

# UPPER MIDWEST PRAIRIE GROUSE SUMMIT

August 1-2, 2023 Crex Wildlife Area, Grantsburg, Wisconsin

Co-hosted by the Wisconsin Sharp-tailed Grouse Society and North American Grouse Partnership with a Planning Team made of the following organizations:

















**Primary Purpose** – Sharp-tailed Grouse and Greater Prairie-Chicken populations in the Upper Midwest have the common issue of being fragmented, battling loss and degradation of habitat, and designation as species in greatest conservation need. This Summit will serve as a forum for professionals to share management and research information, learn from one another, and initiate a more collaborative approach to determine and implement strategies to sustain and recover populations across our ecoregion.

**Secondary Purpose** – To raise awareness, understanding, and support among the public for more and better habitat, population, and outreach management of/for Sharp-tailed Grouse and Greater Prairie-Chicken.

### **AGENDA/PROGRAM**

### Day 1 (August 1, Tuesday) -

- 8:30 Gather coffee, rolls, muffins
- 9:00 Welcome Ken Jonas, WSGS and Jodie Provost, NAGP

<u>State Overviews/Updates</u> – Moderator – Jodie Provost (Societies and DNRs - current pop. and habitat status, mgt. and research, mgt. plans, resources available, how they are attained, what works or not, future outlook)

- 9:05 MN DNR Sharp-tailed Grouse and Greater Prairie Chicken Kyle Arola, Chris Balzer
- 9:30 MN Sharp-tailed Grouse Society (MSGS) Bill Berg, Mike Chalich
- 9:50 MN Prairie Chicken Society The 50 Year History and Some Conservation Concerns Dan Svedarsky
- 10:10 WI DNR Highlights of Wisconsin's Draft Sharp-tailed Grouse Mgt. Plan Bob Hanson Highlights of Wisconsin's New Greater Prairie-Chicken Management Plan Lesa Kardash
- 10:35 Break
- 10:45 WSGS Ken Jonas and Trevor Bellrichard
- 11:05 WI Greater Prairie-Chicken Lessons from the Power (and Pitfalls) of Partnerships Sharon Schwab, Dane County Conservation League
- 11:25 MI DNR Status and Update on Michigan Sharp-tailed Grouse Adam Bump
- 11:50 MI Sharp-tailed Grouse Association (MSGA) Marty Sarrault
- 12:15 Lunch

### The Common Issue – Fragmented Populations – Moderator – Heather Shaw, MI DNR

1:15 - Conservation Strategy for the Greater Prairie-Chicken and the Plains and Prairie Subspecies of Sharp-tailed Grouse – Jodie Provost, NAGP

### Population Management (the Birds) -

- 1:40 Moquah Barrens Translocation Lessons Learned & Considerations for the Future Brian Heeringa, USFS
- 2:05 The Mixing Pot: A Case Study of Hybridization of Sharp-tailed Grouse and Greater Prairie-chicken in North Dakota Susan Felege, UND
- 2:30 Open Discussion regarding Population Mgt. (when to move birds?, how to decide harvest seasons?, etc.)
- 3:00 Break

Habitat Management (the Places) - The latest on techniques to sustain, recover, and connect habitats

- 3:10 Forests to Barrens: Bayfield County's Efforts Mike Amman, Bayfield Co., WI
- 3:35 The Ishkode Project Managing Sharp-tailed Grouse on the Hiawatha National Forest Paul Thompson, SFS
- 4:00 Sharp-tailed Grouse and Vegetation Response to Fall Prescribed Fire and Mowing Charlotte Roy, MN DNR
- 4:25 Open Discussion regarding Habitat Mgt. (challenges such as habitat conversion, solar farms, etc.)
- 5:00 Done for the day
- 5:30 Social and Supper

#### Day 2 (August 2, Wednesday) -

### **Projects Tour**

8 am - NW Sands Projects – led by "Crex Crew" - Kyle Anderson, Joseph Dittrich, Cody Strong, WI DNR Noon – Lunch

<u>Outreach Management (the People)</u> – Moderator – Mike Amman (what works to touch, recruit, motivate?)

