moved by a small force using levers and other means.

The LCC Niche

- Large geographic scale
- Work across taxa
- Forward looking
- Decision focused
- Adaptable
- Integrate human dimension aspects

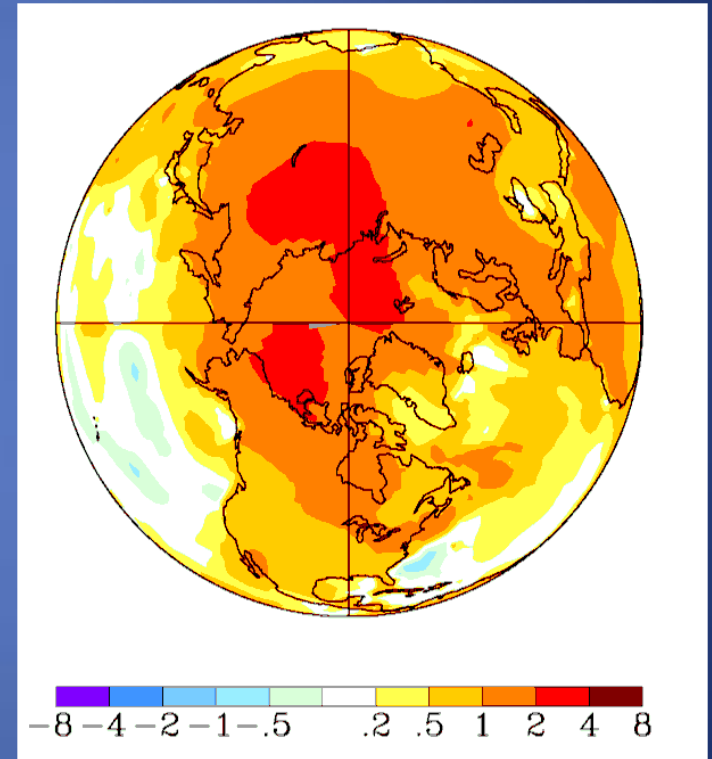


**Landscape Conservation Cooperatives
in the Midwest Region**

- 1. Appalachian**
- 4. Eastern Tallgrass Prairie and Big Rivers**
- 9. Gulf Coastal Plains and Ozarks**
- 13. Plains and Prairie Potholes**
- 16. Upper Midwest and Great Lakes**

“Our” Challenges

- Land use changes/Habitat fragmentation
- Genetic isolation
- Invasive Species
- Water Scarcity
- Energy Development
- Climate change – direct and compounding effects
- Others



*Temperature Change, °C
1958-2008*

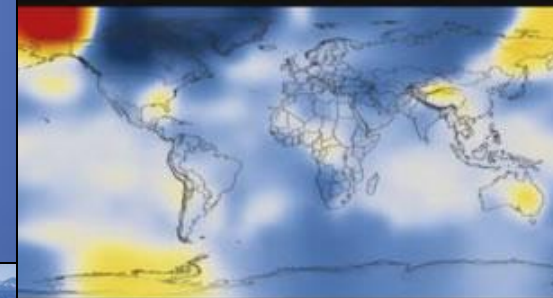
“The conservation challenges of the 21st Century represent a force of change more far-reaching and consequential than any previously encountered.”



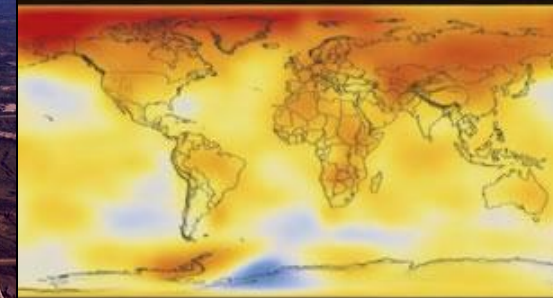
Year: 2042
– Global Population ~9 Billion
People –
habitat fragmentation, contamination,
pollution, invasive species, disease, threats
to water quality and quantity...



1884



2006





Landscape Conservation Cooperatives

What are they?

Applied conservation science partnerships.

- Link science and conservation delivery through management-science partnerships
- Integral to climate change adaptation efforts but not climate centric.
- Work interactively with DOI Climate Science Centers
- Augment and draw upon existing science capacities of partners
- No expectation that LCC's will provide all science needs of FWS or partners

Landscape Conservation Cooperatives

What are they?

Fundamental units of planning and adaptive science

- Vehicle for implementing Strategic Habitat Conservation
- Inform integrated resource management
- Link science with conservation planning and design
 - products relevant, timely and effective in support of conservation decisions
- Provide a diversity of decision support tools

What can LCCs do for you?

- Inform and collaborate on research
- Ensure science is asking the right questions and agencies are working on the right issues
- Increase data sharing and integration
- Strengthen understanding of impacts on a landscape-scale.

Our objective -

We're about increasing conservation delivery by reducing scientific uncertainty associated with landscape level stressors which are important to our partnership

Examples of some of our on-going research projects

- Effects of oil and gas development on grassland birds
- Wetland hydroperiod and climate change: implications for biodiversity and water availability
- Down scaled climate change models
- Pattern tile drainage & wetland consolidation
- Native Prairie Adaptive Management (Complete)
- Bats and Birds & Wind
- Sagebrush habitat – grazing impacts.
- Grassland Conversion Risk Analysis
- Assist with updated SWAP's
- Grassland bird conservation on working landscapes: spatial analysis linking populations to habitats
- Cottonwoods/Songbirds along the Missouri River.

Others

- Iowa wetland restoration potential – map layer (complete)
- NWI data layer Yellowstone River Corridor (complete)
- Healthy Local Economies – Healthy Landscapes
- James River LiDAR layer
- Climate change impacts on native fish in northern great plains
- Fish Passage in response to climate change
- Aquatic Habitat models – NFHAP

Where we're headed...

- **Further Integration of North Central Climate Science Center**

Use of decision analysis process to bring PPP-LCC and climate experts together to develop conceptual models of the interactions between climate change, land use change and conservation in the Plains and Prairie Pothole region. Models will articulate relationships, interactions, and uncertainties between socioeconomic and ecologic systems in the PPR and how they are impacted by climate change.

Something to ponder...

Every one of us has plenty of personal and professional “stressors” in our lives. Yet, in the midst of the great uncertainty these stressors bring, we have been provided a tremendous opportunity to work collaboratively, perhaps as never before, to define, design, and deliver a sustainable landscape for future generations.

