How do we tackle?

SGI team put together brief planning guide
Conveys a strategic thought process to help state and local planning
Provides ideas on beneficial practices
Not intended to be a prescriptive cookbook
What is the Resource Concern?
Degradation and loss of mesic areas for sage-grouse brood-rearing habitat

Our Charge:
Strategically protect, restore, or enhance mesic areas (‘green spots’) so sage-grouse hens and chicks can more readily and reliably access forb- and insect-rich summer habitats.
Overarching Goal: Promote Resilience

“The ability to maintain hydrologic/ecological functions in the face of drought & intense precipitation events”

~ Gunnison Climate Working Group
Watershed issues

- Juniper-dominated landscapes have greater peak accumulations of snow water equivalent, earlier snow melt, and less streamflow relative to sagebrush-dominated landscapes (Kormos et al. 2016)
- Water delivery is delayed by an average of nine days in sagebrush systems (Kormos et al. 2016)
- Conifer removal extends soil water availability by 2-3 weeks (Roundy et al. 2014)
Conservation Actions

Protection Strategies

• Secure conservation easements
• Minimize water development impacts to springs

Restoration/Enhancement Strategies

• Improve livestock grazing to promote riparian and wet meadow functions
• Improve connectivity to, and availability of, mesic resources through conifer removal
• Retrofit or redevelop existing spring developments to enhance mesic habitat conditions
• Actively restore or enhance hydrologic function
Secure conservation easements

Smoke Creek, NV
Minimize water development impacts to springs
Improve livestock grazing to promote riparian and wet meadow functions

Susie Creek, NV

1991 - Grazed with annual hot-season use by cow-calf pairs

1999 - Spring and fall (cool season) grazing by cow-calf pairs allowed willow recovery

2007 - Beaver occupied the reach

2012 - Transition to cattails

2014 - Transition to a wet meadow

(Swanson et al., 2015)
Improve connectivity to, and availability of, mesic resources through conifer removal
Retrofit or redevelop existing spring developments to enhance mesic habitat conditions
Actively restore or enhance hydrologic function

(Higher cost alternative)
Actively restore or enhance hydrologic function

(Higher cost alternative)

Rees Creek, UT

2003 - Pre-Restoration

2014 - Post-Restoration
Actively restore or enhance hydrologic function
(Lower cost alternative)

One Rock Dam
= 1 rock high + uniform surface

Photo credits: Nate Seward
Actively restore or enhance hydrologic function
(Lower cost alternative)
What might success (or failure) look like?
Coming soon:
Mapping mesic productivity through time
Project scale outcomes

Before restoration 2008

After restoration 2013

Before-After Photos!
Tracking progress towards 2.0 goals

• Plans should include Wetland Wildlife Habitat Management (644) as a non-cost shared practice to delineate the mesic habitat area being conserved

• Do your best to estimate the mesic area directly benefited by planned practices
Watershed scale outcomes

Example: Susie and Bettie Creek drainages, NV, 1984-2011

Positive trend area = 124.5 km²
Negative trend area = 33.3 km²