1:00 – Assessing Grassland Bird Conservation Through Audubon Conservation Ranching – Ashly Steinke, Audubon Great Lakes

- 1:25 Private Landowner Outreach Through the Farm Bill Biologist Program Jake Granfors, Pheasants Forever
- 1:50 The Prairie Chicken Festival and Beyond Dan O'Connell, Portage County
- 2:15 Break

### <u>Landscape or Ecoregion Scale Management (the Partnerships and Collaboration)</u> – Moderator - Jodie Provost

- 2:25 A Bird Friendly Farm Bill Steve Riley, American Bird Conservancy (ABC)
- 2:50 A Successful Across-States Example Jim Giocomo, ABC

### **Next Steps**

- 3:15 Open Discussion regarding Outreach, Collaboration, and Next Steps
- 4:00- Wrap Up, Summary
- 4:10 Farewell, Thank You, Travel Home Safely

### **ABSTRACTS** (Presentations will be recorded and placed on NAGP website at grousepartners.org)

MN DNR – Sharp-tailed Grouse and Greater Prairie-Chicken – Kyle Arola, <a href="mailto:kyle.arola@state.mn.us">kyle.arola@state.mn.us</a>, Chris Balzer, <a href="mailto:christian.balzer@state.mn.us">christian.balzer@state.mn.us</a>, Derek Frost, <a href="mailto:derek.frost@state.mn.us">derek.frost@state.mn.us</a>

Sharp-tailed grouse and prairie chicken populations in northwest Minnesota (NW MN) have fluctuated over the past 30 years primarily due to availability of suitable open landscape habitat (especially Conservation Reserve Program enrollment acres). Currently, NW MN sharp-tailed grouse population appears to be stable to slightly increasing (unlike the East Central population) according to spring lek surveys coordinated by Minnesota Department of Natural Resource (MN DNR) staff. In addition, the sharp-tailed grouse range appears to be expanding south into the prairie chicken range. MN DNR surveys indicate that the overall prairie chicken population has declined during the past couple decades. However, prairie chicken numbers in the southern and central portions of the range seem to have stabilized with a continued slight decrease in the northern portion of their range. The MN DNR attempts to properly manage open landscapes with primarily prescribed fire and mechanical regeneration—often using partnerships with conservation organizations. Funding, staffing shortages, and contractor availability have proven to be common roadblocks to adequately manage the large tracts of MN DNR land in NW MN. Continued research on best management practices may help focus future funding and staffing efforts.

Sharp-tailed grouse populations have steadily declined over the last several decades in East Central Minnesota. Managers are very concerned about this decline, but despite significant habitat management efforts we have not been able to stop the trend. Due to concerns about this population, the hunting season was closed beginning in 2021. Working with our partners at Minnesota Sharp-tailed Grouse Society and Pheasants Forever, we have the capacity to do significant habitat work

through Outdoor Heritage and Conservation Partners Legacy Funding. However, so far we have not seen the population respond to this work. Managers feel the decline is habitat driven, but even in areas with significant habitat management efforts the birds have declined. What are we missing? Is it a scale thing? Climate change? Population genetics? Changes in predator communities or abundance? How do we stop the decline?

# MN Sharp-tailed Grouse Society (MSGS) – Bill Berg, <u>bltrbrg@frontier.com</u>, Mike Chalich, <u>michael chalich@hotmail.com</u>

MSGS was founded in 1986 by Roche Lally of Duluth. He served as the first and only president for MSGS for about three decades. MSGS is dedicated to the management and restoration of sharp-tailed grouse in Minnesota for hunters and non-hunters, and works very hard toward that goal. With about 250 members, it has secured funding for numerous habitat projects, prescribed burning equipment, informational brochures, land acquisition, research projects, viewing blinds, and more. It publishes a newsletter three times per year, and organizes annual volunteer brush cut habitat days and biannual Spring Flings for members. Dave Pauly, aka "Griz", current and outgoing (2<sup>nd</sup>) president, has been instrumental in accomplishing habitat projects, especially using Conservation Partnership Legacy grants. Bill Berg, a founding father, will share about the history and accomplishments of MSGS, and Mike Chalich, president-elect will share about his vision for MSGS.

## The 50-Year History of the MN Prairie Chicken Society and Some Conservation Concerns – Dan Svedarsky, <u>dsvedars@crk.umn.edu</u>

In April of 1973, an informational meeting was held at the Crookston campus of the University of Minnesota to assess the status of this charismatic bird of the prairie. In 1974, the first official meeting of the Minnesota Prairie Chicken Society was staged at Fergus Falls, in northwest Minnesota. It was keynoted by Fred and Fran Hamerstrom, Wisconsin's famed prairie chicken biologists. A number of key accomplishments will be summarized along with outlining some conservation challenges.

