

HUMBOLDT-TOIYABE NATIONAL FOREST INVASIVE PLANTS PROGRAM

Invasive Annual Grasses



OUR FOREST

- 2 states: Nevada and California
- 7 districts
- 6.3 million acres

NOXIOUS WEEDS

- 54,720 acres of noxious weeds
- 11,107 acres of annual grasses mapped
- 4,738 acres treated on average with an average success of 83%

INVASIVE ANNUAL GRASSES ON THE HTNF

- Cheatgrass (BRTE) no longer on the noxious weed list
- Medusahead (TACA8) Category B noxious weed
- Ventenata (VEDU) Category A noxious weed
- Barbed Goatgrass (AECY) Category A noxious weed
- Jointed Goatgrass (AETR) Category A noxious weed (sierra zone)

Issues we've encountered with accurately mapping our infestations:

- Correct identification of plant
 - Medusahead vs squirrel tail
 - New species like Goatgrass and Ventenata
- Mapping accuracy
 - How do we identify our cheatgrass invaded sites
- Ability to survey adequately
 - Workforce is limited
 - All hands on deck tactics
 - Coordination with Cooperators

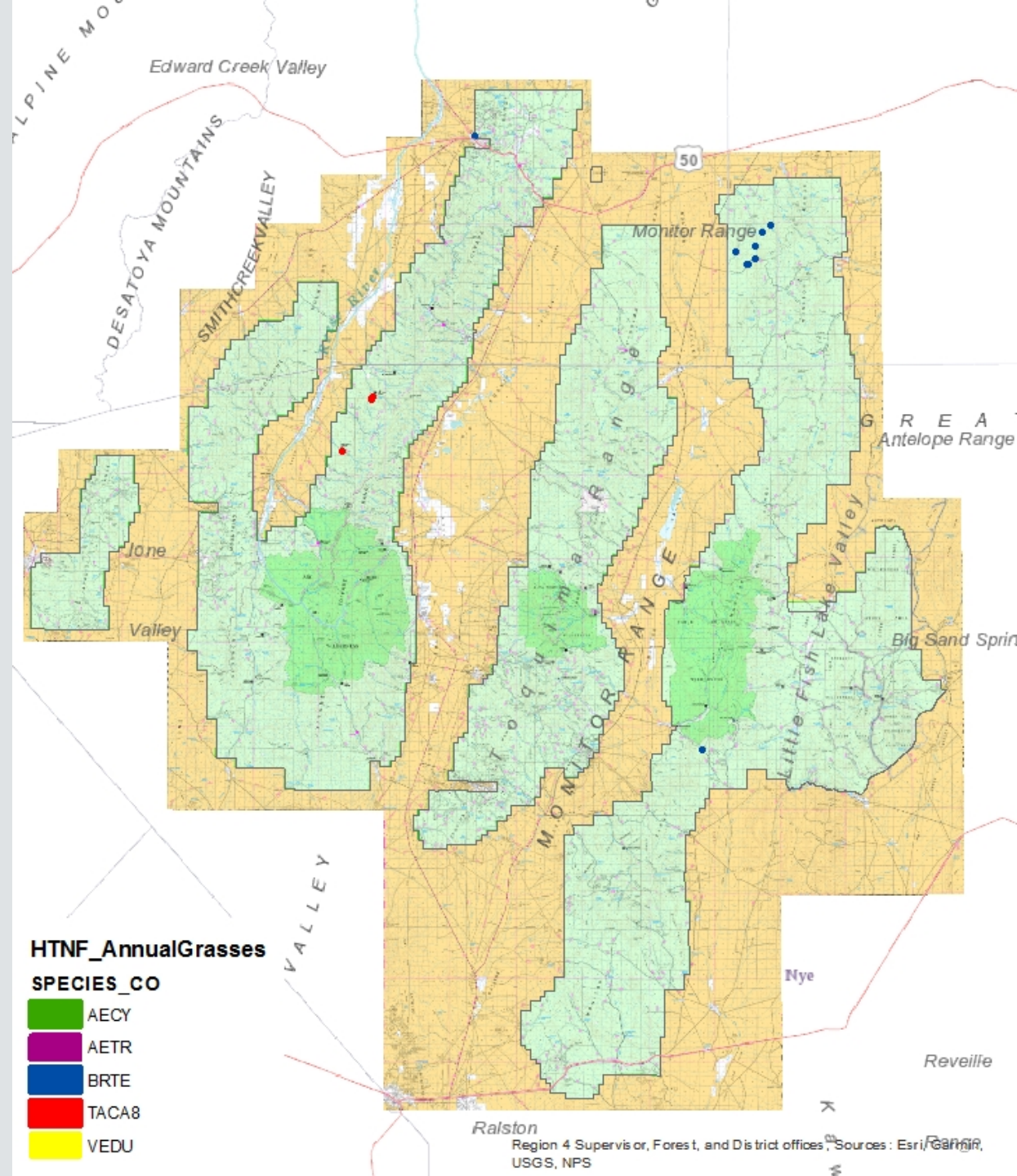
AUSTIN-TONOPAH RD



Cheatgrass
(BRTE)



Medusahead
(TACA8)
may be
misidentified,
needs to be
field verified.



MOUNTAIN CITY RD



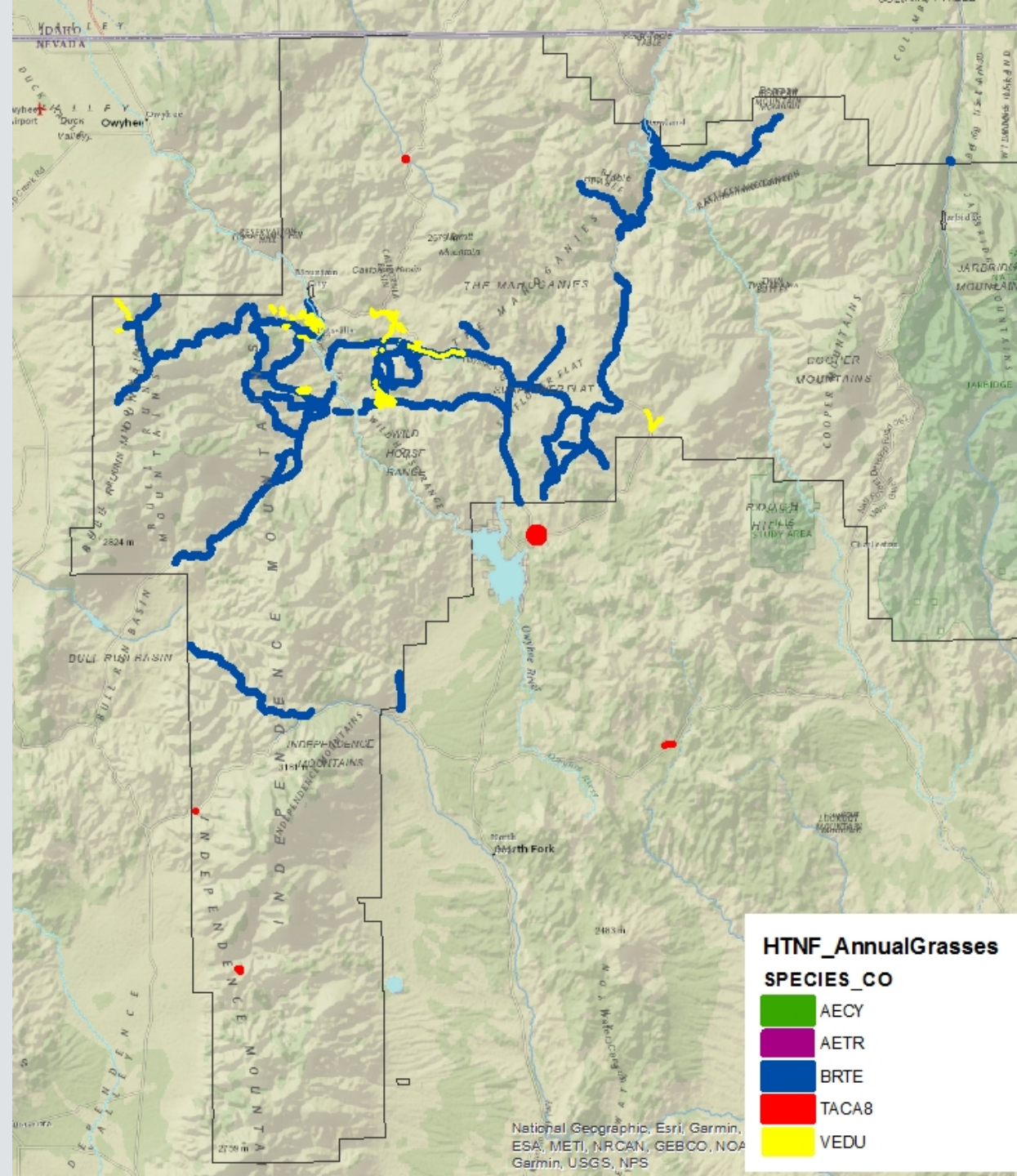
Cheatgrass (BRTE)



