CHEATGRASS IN SUBLETTE COUNTY

Julie Kraft
Sublette County Weed and Pest

CHEATGRASS
BROMUS TECTORUM L.

Cool Season - Winter annual
- Germinates in fall or early spring
- Variable germination in Sublette County

Reproducing from seed
- Each spikelet produces 4 to 8 seeds
- Seed viability 5-8 years

Leaves are hairy green early growth followed by red/purple then straw colored at maturity

Forage value only in early spring before seed heads are produced, then causes injury to eyes and mouth

Competitive ability
- annual grass niche in a cool season grass environment

Phenotypic plasticity
- Ability to adopt to conditions

Alters the ecosystem
- Increases fine fuels
- Increases fire frequency
- Plant community can become "shrubless"

SUBLETTE COUNTY INVASIVE SPECIES TASKFORCE

Group of concerned residents

- BLM, NRCS, WGFD, SCCD, SCWP, UW extension, energy and private landowners

Held an open house

Developed a strategic plan

Herbicide study plots

Obtained funding for cheatgrass and noxious weed survey

Obtained treatments money for surveyed infestations

Developed “Hold the Line”

Implemented management

TASKFORCE

- Treat all known or found locations west of the “Hold the Line”
- Treat corridors
- Manage and Minimize large infestations
- Survey new areas
- Work with cooperators
- Educate public on all invasives
- Natural interspace between native plants
- Reduce fine fuels
- Maintain healthy sagebrush rangelands

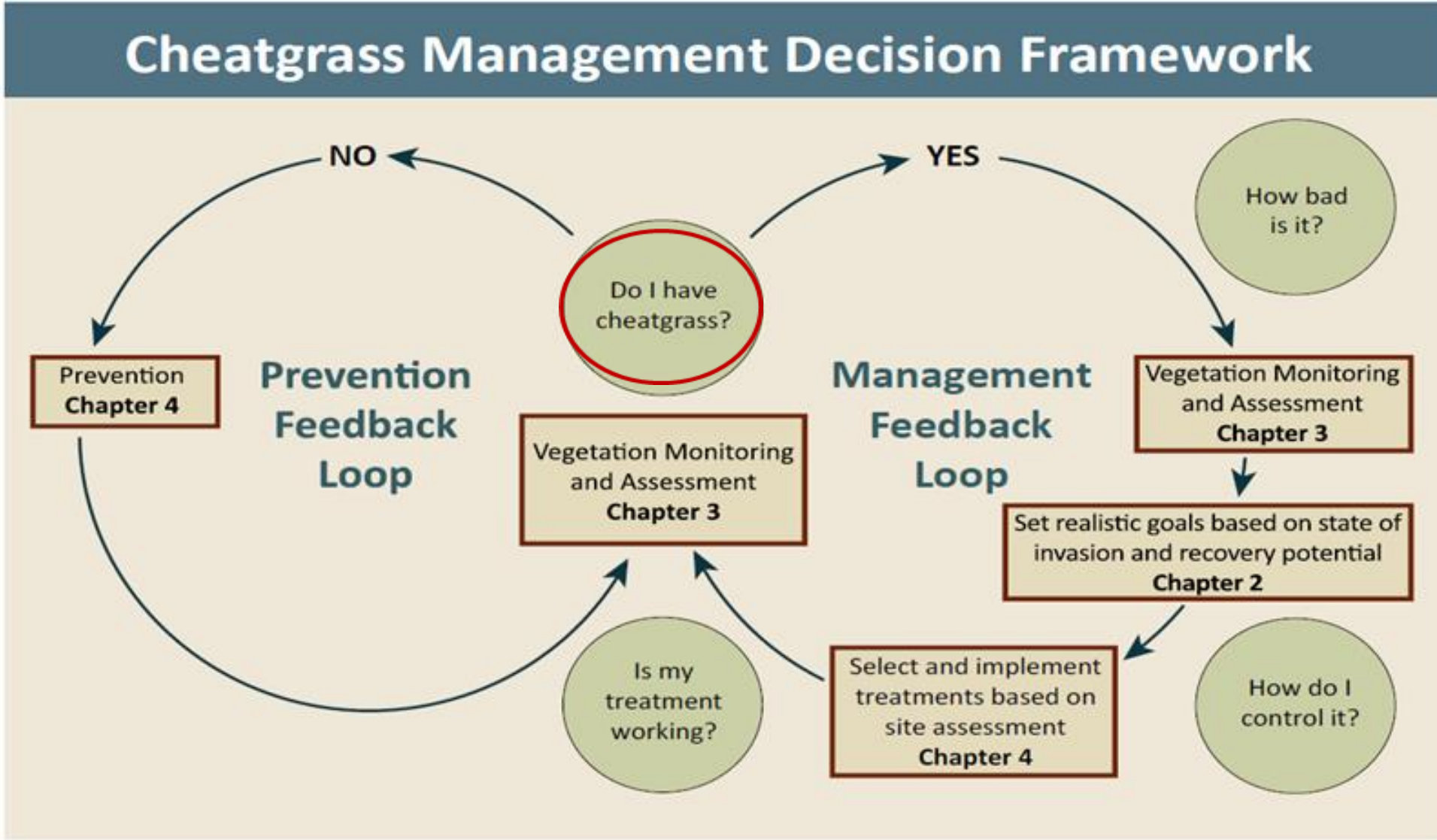
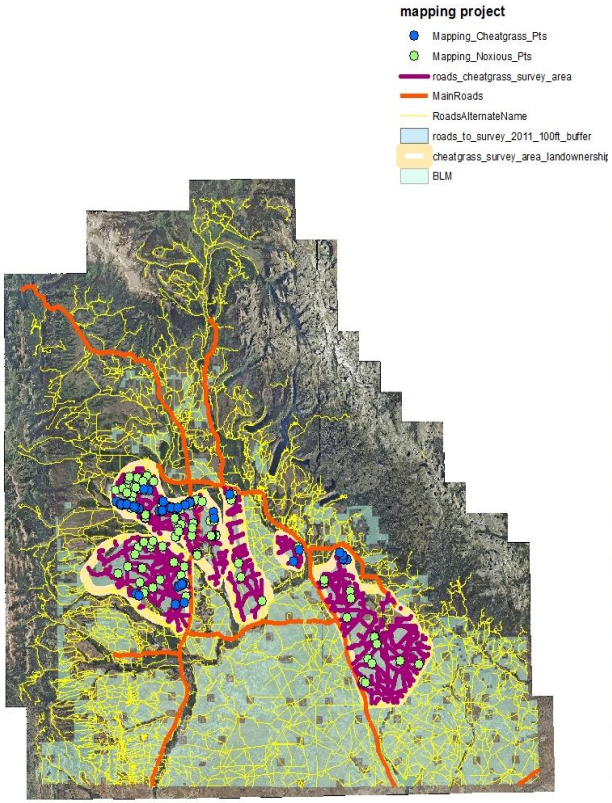
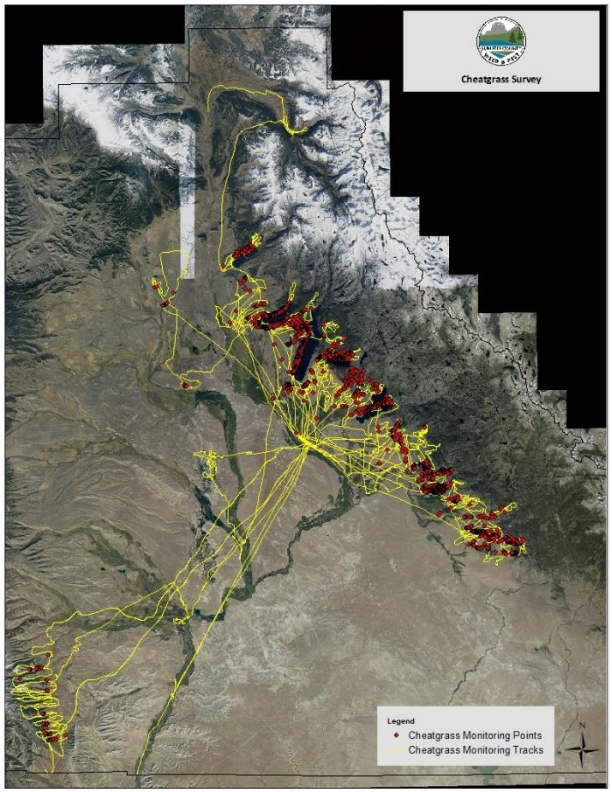