# WI DNR – Highlights of Wisconsin's Draft Sharp-tailed Grouse Mgt. Plan – Bob Hanson, Robert. Hanson@wisconsin.gov

The Wisconsin Department of Natural Resources and the WI Sharp-tailed Grouse Advisory Committee is drafting the Wisconsin Sharp-tailed Grouse (STGR) Management Plan for 2023-2033. The focus of the plan is Northwest WI where state, county, federal, and private managed barrens cores and corridor barrens projects are where most of the STGR population are now concentrated. The WI 2023 Lek Surveys found 202 dancing male STGR, 190 males in NW WI. The primary goal of the plan focuses on implementing the Northwest Sands Habitat Corridor Plan that increases landscape level connectivity of barrens habitat. This partnership will achieve this goal by implementing priority habitat management actions including quality fire managed core barrens, and through rolling barrens partnerships with forests within the habitat corridor. "Rolling barrens" are an innovative way of managing pine barrens that provides connectivity between core barrens using timber harvest to replicate fire. Under this

working forest model blocks of forest are harvested/regenerated in sequence over time to mimic fire and open a much larger area than is typical in modern harvests. The partnership will also collaborate to achieve goals of increasing open habitat acreages enrolled in private land programs within two identified core areas. Additional actions that will support plan goals involve evaluating habitat management strategies, lek survey protocol, sensitivity to climate change, and a sustainable harvest framework. An Information Needs part of the plan calls for a sensitivity analysis and minimal viable population to be completed within two years to help the advisory committee in discussions involving sustainable harvest.

## WI DNR - Highlights of Wisconsin's New Greater Prairie-Chicken Mgt. Plan - Lesa Kardash, Lesa.Kardash@wisconsin.gov

The Wisconsin Department of Natural Resources (WDNR) recently completed the Wisconsin Greater Prairie-chicken (GRPC) management plan for 2022-2032. The WDNR narrowed the focus of the plan in central Wisconsin to three state-managed properties and corridors between those properties ("core area"), where most of the GRPC population is now concentrated. The primary goal of the plan focuses on increasing acres of grassland habitat managed annually and reclaiming grassland habitat on the three core properties. WDNR managers will achieve this goal by implementing priority habitat management actions including increasing woody vegetation control, conservation grazing, and prescribed fire. WDNR and partners will collaborate to achieve secondary goals of increasing acreage enrolled in private land programs and permanent grassland protection through acquisitions and easements within the core area. WDNR proposes to amend existing private land programs to address barriers, seek funding to establish and implement new programs, and provide private lands positions. Priority private land initiatives include state easement and crop conversion programs, subsidizing CRP, a grassbank program, and woody vegetation removal along roads and fencerows. Additional actions that will support plan goals involve priorities for research and education. Research priorities include evaluating habitat management strategies, lek survey protocol, potential impacts of solar panel facilities, and sensitivity to climate change. WDNR will expand involvement in education and outreach by focusing on collaboration with partner groups.

# **Wisconsin Sharp-tailed Grouse Society** – Ken Jonas, <u>kenjon@centurytel.net</u>, and Trevor Bellrichard, <u>tbell@wisharptails.org</u>

Sharp-tailed grouse have a long history of decline throughout the state of Wisconsin. In the early 1990s, the Wisconsin Sharp-tailed Grouse Society was formed to provide citizen support and action for maintaining sharp-tails as a viable wildlife species in the state. The organization's purpose and objectives are focused on the oak and pine barrens in the northwest sands ecological landscape where sharp-tailed grouse are an indicator species. Through time as aging of the organization took place, membership retention and recruitment declined causing concern about future efforts and survival of the organization. In recent years there has been a positive increase in recruitment of new members that correlates with utilization of current social media platforms to publicize the plight of sharp-tailed grouse in the state. A renewed effort to participate in outreach at regional shows and event has also led to increased awareness and membership. The current plan of action and the steps taken to stay viable with a younger cohort of members are provided.