Ventenata (VEDU)

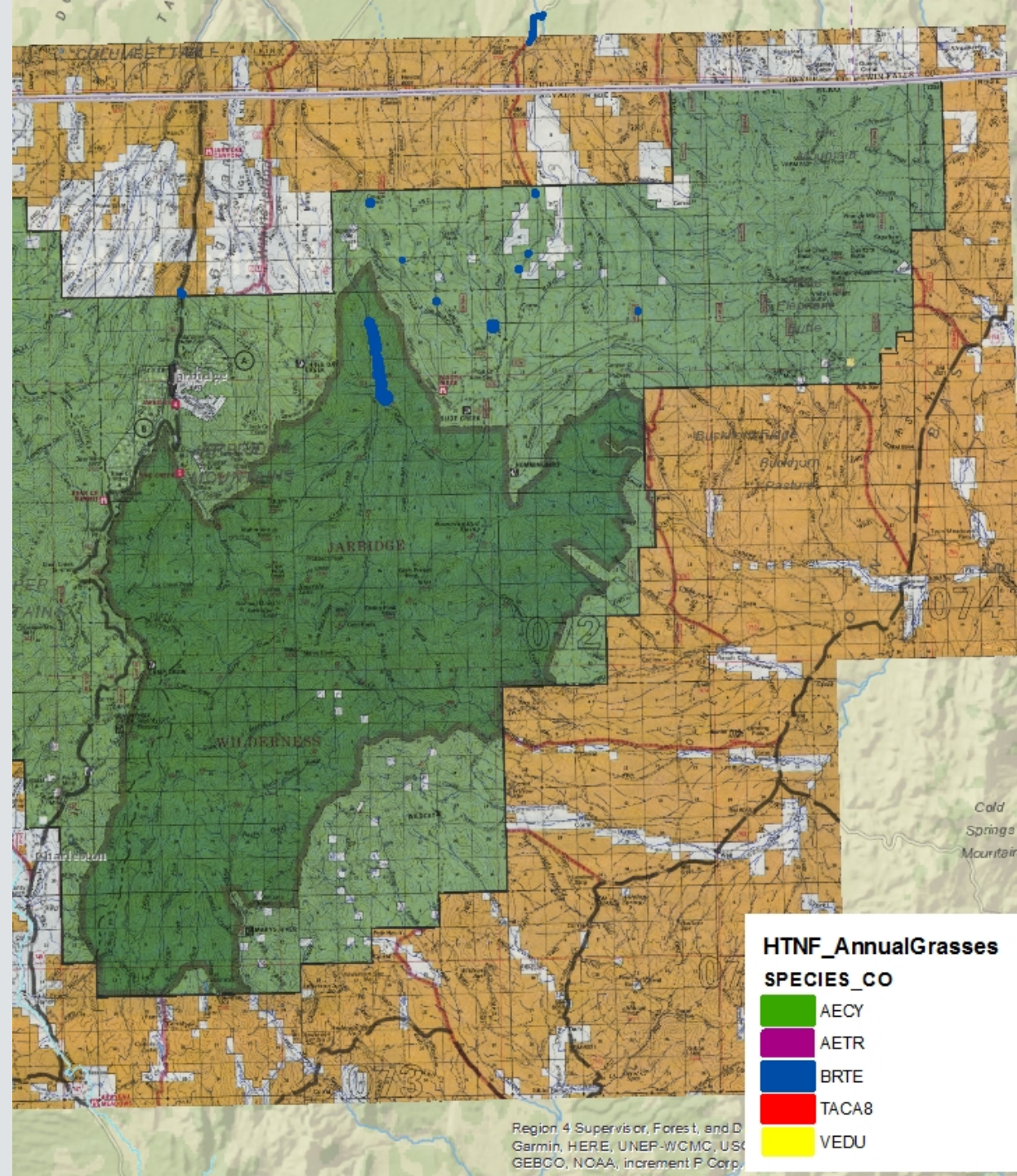


Medusahead (TACA8)



