

Wyoming Game and Fish Department's Invasive Annual Grass Implementation Plan

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- Non-native to Wyoming
- Completes life cycle in one growing season
- Outcompetes native vegetation
- Have shallow root systems and produce many seeds
- Reproduces only by seed
- Seeds are dispersed by wind, animals, humans, and machinery

INVASIVE ANNUAL GRASSES

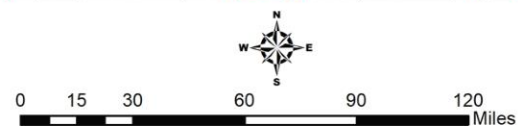
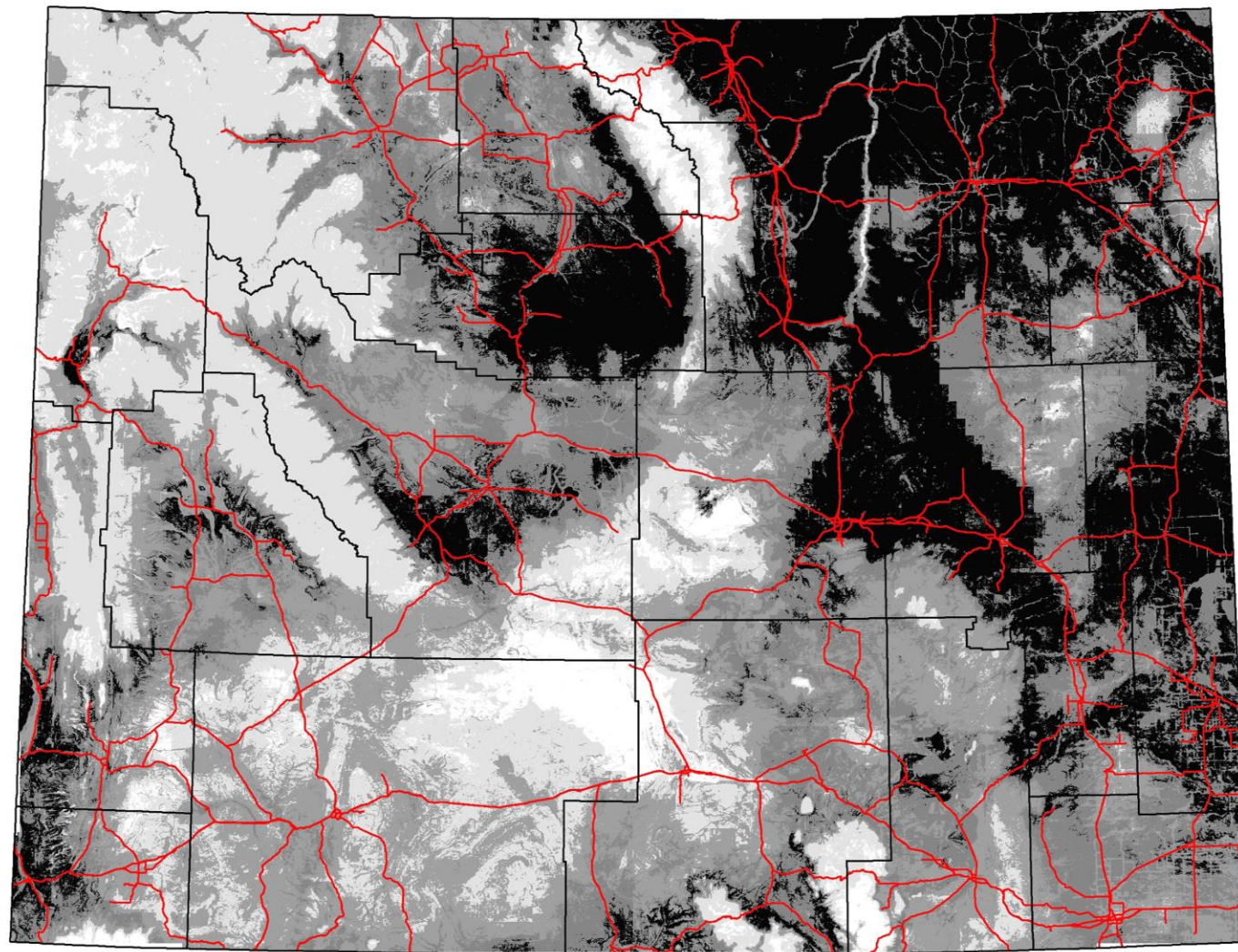