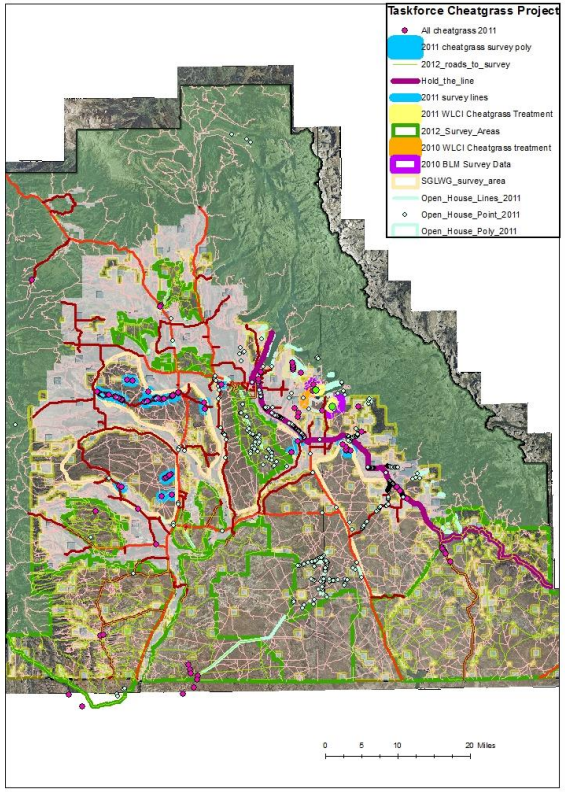
Figure I-1. Cheatgrass Management Decision Framework. This series of steps describes an iterative process to strategically manage cheatgrass in pastures, wildlands, and rangelands. Beginning at the initial question—Do I have cheatgrass?—this decision-support tool walks a manager through the steps described in this handbook. Long-term commitment to vegetation monitoring is a cornerstone, so managers can adequately determine progress toward stated vegetation-management goals.