JARBIDGE RD

Cheatgrass (BRTE)



RUBY MOUNTAINS RD



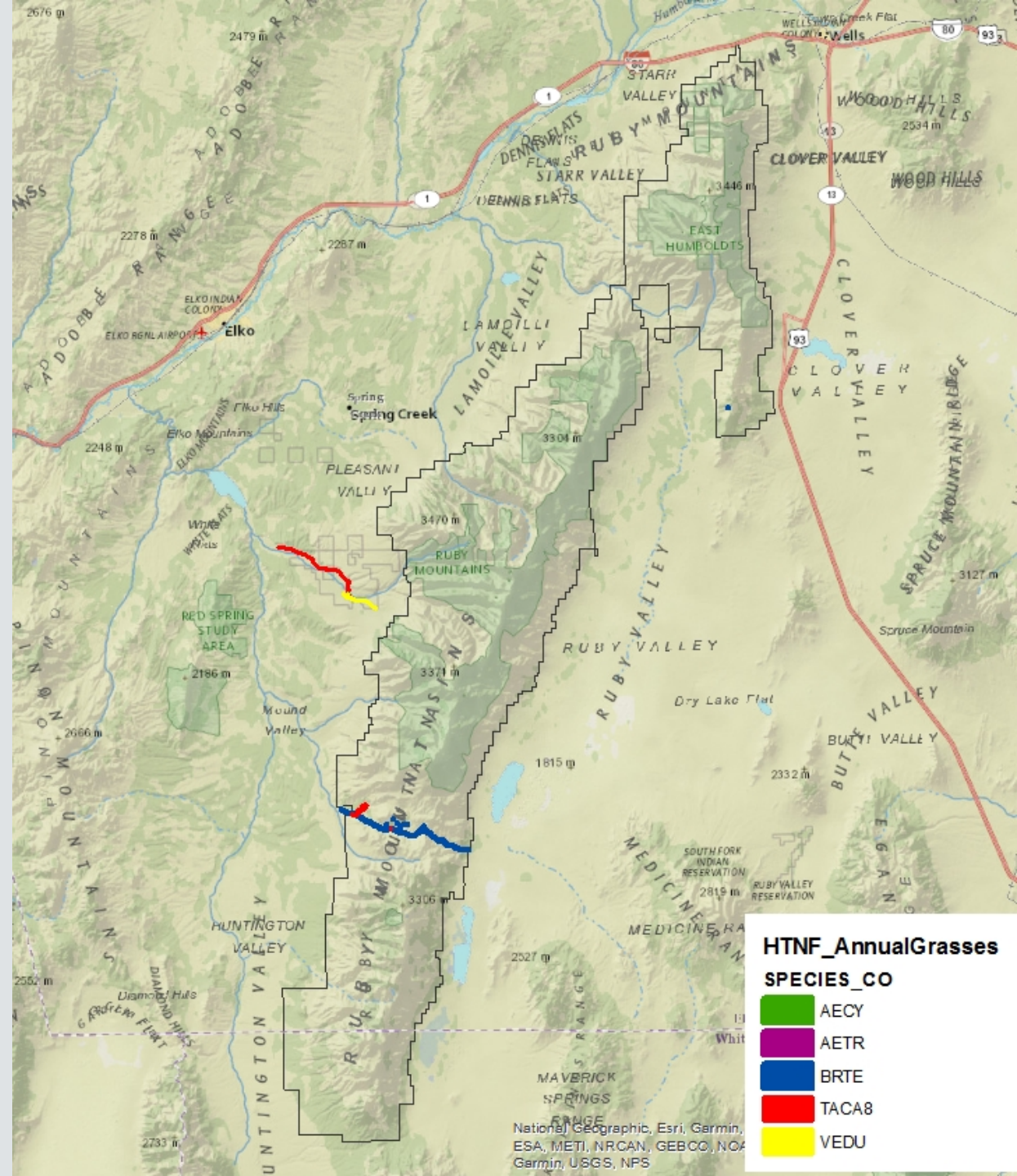
Medusahead (TACA8)



Cheatgrass (BRTE)



Ventenata (VEDU) occurs adjacent to the forest but has not yet been identified on the forest.