- Creates an increased fire risk
- More likely to re-establish burned areas than native grasses
- Threatens wildlife through conversion of productive habitat to invasive grasses



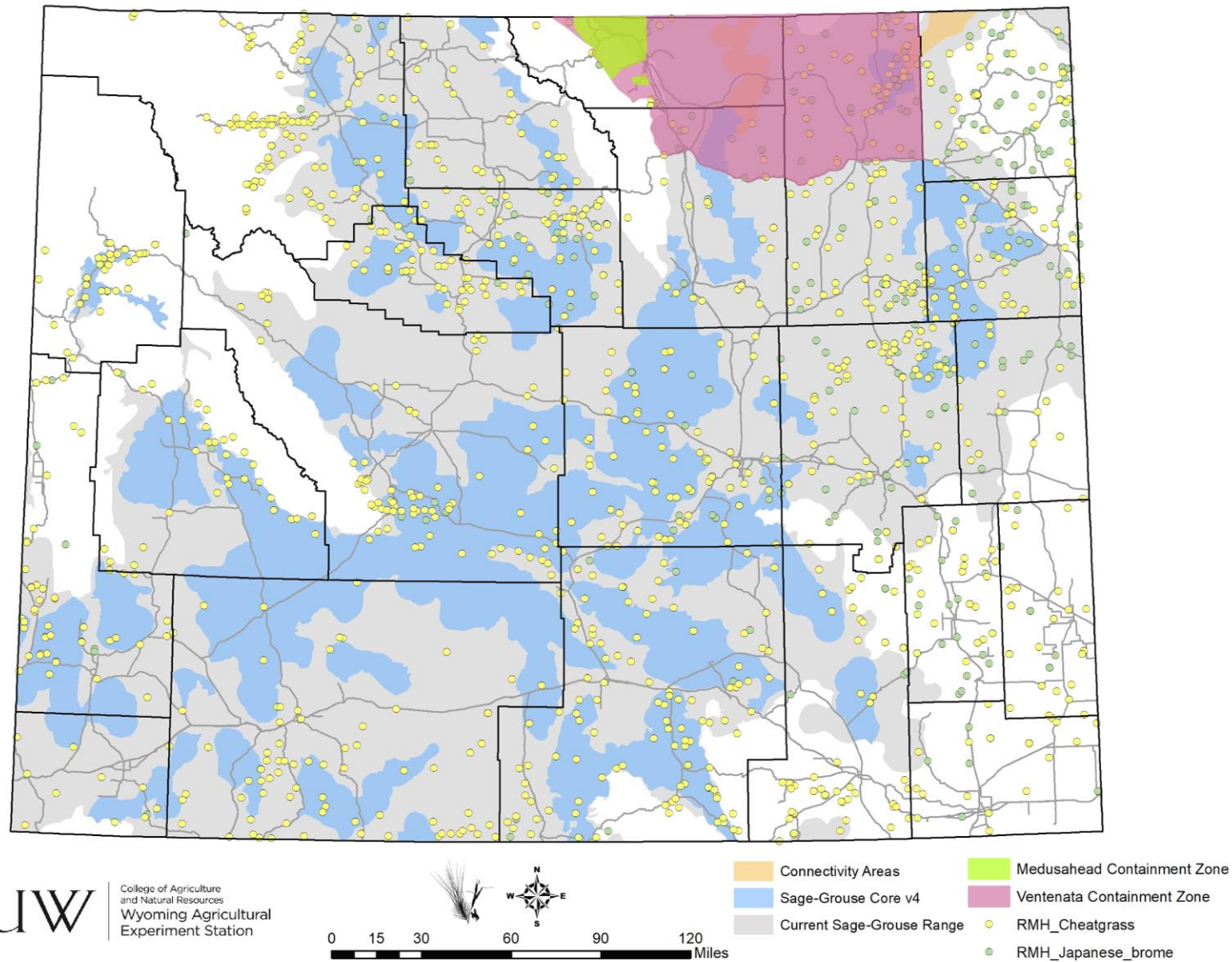
BACKGROUND

Cheatgrass probability of
occurrence modeled for
Wyoming.
Noseworthy 2015.