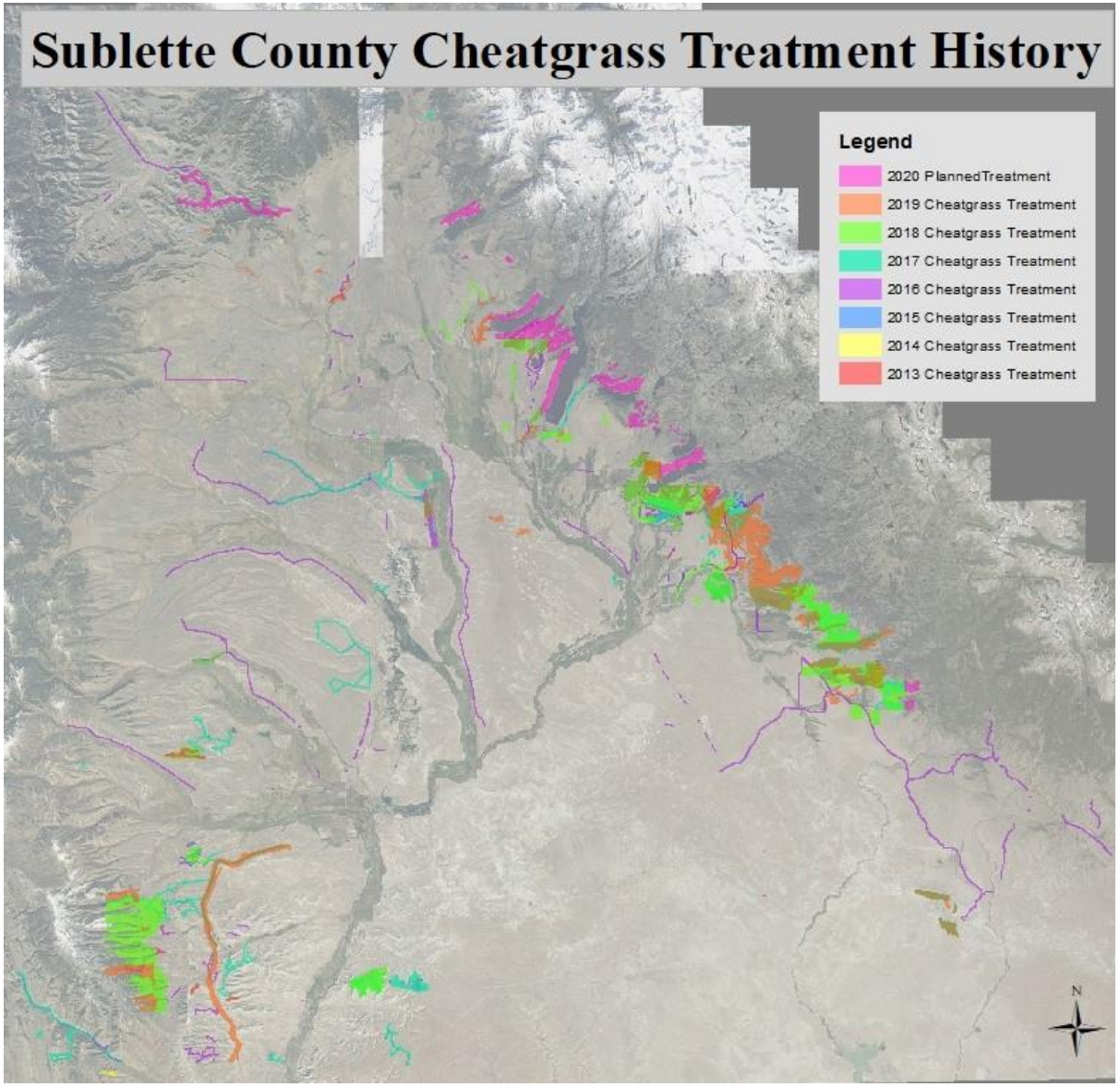
SURVEY

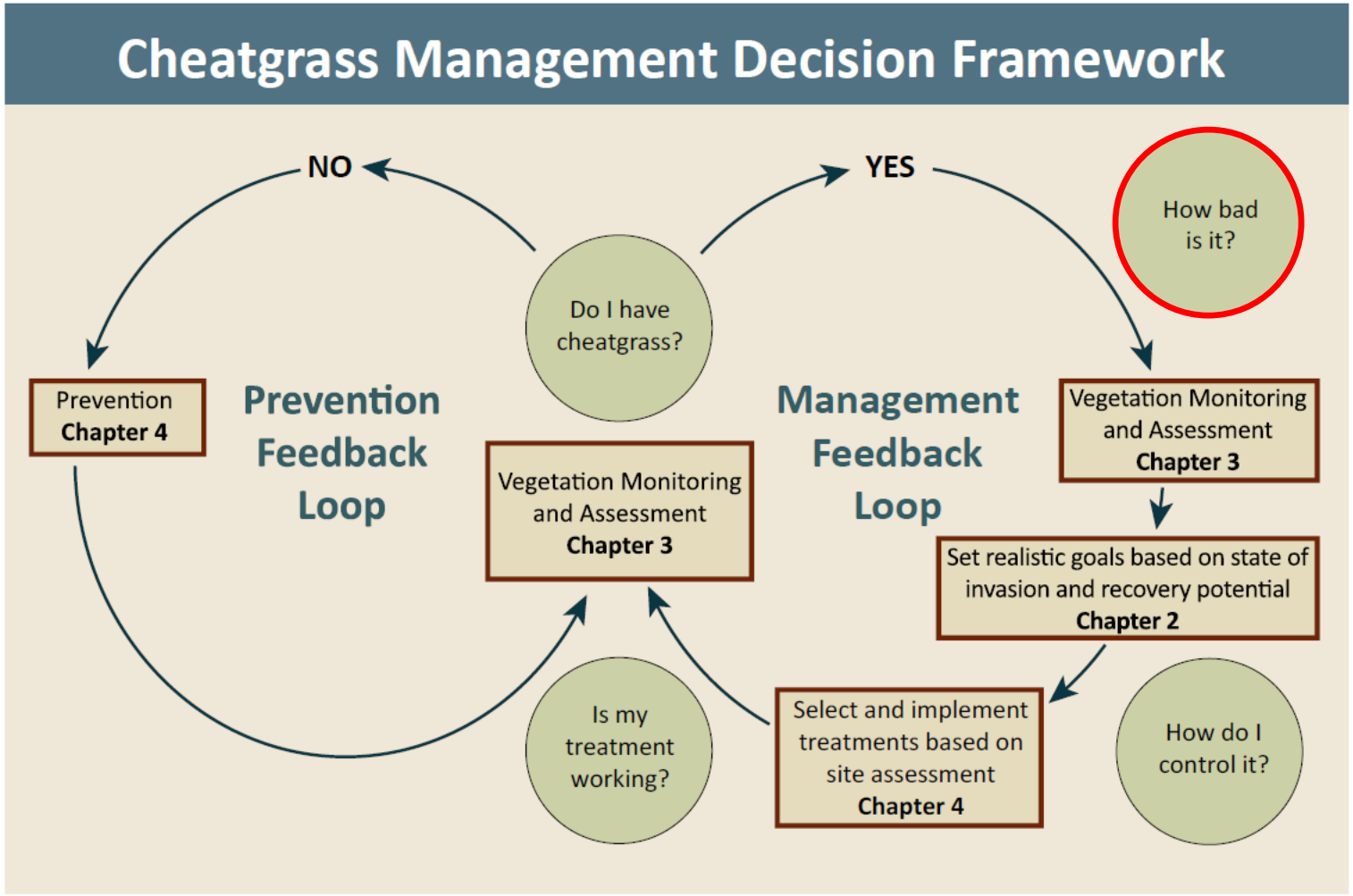
- Road survey
- Observations
- Aerial survey








Sublette County Cheatgrass Treatment History
Legend
2020 PlannedTreatment
2019 Cheatgrass Treatment
2018 Cheatgrass Treatment
2017 Cheatgrass Treatment
2016 Cheatgrass Treatment
2015 Cheatgrass Treatment
2014 Cheatgrass Treatment
2013 Cheatgrass Treatment
N