SANTA ROSA RD



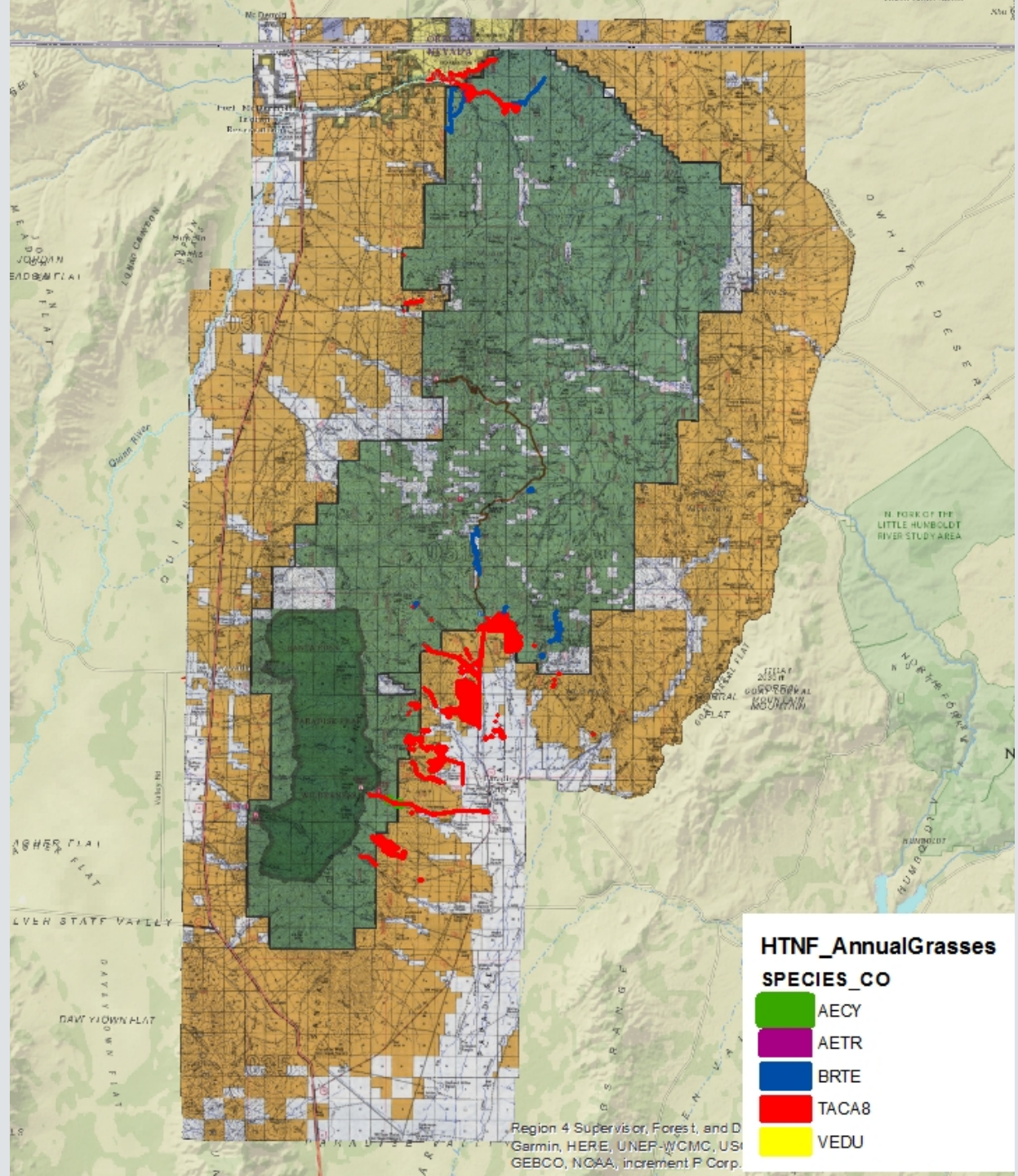
Jointed Goatgrass
(AECY)