BACKGROUND

Medusahead and ventenata priority containment zones displayed with annual brome occurrence points overlapping version 4 Greater Sage-Grouse core area.



SAGEBRUSH

- Invasive annual grasses are rapidly taking over sagebrush habitats
- Sole food source for sage-grouse in the winter
- Once covered nearly 250 million acres in western North America
- Now occurs on approximately half the original acres

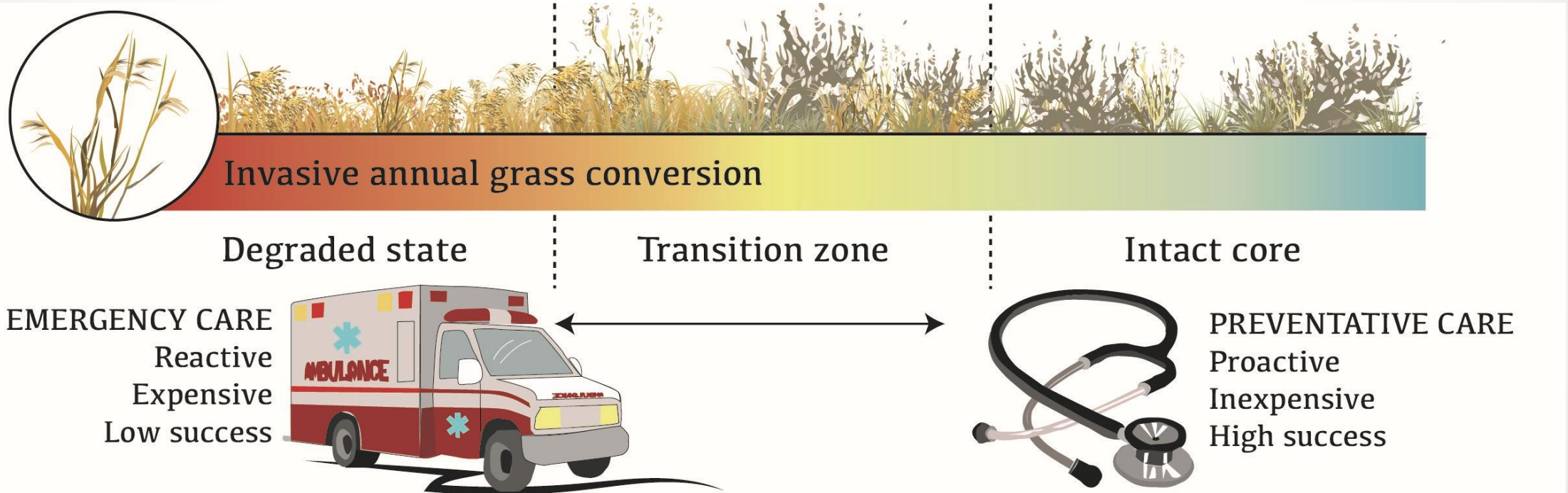


INVASIVE ANNUAL GRASS AND FIRE

- Invasive annual grass matures and dries out long before native species
- Acts as a fine fuel for fires
- Can produce as much as 4,000 pounds of fine fuel per acre
- Fire frequency has increased from every ~50+ years to every 5 years or less