WI Greater Prairie-Chicken - Lessons from the Power (and Pitfalls) of Partnerships - Sharon Schwab, Dane County Conservation League, <a href="mailto:sschwab@flarkinc.com">sschwab@flarkinc.com</a>

The late Drs. Frederick and Francis Hamerstrom prevented the extirpation of Wisconsin's Greater Prairie-chicken (GRPC) through a unique "scatter-pattern" of land management. They partnered with two organizations – Dane County Conservation League (DCCL) of Madison, WI and the Society of *Tympanuchus cupido pinnatus* (STCP) of Milwaukee to purchase thousands of acres in Central Wisconsin from the late 1950s into the mid-1970s where the remnant GRPC population persisted. Since that time many partners have entered and exited in their efforts to protect, manage, and enhance GRPCs and other threatened, endangered, and special concern grassland species. In 2005 the Central Wisconsin Grassland Conservation Area was designated by the Wisconsin Department of Natural Resources. Included were efforts to formalize real or potential partnerships with relevant agencies, organizations, and interested persons. A GRPC Festival was initiated with hopes of recreating the conservation ethic for GRPC through observation blinds, birding tours, nature writing, art, and more. As the adage goes, "It takes a village" ...This presentation will review those partnerships which have helped the GRPC survive – some that persist and others that have stepped away from the challenge.

### MI DNR - Status and Update on Michigan Sharp-tailed Grouse - Adam Bump, BUMPA@michigan.gov

Sharptailed grouse exist in the Eastern Upper Peninsula of Michigan, with scattered pockets in other portions of the Upper Peninsula. An overview of the status of the sharptailed grouse program in Michigan will be provided including monitoring techniques, habitat projects and harvest management. Also covered will be next steps in sharptailed grouse management in Michigan.

MI Sharp-tailed Grouse Association (MSGA) – Marty Sarrault, <u>marty0127@peoplepc.com</u>

Marty will share about accomplishments of and future plans for the MSGA.

Conservation Strategy for the Greater Prairie-Chicken and the Plains and Prairie Subspecies of Sharptailed Grouse – Jodie Provost, NAGP, jodie@grousepartners.org

Why do fragmented prairie grouse populations matter? What are we going to do to prevent and fix them? An interstate work group of 14 states convened in 2015 with the intent of developing rangewide plans for greater prairie-chicken and the plains and prairie subspecies of sharp-tailed grouse, to be pro-active in addressing their habitat loss and population declines, apply lessons learned from the declines of lesser prairie-chicken and sage grouse, and use them as flagship species to conserve grassland and shrubland habitats and the suite of wildlife that need them. The resulting report in 2022 is a starting point. It recommends identification of, and focused collaborative use of resources in, 50,000 acres blocks of high-quality grassland and shrubland habitats across the two species' range to sustain viable populations in the long term.

# Moquah Barrens Translocation – Lessons Learned & Considerations for the Future - Brian Heeringa, USFS, brian.heeringa@usda.gov

Translocation is a tool wildlife managers have used over time to accomplish habitat and wildlife management goals ranging from supplementing an existing population to recovering a population at risk of extirpation. In 2014/2015, a plan to supplement the sharp-tailed grouse within the Moquah Barrens of northern Wisconsin was developed to offset the perceived decline and low population. From 2016-2018, US Forest Service personnel, along with numerous project partners, translocated 160 sharp-tailed grouse from northwest Minnesota to the Moquah Barrens of northwest Wisconsin. During that time, radio telemetry was conducted on a subset of the released birds and landscape restoration activities were actively underway. With the boost in numbers, sharp-tailed grouse temporarily increased, but today numbers have decreased to just above pre-translocation levels. What potential reasons, or factors may have caused this?

Monitoring and survey efforts on sharp-tailed grouse, as well as vegetation, winter tracking, and other focus areas, may provide some clues. The presentation will provide a brief summary of Moquah, the recent translocation and monitoring efforts, as well as current observations to share lessons learned, questions that still need answers, and considerations for the future of sharp-tailed grouse at the Moquah Barrens. The Moquah Barrens are a State designated wildlife management area managed by the USDA Forest Service located on the Washburn Ranger District of the Chequamegon-Nicolet National Forest in Bayfield County, Wisconsin.

