

# COLORADO PLATEAU NATIVE PLANT PROGRAM

2017 ANNUAL MEETING

Feb. 28 - March 02, 2017



Four Corners School of Outdoor Education at the Canyon Country Discovery Center

1117 N. Main St.  
Monticello, UT 84535

1-800-525-4456

<http://www.fourcornersschool.org/>





## TUESDAY

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**8:30** **Welcome from Four Corners School & Canyon Country Discovery Center**

Chris Giangreco, *Four Corners School*

**8:35** **CPNPP Annual Meeting Introduction**

Lance Porter, *BLM Canyon Country District*

**8:45** **Colorado Plateau Native Plant Program Overview**

Adrienne Pilmanis, *BLM Colorado Plateau Native Plant Program*

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## Big Picture Restoration Need for Materials

**9:05** **BLM National Seed Warehouse System & History**

Patricia Roller, *BLM Boise*

**9:25** **Using past seeding treatments to inform sourcing in the Colorado Plateau**

Andrea Kramer & Shannon Still, *Chicago Botanic Garden*; Nora Talkington, *Navajo Natural Heritage Program*; Troy Wood, *USGS Flagstaff*

**9:45** **Long-term trends in restoration and associated land treatments in the Southwest United States**

Stella Copeland & Bradley Butterfield, *Northern Arizona University*;

John Bradford & Seth Munson, *USGS Moab*; David Pilliod & Justin Welty, *USGS Boise*





## TUESDAY

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**10:05**     **Disturbance Automated Reference Toolset (DART): Prioritizing ecological rehabilitation from energy development on the Colorado Plateau**

Travis Nauman, *USGS Moab*

**10:25**     **Break**

**10:40**     **The applicability of next-generation sequencing to native plant materials development**

Rob Massatti, *USGS Flagstaff*

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## Big Picture Long-Term Players

**11:00**     **UCEPC Field Increase of *Koeleria macrantha*, *Poa secunda*, *Achnatherum hymenoides*, and *Elymus elymoides***

Steven Parr, *Upper Colorado Environmental Plant Center*

**11:20**     **Review of a Cross-Pollinated Allo-Octoploid and Current Research Studies at the Los Lunas Plant Materials Center**

Bernadette Cooney, *Los Lunas Plant Materials Center*

**11:50**     **USDA-ARS FRRL plant materials development for the Colorado Plateau**

Shaun Bushman, *Forage & Range Research Lab, Agricultural Research Service*



## TUESDAY

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**12:10**    **Lunch - Peace Tree Café Caterer**

**1:10**    **From the Wild to Farm and Back Again: A Strategy for Native Plant Material Development and Utilization**

*Kevin Gunnell, Utah Division of Wildlife Resources, Great Basin Research Center;*

*Scott Jensen, USFS, Rocky Mountain Research Station*

**1:30**    **When plant distributions and administrative boundaries don't align, can people? Partnering across plant materials development programs**

*Scott Jensen, USFS, Rocky Mountain Research Station; Kevin Gunnell, Utah Division of Wildlife Resources, Great Basin Research Center*

**1:50**    **Industry perspectives on national native seed and local ecotypes**

*Robbie Henes, Southwest Seed, Inc.*

**2:10**    **Species Propagation Discussion: *Dalea searlesii* (prairie clover) germplasms: challenges & opportunities for production**

*Panel & attendees*

**2:30**    **Uncompahgre Partnership + Colorado Parks and Wildlife Plant Materials Program Updates**

*Kathy See, UP Native Plant Coordinator*

**2:45**    **Mayberry update**

*Kara Dohrenwend, Mayberry Plant Propagation Center*

**3:00**    **Break**





## TUESDAY

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**3:15 Common garden germination trial of native and introduced grasses with multiple treatments/amendments**

Kelly Memmott, *Dixie & Fishlake National Forest*

**3:30 Genetic and cytotypic variability in a dominant southwestern grass (*Bouteloua gracilis*): Implications for restoration and seed sourcing**