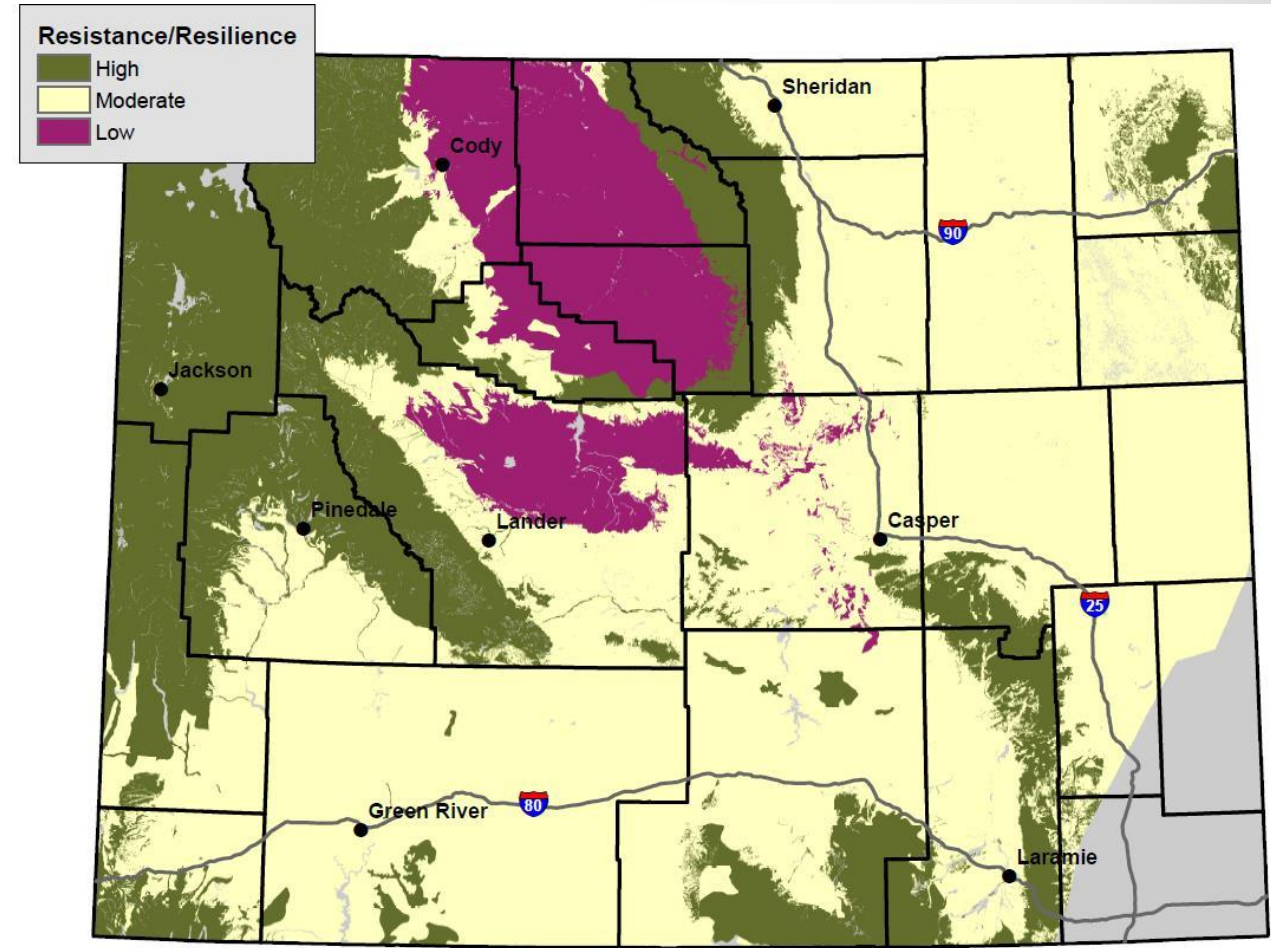
PREVENTION AND ESTABLISHMENT



Credit: USDA-NRCS, Working Lands for Wildlife

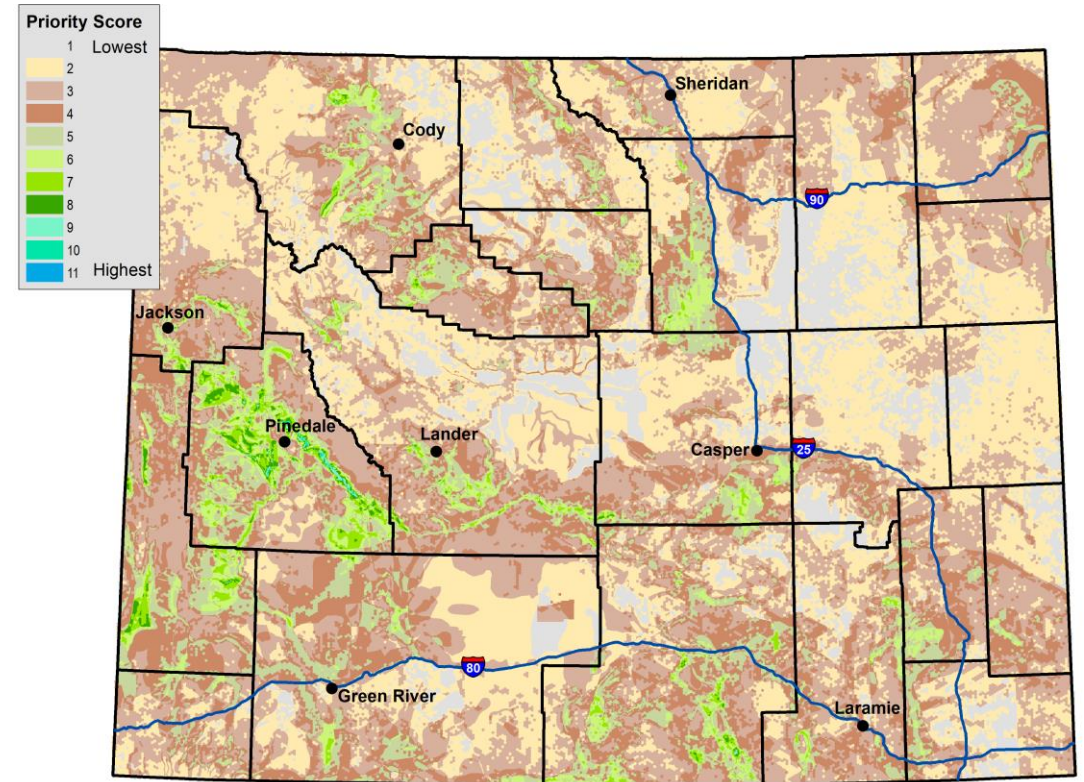
RESISTANCE & RESILIENCE

- Resistance - ability to retain its fundamental structure despite stressors, disturbances, or invasive species
- Resilience - ability to regain fundamental structure when altered by stress and disturbance