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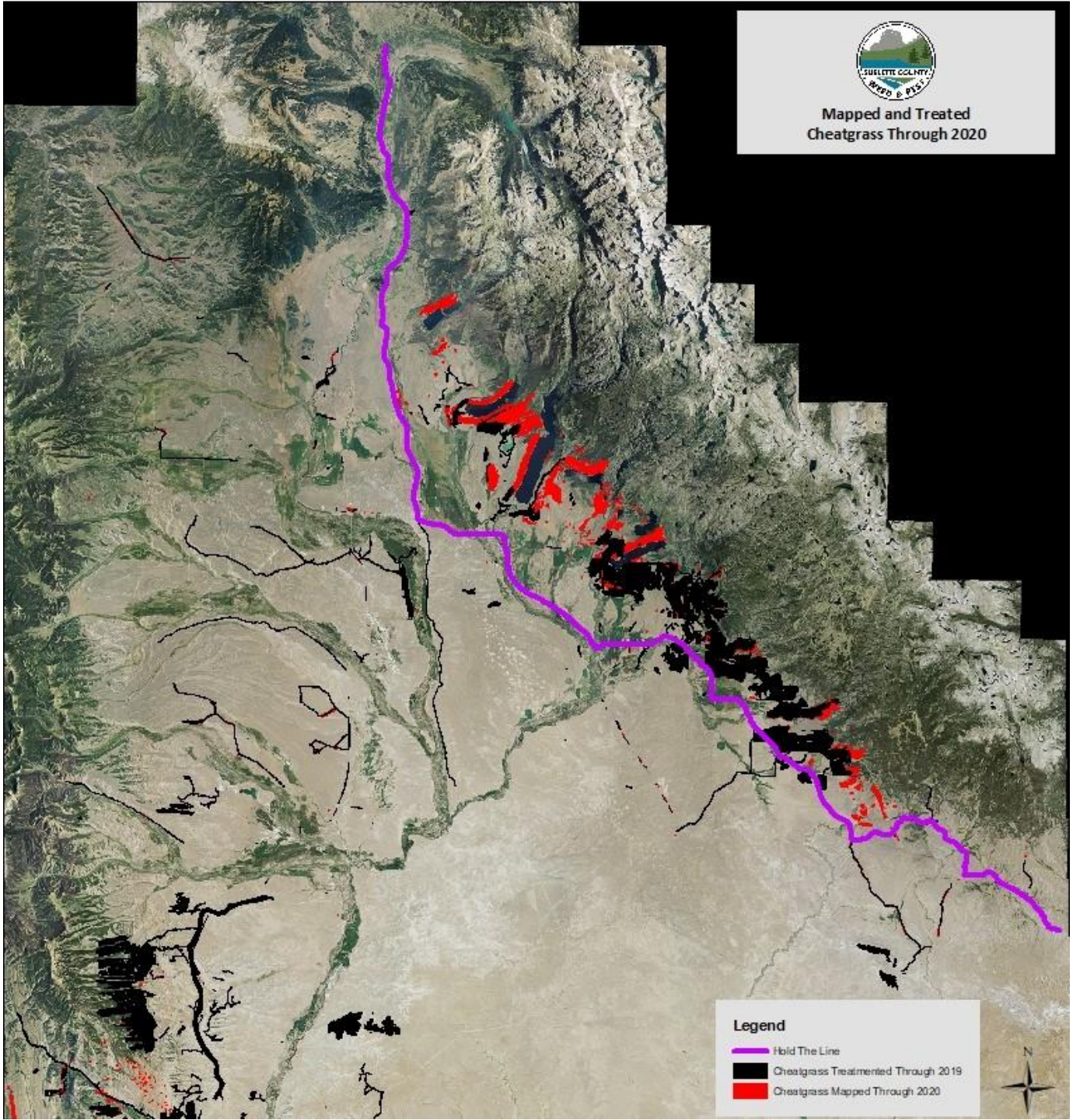

Mapped and Treated
Cheatgrass Through 2020
Legend
Hold The Line
Cheatgrass Treatmented Through 2019
Cheatgrass Mapped Through 2020
N

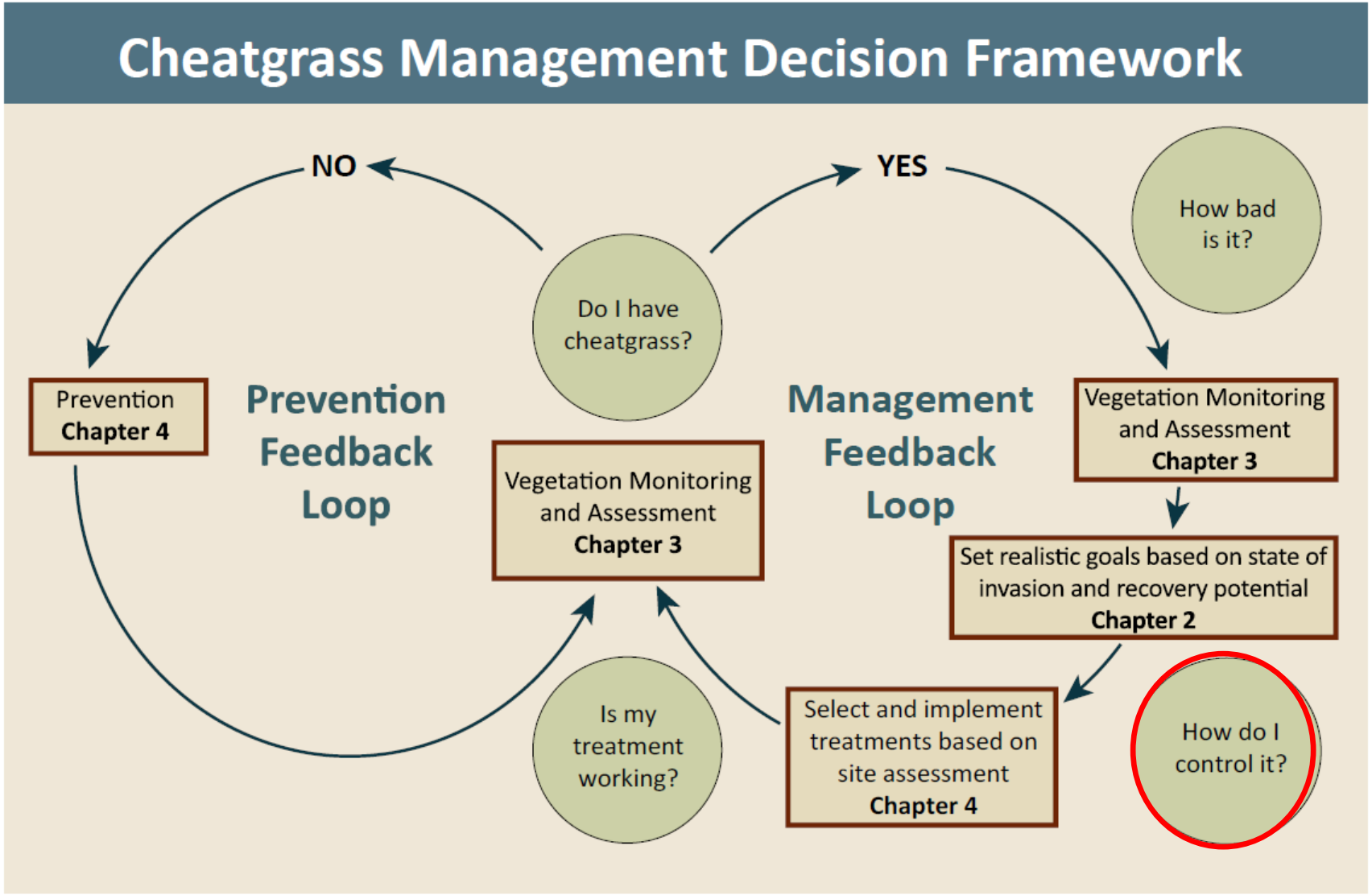
SUBLETTE COUNTY DECLARED NOXIOUS WEED

W.S. 11-5-102 (a)(viii)