Katrina Tso, *Northern Arizona University*

**3:50 Intra-specific trait variation of Western grasses**

Carla Roybal & Bradley Butterfield, *Northern Arizona University*

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## Partner Activity Reports - Pollinators

**4:10 Using Rana to Screen Plant Species for Effective Pollinator Support During Ecosystem Restoration**

Bruce Pavlik & Sarah Barlow, *Red Butte Botanic Garden, University of Utah*

**4:30 Understanding and Supporting Pollination Systems in Changing Environments**

Molly McCormick, *Northern Arizona University*

**4:50 Discussion**

**5:15 Poster Setup**

**5:30 POSTERS & Reception - onsite - Peace Tree Café Caterer**

Bring your own beverage



## TUESDAY

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### 6 - 6:30 Lightning Talks

#### 5 min SEED: Species Variability In A Small Package

Stan Young, *Utah Crop Improvement Association & Utah State University*

#### 5 min Ecological responses of *Pleuraphis jamesii* to altered intra-annual precipitation patterns

Michael Duniway, *USGS Moab*; David Hoover, *USDA-ARS Rangeland Resources Research Unit*; Troy Wood, *USGS Flagstaff*

#### 5 min Verde Native Seed Cooperative: Building a Regional Native Plant Network

Molly McCormick, *Northern Arizona University*; Kate Watters & Anna Schrenk, *Friends of Verde River Greenway*

#### 5 min Using species functional traits and local climate variables to predict restoration outcomes across the Colorado Plateau

Kathleen Balazs & Bradley Butterfield, *Northern Arizona University*; Nora Talkington, *Navajo Natural Heritage Program*; Shannon Still & Andrea Kramer, *Chicago Botanic Garden*

#### 5 min Cedar City FO & Seed use

Mitch Bayles, *BLM Cedar City*

#### 5 min Regional climate change & CPNPP USGS-NAU Research Overview

John Bradford, *USGS Flagstaff*





## WEDNESDAY

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### Restoration Methodology & Projects in Relation to Plant Materials

**8:30**    **Lessons Learned from Riparian Revegetation**

Ann Marie Aubry & Shannon Hatch, *BLM Moab & Tamarisk Coalition*

**8:50**    **Using connectivity Modifiers to restore degraded grasslands in Canyonlands and Arches National Parks**

Rebecca Mann & Michael Duniway, *USGS Moab*; Liz Ballenger, *NPS*

**9:10**    **Attempts to restore biological soil crust and stabilizing eroding soils in Bandelier National Monument, NM**

Kristina Young & Matthew Bowker, *Northern Arizona University*;

Jayne Belnap, Michael Duniway & Sasha Reed, *USGS Moab*

**9:30**    **Collaborations between researchers and practitioners yields practical and informed guidance for seed selection and restoration planning**

Owen Baughman & Elizabeth Leger, *University of Nevada, Reno*; Robert Burton, *BLM*

*Winnemucca*; Mark Williams, *BLM Salt Lake City*

**9:50**    **Salt Desert Restoration Studies**

M. Nikki Grant-Hoffman & Anna Lincoln, *BLM Colorado*; Jayne Jonas & Mark Paschke, *Colorado State University*; Kent Holsinger, *BLM*; Steven Parr, *Upper Colorado*

*Environmental Plant Center*



## WEDNESDAY

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**10:10**    **Novel Seed Treatments to Reduce the Risk of Post-fire Seeding Failure**

Ryan Call & William Richardson, *Brigham Young University*

**10:30**    **Break**

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## Wildland Seed Collection Guidance