- Maps allow the Department to focus efforts on areas most likely to recover or resist an invasive species and on the most critical habitat for wildlife



MAPPING

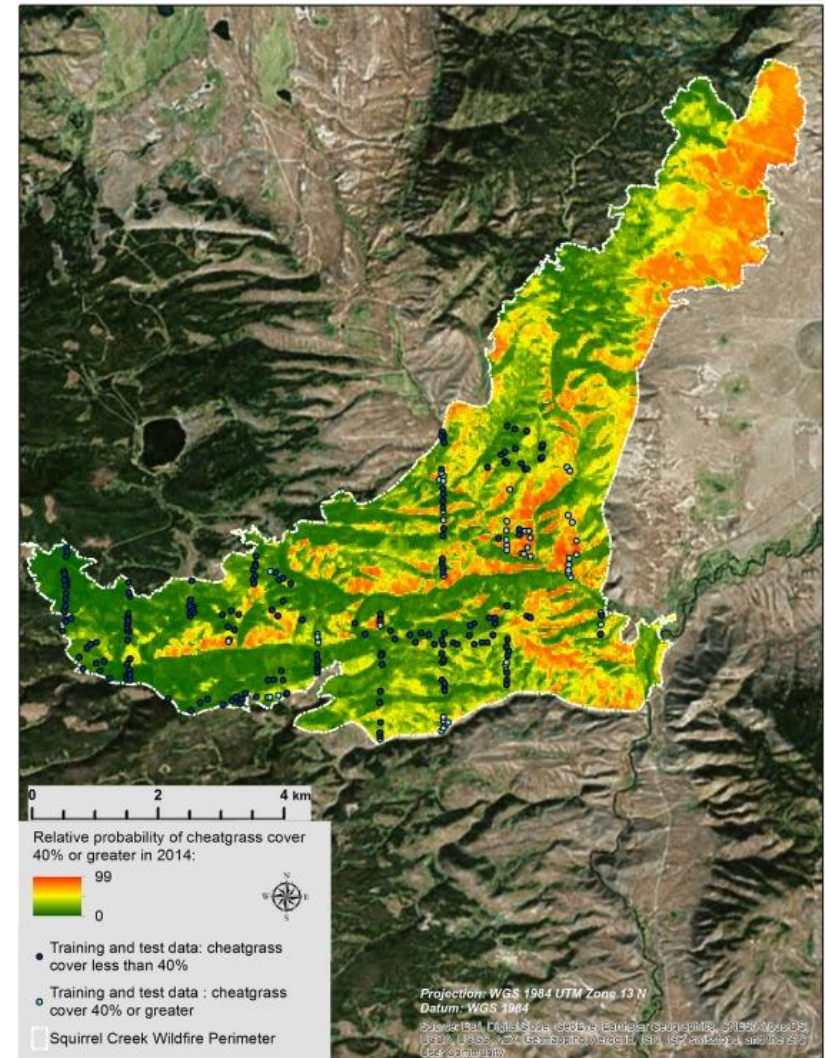
- The Department has developed an interactive mapping tool to display the most important wildlife habitats in Wyoming
- The total area covered by at least 1 important attribute is over 20 million acres
- For context, the state of Wyoming is comprised of over 62 million acres total