"Declared weed" means any plant species which the board and the Wyoming weed and pest council have found, either by virtue of its direct or indirect effect to negatively impact management of agricultural or natural ecosystems, or as a carrier of disease or parasites, to be detrimental to the general welfare of persons residing within a district;

<u>Implement and pursue an effective program for the control of designated weeds and pests</u>

Listed in Sublette County in 2015. Now half of Wyoming Counties haveit listed as a declared noxious weed



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COMMITMENT TO ONGOING RESEARCH

Small Plot Trails

- Rimsulfuron and others prior to 2011

Threshold Study

- University of Wyoming (Mealor and Wood)
- Wilber Ellis - Ranger (imazapic on sand)
- WGFD Fall Creek WHMA

CSU Downy Brome Management Study

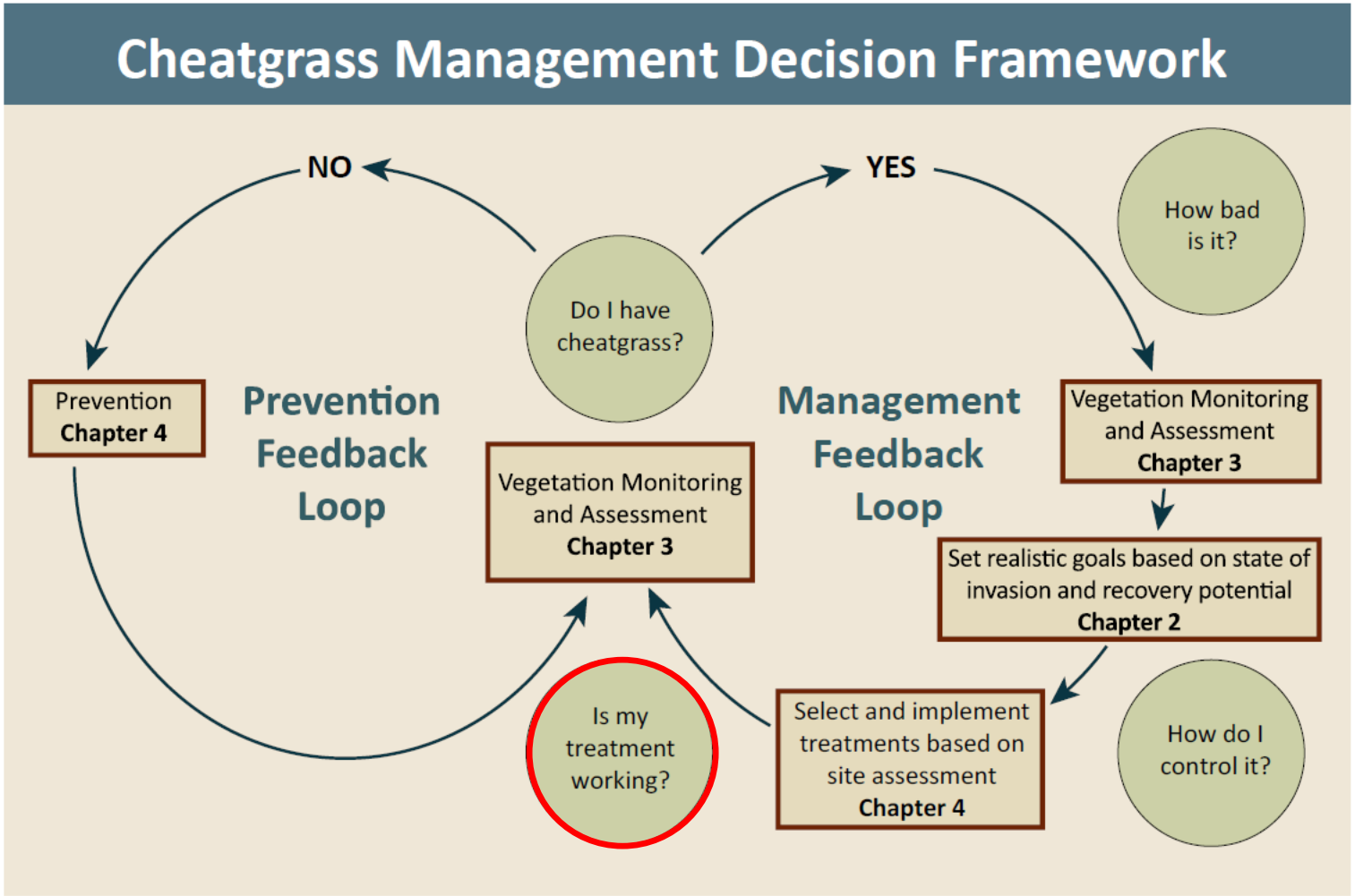
- Nissan, Meiman, Sebastian and Courkamp
- Bayer - Esplanade 200SC (indaziflam)
- United States Forest Service
- Boulder Ridge and WGFD Half Moon WHMA

Demonstration Plots

- Halfmoon Esplandade, Rimsulfuron, combo
- Proposed field tour summer 2020

Psuedomonues florescense

- Bacteria-annual non-native grass seedlings as they germinate
- Half Moon
- Roads