**10:45**    **Regional Seed Collection Guidance**

Rachel Hosna, *BLM / Great Basin Institute*

**11:05**    **Data driven seed collection using Python and weather forecasts**

Avery Uslander, *BLM / Great Basin Institute*

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## New Partner Proposals

**11:20**    **Vernal Field Office SOS and Plant Materials Development: past, present & future**

Jessi Brunson, *BLM Vernal*

**11:35**    **The science of seed banks: providing information about existing soil seed banks to inform management**

Akasha Faist, *University of Colorado*; Sasha Reed, *USGS Moab*





## WEDNESDAY

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- 11:50** Native plants on green roofs for water conservation, support of native pollinators, and as a seed source for community native landscaping  
Jacqualine Grant & Matthew Ogburn, *Southern Utah University*
- 12:05** Lunch - onsite, Wagon Wheel Pizza
- 1:15** Canyon Country Discovery Center Conservation & Service: a New Program Emphasizing Seed Collection, Native Plant Propagation, and Related Activities  
Mark Grover, *Four Corners School*
- 1:30** Introduction to the Navajo Natural Heritage Program and the “budding” Navajo Native Plants Program  
Nora Talkington & Leanna Begay, *Navajo Natural Heritage Program*
- 1:45** Verde Native Seed Cooperative: Expanding Native Seed Collection and Production in Northern Arizona  
Kate Watters, *Friends of Verde River Greenway*
- 2:00** Identifying key components of tri-trophic networks involving Greater Sage Grouse  
Bruce Pavlik & Sarah Barlow, *University of Utah, Red Butte Garden & Arboretum*





## WEDNESDAY

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**2:15** Discussion - New Partner Proposals

All

**3:00** Break

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## 2017 Seed Collection Coordination & Planning Meeting

**3:15** Discuss coordination, prioritization, potential overlap, complementarity, procedure, schedule follow-up calls/ meetings

Everyone planning or proposing wildland seed collection in 2017

**6:00** Optional dinner offsite, Roughlock Lodge

## THURSDAY

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## Field Trip (Details Next Page)

**8:30** Mike Duniway, Rebecca Mann, Liz Ballenger, Kristina Young

**2:00** Optional late afternoon TBD Small Group Meetings

**6:00** Optional dinner & music at State Line





**Thursday, March 2. 8:30 am – early afternoon**

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## **CPNPP Field Trip to Partner Project Sites:**

Mike Duniway (USGS), Rebecca Mann (USGS), Liz Ballenger (NPS), and Kristina Young (NAU) will be your expert guides for this excursion from Monticello to the Needles District of Canyonlands National Park (<https://www.nps.gov/cany/index.htm>) and the Canyonlands Research Center (<http://canyonlandsresearchcenter.org/>) and back.

RSVP required by February 21 for both trip and van transport.

Email Adrienne Pilmanis at [apilmani@blm.gov](mailto:apilmani@blm.gov).

Space is limited

**Description:** For this half day tour, we will visit a variety of project sites, including both research and management actions, in the Indian Creek and Needles areas.

Stops will include: a visit to the Canyonlands Research Center headquarters to visit

1) a grass precipitation manipulation trial (Hoover et al poster)

1) a biological soil crust restoration experiment (Young et al presentation)

- and three stops in the Needles District of Canyonlands National Park.

1) a grassland restoration adaptive management action (Con Mods, Mann et al presentation & recently featured on [CBS news](#))

2) an increase field where the NPS is increasing sand dropseed (*Sporobolus cryptandrus*) and alkali sacaton (*S. airoides*) to provide locally-sourced seed for NPS restoration activities

3) if time allows, a very successful four-wing saltbush-sagebrush restoration project at an old NPS maintenance yard.



## **Thursday, March 2. 8:30 am – early afternoon**

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### **Important Details:**

1. Attendees should bring a sack lunch and sufficient water for up to 6 hours.

<https://www.nps.gov/cany/planyourvisit/winter.htm>

2. The Field Trip will proceed even if temperatures are below freezing. Only dangerous driving conditions (e.g. snowpack or ice) will cause Field Trip cancellation.

3. Four Corners School will be providing van transport and attendees will be asked to sign liability forms. Attendees may also choose to drive themselves.

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