## The Mixing Pot: A Case Study of Hybridization of Sharp-tailed Grouse and Greater Prairie-chicken in North Dakota – Susan Felege, UND, <a href="mailto:susan.felege@und.edu">susan.felege@und.edu</a>

The greater prairie-chicken (*Tympanuchus cupido*) population in Grand Forks County, North Dakota has declined since 2005, after initial success following restoration efforts from 1992-1998. During this period, sharp-tailed grouse (*T. phasianellus*), which co-occupy the area, have increased. We conducted annual spring lek counts (15 March to 15 May 2019 - 2022) to monitor the population trends for both prairie grouse species. Within two study blocks, we attempted to identify all leks of both species through listening surveys and then return to count the number of birds on each lek by species and sex. We counted between 24 and 38 active leks annually. We observed steady decreases in prairie-chickens (only seven male prairie-chickens were observed in 2022); increases in sharptails; and increases in hybrid greater prairie-chicken x sharp-tailed grouse (8/31 leks in 2022). Previously, managers assumed that hybrids were relatively rare, but we documented as many as 16 hybrids that could be identified morphologically in a single year. Future work will be needed to evaluate the genetics of grouse where they co-exist to further determine accurate hybridization rates within the population.

### Forests to Barrens: Bayfield County's Efforts – Mike Amman, Mike.Amman@bayfieldcounty.wi.gov

The Bayfield County Forestry and Parks Dept. has been working on creating and maintaining barrens within their respective ownership within the Northwest Sands of Wisconsin. Part of the Bayfield County Forest mission includes supporting multiple use objectives which includes ensuring that the barrens community exists where appropriate. Bayfield County in partnership with the WI DNR has

supported, enhanced, and expanded the barrens community on the Bayfield County Forest through myriad of treatment techniques. The ongoing efforts are yielding positive results which include an increase in the local sharp-tailed grouse population along with simply providing more acres for barrens dependent species to exist. Bayfield County is committed to ensuring that the barrens community is a permanent part of the Bayfield County Forest.

The Ishkode Project - Managing Sharp-tailed Grouse on the Hiawatha National Forest - Paul Thompson, Hiawatha National Forest, USFS, paul.d.thompson@usda.gov

This project focuses on collaborative approaches to adaptive management and effective costewardship of federal lands from Anishinaabe and western science frameworks to build resilience in fire-adapted ecosystems.

Sharp-tailed Grouse and Vegetation Response to Fall Prescribed Fire and Mowing – Charlotte Roy, MN DNR, <a href="mailto:charlotte.roy@state.mn.us">charlotte.roy@state.mn.us</a>

We examined sharp-tailed grouse responses to prescribed fire and mechanical treatment in the fall during 2015-2021 in northwestern Minnesota. We surveyed sharp-tailed grouse use and measured vegetation at 16 mowing/shearing treatments, 12 prescribed burns, and also at 22 control sites. We conducted fecal pellet transects and documented sharp-tailed grouse observed 0−28 (mean 9.1) days before management, and 1 week, 1 month, 1 year, and 3 years after management. Sharp-tailed grouse use increased following prescribed fire but did not change after mowing. Increased sharp-tailed grouse use following prescribed fire was temporary. Changes in vegetation metrics were also temporary with most metrics returning to pre-treatment levels after 1 year, although shrub height at mowed sites returned more slowly and the forb response at fall prescribed fire sites persisted ≥3 years. We suggest that prescribed fire is more effective at increasing sharp-tailed grouse use of sites, perhaps due to cues associated with fire that attract sharp-tailed grouse. However, mowing and shearing are important to maintain sharp-tailed grouse site use, otherwise, woody encroachment reduces sharp-tailed grouse habitat, and fall prescribed fires had no measurable effect on shrubs. Thus, prescribed fire and mowing/shearing produced different sharp-tailed grouse and vegetation responses in the fall and should be applied to meet different management goals.

**Assessing Grassland Bird Conservation Through Audubon Conservation Ranching** – Ashly Steinke, Audubon Great Lakes, <a href="mailto:ashly.steinke@audubon.org">ashly.steinke@audubon.org</a>

Grassland birds have suffered an unparalleled decline over the past half-century. These declines are tied to many causes, but the loss of grassland habitat stands out as a driving force. Audubon has developed the Conservation Ranching Initiative to combat the negative effects of grassland degradation on private lands. This market-based conservation approach offers incentives for good grassland stewardship through a certification label on beef products. To assess the effectiveness of Audubon's bird-friendly grazing protocols, we developed the Bird Friendliness Index to compare bird communities on certified ranches to ungrazed habitats. Certified bird-friendly pastures in the western U.S. contained bird communities that were generally as species rich or richer than surrounding grassland ecosystems. As we launch Audubon Conservation Ranching in Wisconsin and Minnesota by

recruiting ranches to the program, we will survey certified ranches to determine if Audubon's Bird Friendly grazing protocols produce similar results in the upper Midwest.