Maps highlight important habitats including: Mule Deer Initiative herds, sage-grouse core and connectivity habitats, Wyoming Game and Fish Commission approved migration corridors, Wyoming Game and Fish Commission owned Wildlife Habitat Management Areas and Public Access Areas, Strategic Habitat Plan Enhancement Areas, and crucial ranges for big game species

- The Department is exploring ways to analyze and

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ON THE GROUND EFFORTS

- The Department and partners completed 47,418 acres of herbicide treatments in 2019
- The Department is on track to nearly double these efforts in 2020

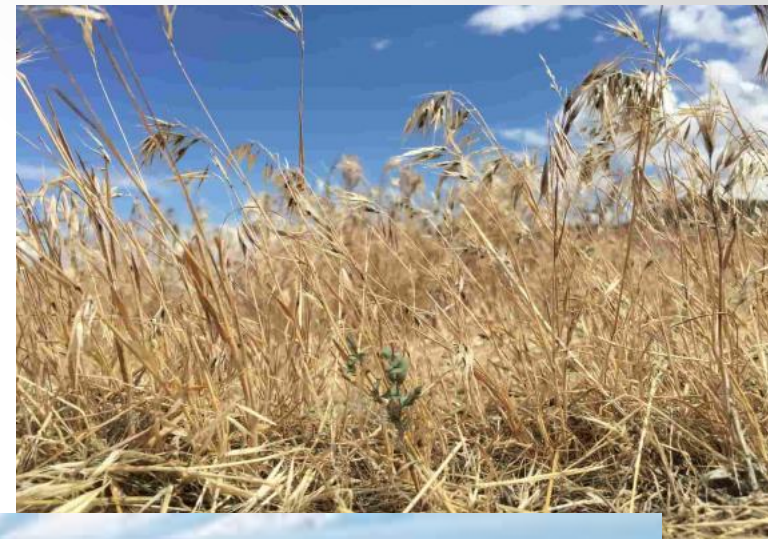


- Invasive annual grasses pose an imminent threat to Wyoming's wildlife and habitat
- Invasive annual grasses outcompete native vegetation, reducing forage for wildlife
- Many of Wyoming's most critical deer migration corridors fall within sage grouse core habitat which is threatened by cheatgrass

CONCLUSION



- The Department has identified a series of tools to address the threat and restore native vegetation
- Department managers will incorporate the latest technology and research in management decisions
- Advancements in both new chemicals and aerial imagery provide the Department increased probability of a successful outcome



- The Department and partners acknowledge this effort will be a long term undertaking
- Establishing and maintaining partnerships will be the key to our success