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MONITORING AND EVALUATION

Numerous monitoring sites

- Line Point intercept
- Photo points
- Assess control
- Assess damage

Our plant communities, while invaded, are still intact

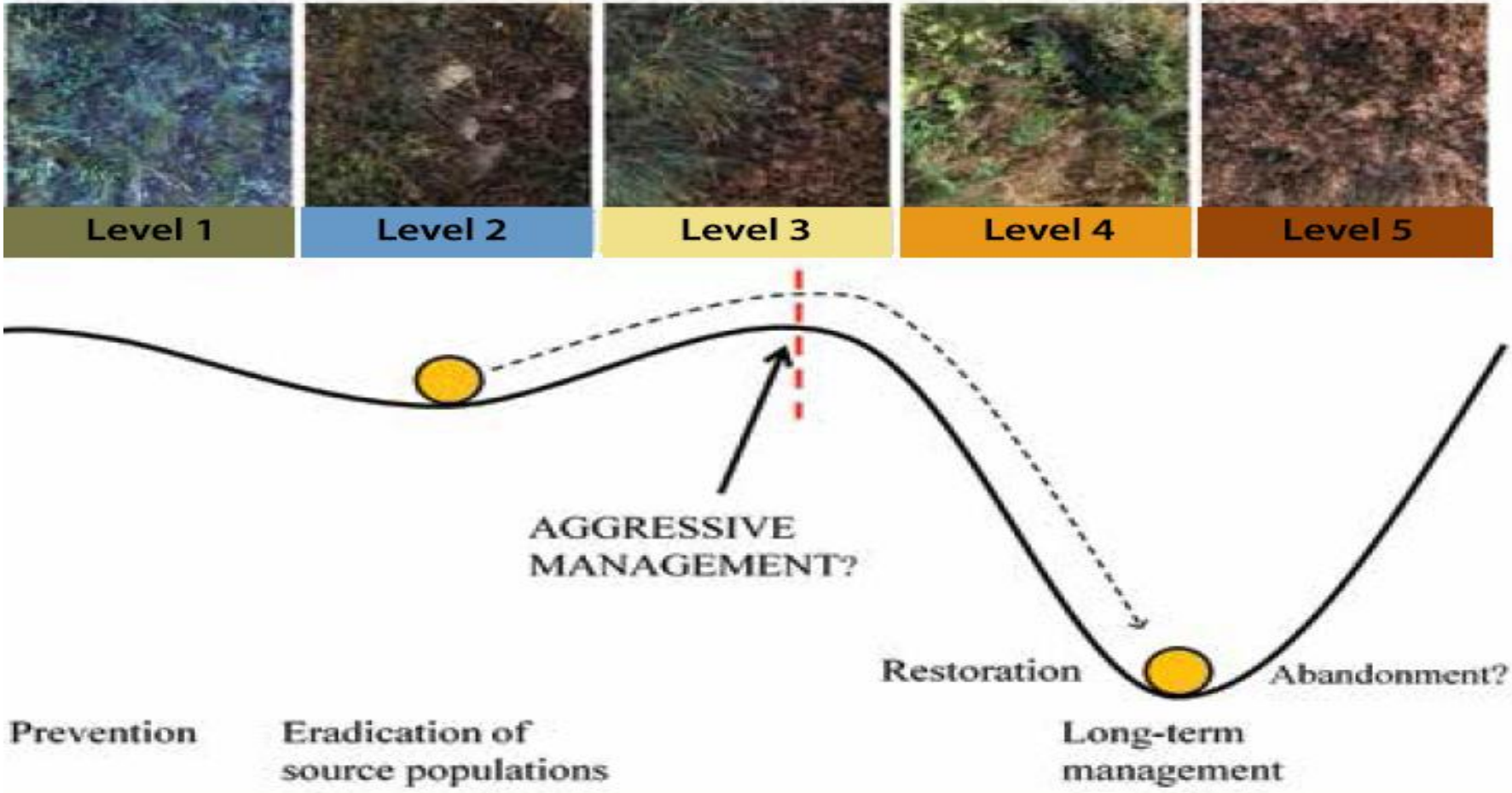
LAND HEALTH

Stable state is threatened by increased invasive species.

Fire or other disturbance event could move this habitat into a monoculture of cheatgrass