# **Private Landowner Outreach Through the Farm Bill Biologist Program** – Jake Granfors, Pheasants Forever, <u>jgranfors@pheasantsforever.org</u>

It is no secret private landowners hold the key to abundant wildlife populations and healthy ecosystems. The Farm Bill Biologist program consists of trained biologists that provide a "boots-on-the-ground" habitat program delivery system that emphasizes the wildlife benefits possible through the voluntary conservation programs of the Federal Farm Bill. Farm Bill Biologists are embedded within local USDA Service Centers providing county or multi-county coverage and provide information on voluntary conservation opportunities to a broad and diverse audience. As a Farm Bill Biologist in east-central Minnesota, I will discuss landowner outreach efforts and how to break down barriers and address misconceptions that exist to increase adoption of voluntary conservation practices. In east-central Minnesota (Aitkin, Carlton, Kanabec, and Pine Counties), Pheasants Forever (PF) Farm Bill Biologists and the U.S. Department of Agriculture's (USDA) Environmental Quality Incentive Program (EQIP) have been instrumental in supporting over 8,300 acres of grassland and shrubland habitat enhancement on private land since 2017. Practices include brushland mowing, delayed haying, and prescribed burning.

### The Prairie Chicken Festival and Beyond – Dan O'Connell, Portage County, OConned@co.portage.wi.gov

In 2008 the Prairie Chicken Festival planning committee decided to go beyond bird viewing from blinds and began other education and outreach efforts. This was done by inviting guest speakers with various levels of expertise on the Greater Prairie Chicken (GRPC), its life history and habitat needs as well as those for other species that call the Central Wisconsin grasslands home. We also decided that the youth were key and started work with school-age children. By getting these young students in the blinds to view the GRPC, creating posters, etc. we saw a marked change in the attitudes of adult residents. Over the years we have hosted hundreds of people from many states and several countries for viewing. We will discuss how a few of these have brought the plight of the GRPC to the national stage. Other examples of education efforts include local presentations, historical perspectives, newsletters, postcards, and observation blind building. Since 2014 we have expanded our efforts and now are working with the Farmers of Mill Creek Watershed. This has allowed us and them to reach many local producers and property owners as well as many more schools to continue the education on a wide array of conservation topics. All of this is done to get people of all ages to understand that by proper management of both public and private lands we all benefit and that we are all in this together!

### A Bird Friendly Farm Bill – Steve Riley, American Bird Conservancy (ABC), SRiley@abcbirds.org

What does a bird-friendly Farm Bill mean? It simply means that there are a good many aspects of the bill, especially in the Conservation Title, that can be improved so that they help native birds and other wildlife. Also, while many might think such changes will require more money or great sacrifices for ranchers, farmers, and the ag industry, that is not necessarily true. It was imperative that we join the

Farm Bill debate in earnest, knowing that we have lost half of all grassland birds in North America over the last 50 years, which is emblematic of broader ecological declines. ABC is taking a fresh look at traditional and contemporary Farm-Bill-improving ideas offered by the wildlife community. The lens we are using is one that asks "what do birds need that can better benefit farmers, ranchers. and the American public. Turns out, there are a lot of things we can do. Some of these things require changes in the upcoming Farm Bill, while others can be fixed by administrative and cultural changes. We are working on these problems from both ends and at the same time.

Ramping-up conservation delivery capacity is necessary to meet today's conservation challenges. Jim Giocomo, ABC, jgiocomo@abcbirds.org

Conservation delivery is impacted by many systems and decisions made at multiple scales and by multiple organizations, and can be treated as a supply chain. We used the restoration of declining bird populations as a basis to build an understanding of the land management effort (acres) needed to meet bird population objectives. This understanding creates opportunities to plan for the kinds of programs (dollars) and the staffing (people) needed to ramp-up conservation delivery capacity. We'll show examples how using a birds-acres-dollars-people framework can help implement strategies that help to build and strengthen the cross-boundary conservation delivery supply chain at various scales.