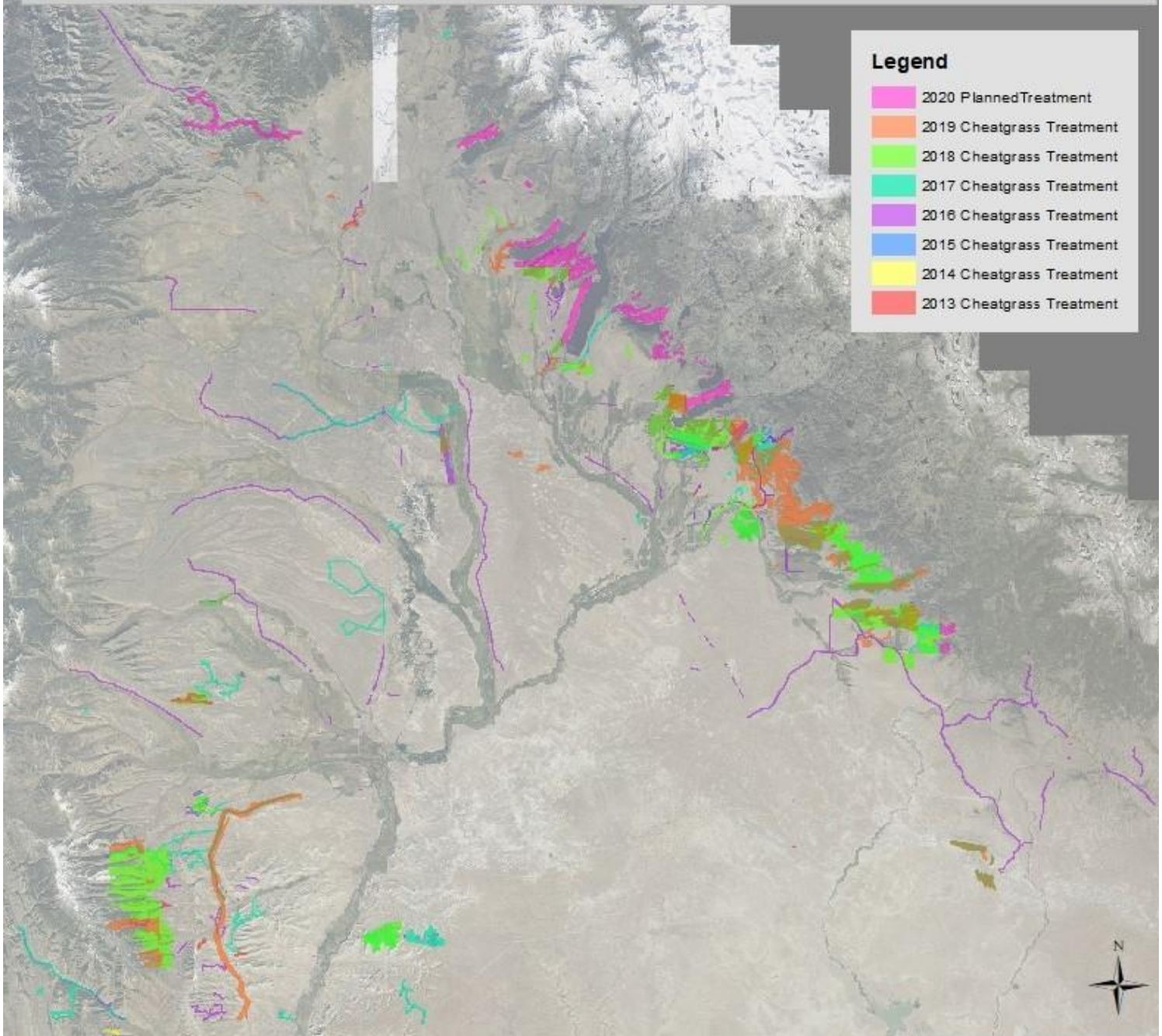
Moisture regime

CONCEPT OF THRESHOLDS: LIFE ON THE EDGE

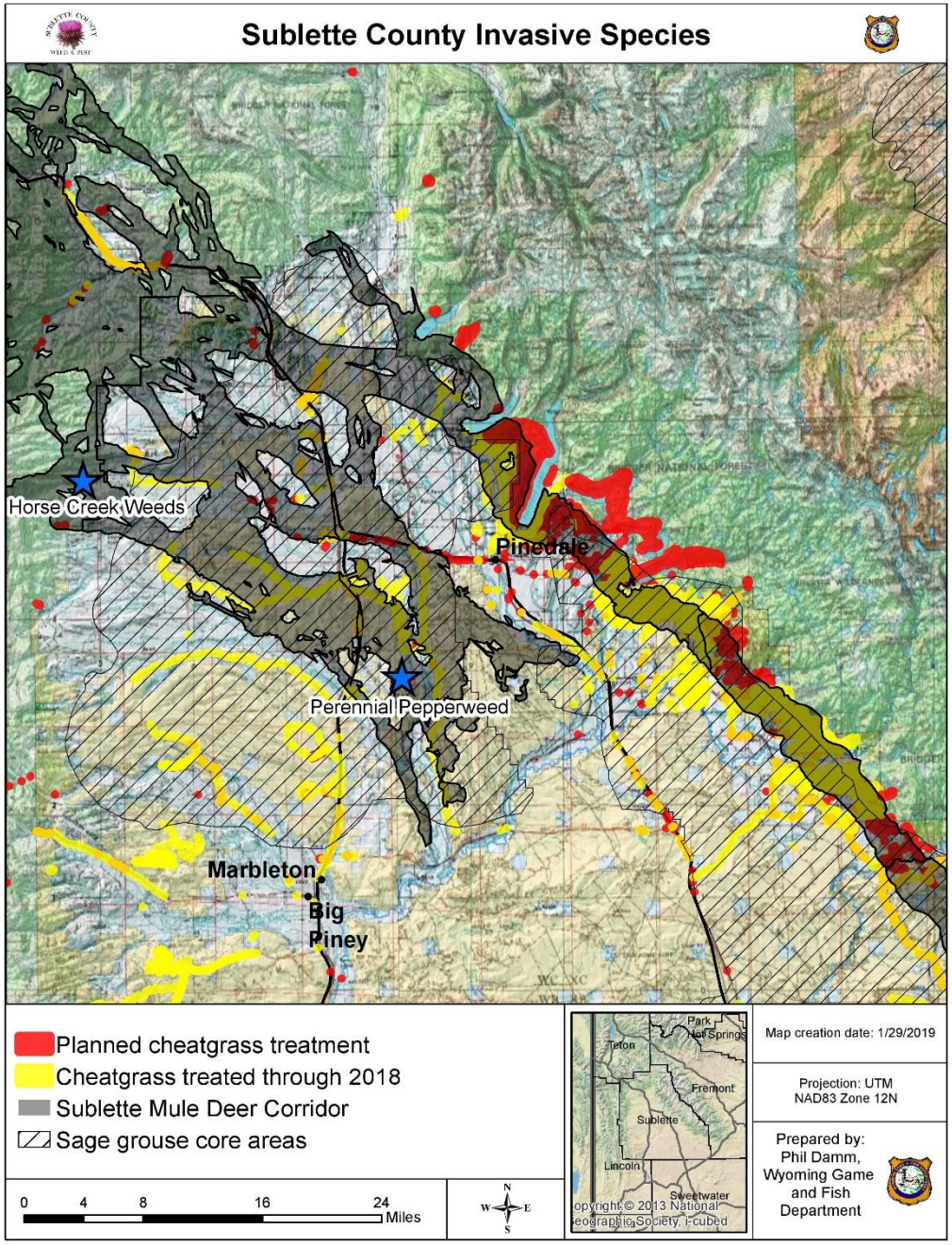


CHEATGRASS MANAGEMENT HANDBOOK MANAGING AN INVASIVE ANNUAL GRASS IN THE ROCKY MOUNTAIN REGION, BY UW AND CSU , AUGUST 2013

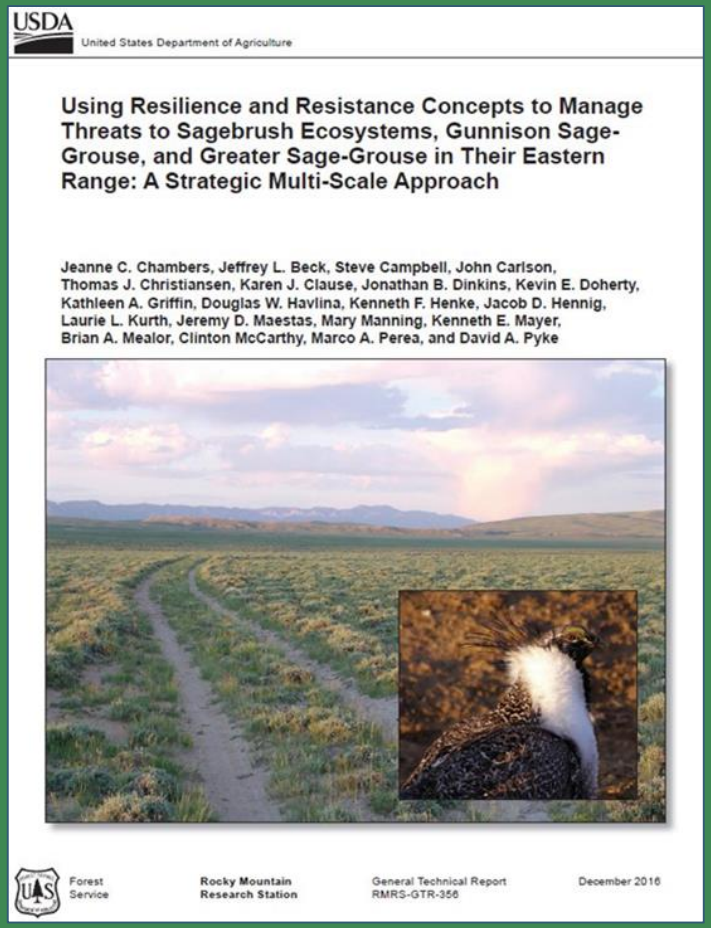
Sublette County Cheatgrass Treatment History



INVASION OF CRITICAL WILDLIFE HABITAT



RESILIENT PLANT COMMUNITIES RESIST INVASION



USDA United States Department of Agriculture

Using Resilience and Resistance Concepts to Manage Threats to Sagebrush Ecosystems, Gunnison Sage-Grouse, and Greater Sage-Grouse in Their Eastern Range: A Strategic Multi-Scale Approach

Jeanne C. Chambers, Jeffrey L. Beck, Steve Campbell, John Carlson, Thomas J. Christiansen, Karen J. Clause, Jonathan B. Dinkins, Kevin E. Doherty, Kathleen A. Griffin, Douglas W. Havlina, Kenneth F. Henke, Jacob D. Hennig, Laurie L. Kurth, Jeremy D. Maestas, Mary Manning, Kenneth E. Mayer, Brian A. Mealor, Clinton McCarthy, Marco A. Perea, and David A. Pyke

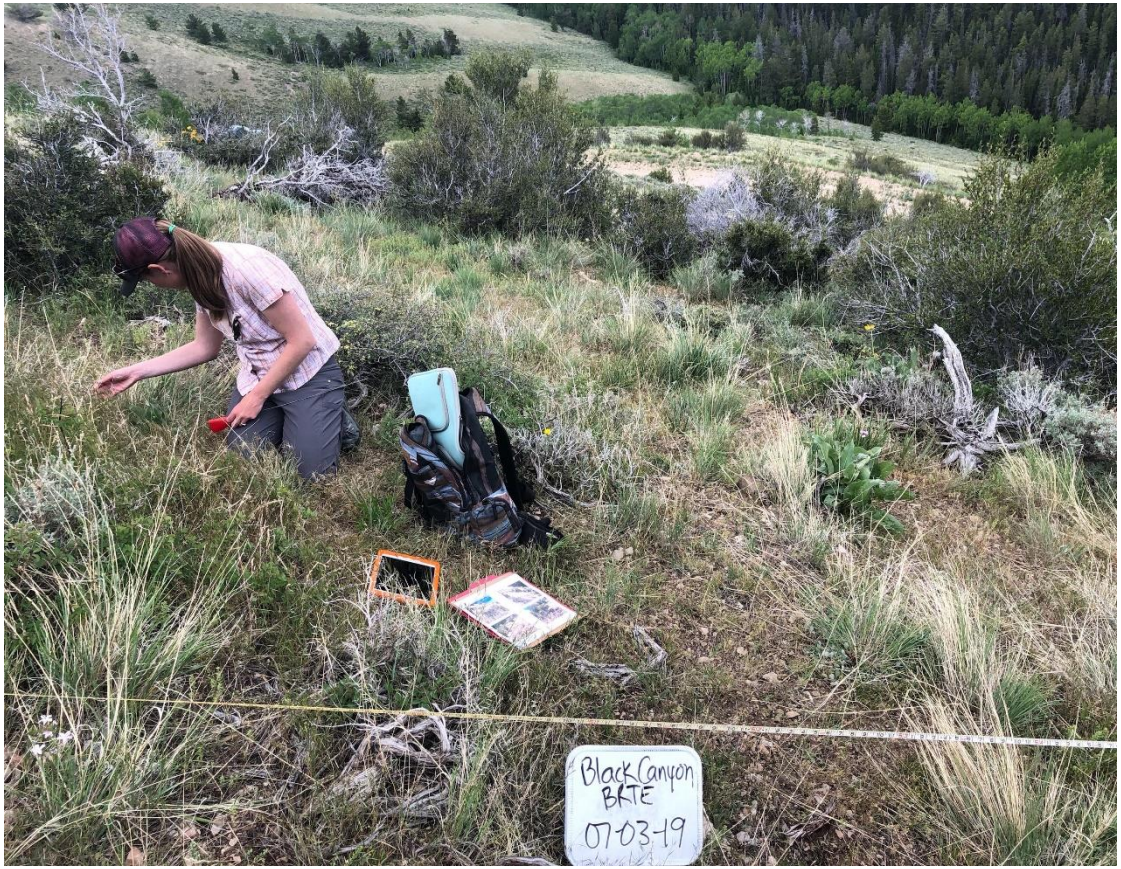
Forest Service | Rocky Mountain Research Station | General Technical Report RMRS-GTR-356 | December 2016

Threat—Nonnative Invasive Species

Management Strategies

- Use resilience and resistance categories and knowledge of invasive plant distributions to select appropriate management approaches.
  - Protect high quality (relatively weed-free) sagebrush communities with moderate-to-high sage-grouse habitat probabilities (cells 1B, 1C, 2B, 2C, 3B, 3C):
    - Focus on preventing introduction and establishment of invasive species, especially in low resistance areas with high susceptibility to annual grass invasion (in and adjacent to cells 3B, 3C).
    - Avoid seeding introduced forage species (crested wheatgrass, smooth brome, etc.) in postfire rehabilitation or restoration in moderate to high resilience and resistance areas because these species can dominate sagebrush communities.
    - Practice early detection-rapid response (EDRR) approaches for emerging invasive species of concern (in and adjacent to cells 1B, 1C, 2B, 2C, 3B, 3C).
  - Where weed populations already exist, seek opportunities to maximize treatment effectiveness by prioritizing restoration within relatively intact sagebrush communities (cells 1B, 1C, 2B, 2C, 3B, 3C). Restoration will likely be easier at locations in cooler and moister ecological types with higher resilience and resistance.
    - Prioritize sites with sufficient native perennial herbaceous species to respond to release from invasive plant competition.
    - Manage grazing to reduce invasive species and promote native perennial grasses. In the West-Central Semiarid Prairies and other cool and moist areas, manage grazing to reduce crested wheatgrass, Kentucky bluegrass, smooth brome, and other introduced forage species and to promote native cool season perennial grasses (see grazing strategies.
    - Attempt proactive management of invasive annual grasses in the understory of sagebrush stands to reduce wildfire risk where proven methods exist (rather than focusing efforts exclusively on postfire annual grass control). Restrict spread of large weed infestations located in lower habitat probability areas (cells 1A, 2A, 3A) to prevent compromising adjacent higher quality habitats (cells 1B, 1C, 2B, 2C, 3B, 3C).

Estimated annual rate of spread for cheatgrass is 14% (Duncan and Clark, 2005)



MANAGEMENT WITHOUT BORDERS

Hoback to Red Desert Migration

Sublette County Forest Collaborative

Bridger Teton NF draft weeds EIS to allow aerial application

NRCS – Sage Grouse Initiative

https://youtu.be/wuQ5O76e8IE

PARTNERING FOR SUCCESS

Property visits

Herbicide and labor cost-share

- Herbicide CS of 75% up to $3,000 per private landowner, when purchased from SCWP
- Labor CS of 35% of contracted labor, up to $10,000 per private landowner per year. Must pre-approve with SCWP

Equipment borrow

- Backpack, atv, truck, help to find a contractor

Weed Management Plan

Partner Funds

STOP INVASIVE SPECIES IN YOUR TRACKS

Play Clean Go®

COME CLEAN
LEAVE CLEAN

SUBLETTE COUNTY WEED & PEST

THANK YOU