Cheatgrass (BRTE)



Medusahead (TACA8)



HTNF_AnnualGrasses

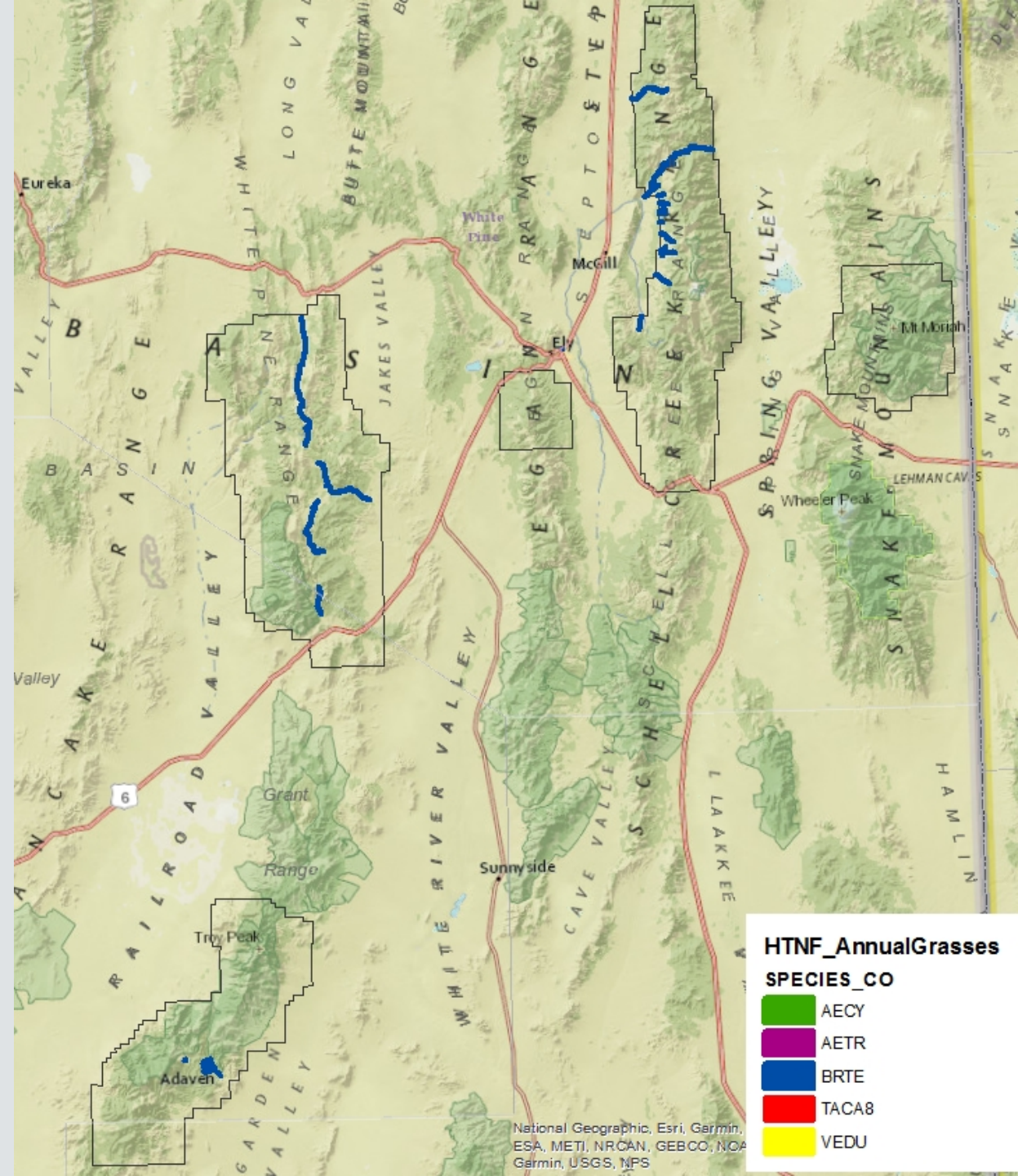
SPECIES_CO

■	AECY
■	AETR
■	BRTE
■	TACA8
■	VEDU

ELY RD



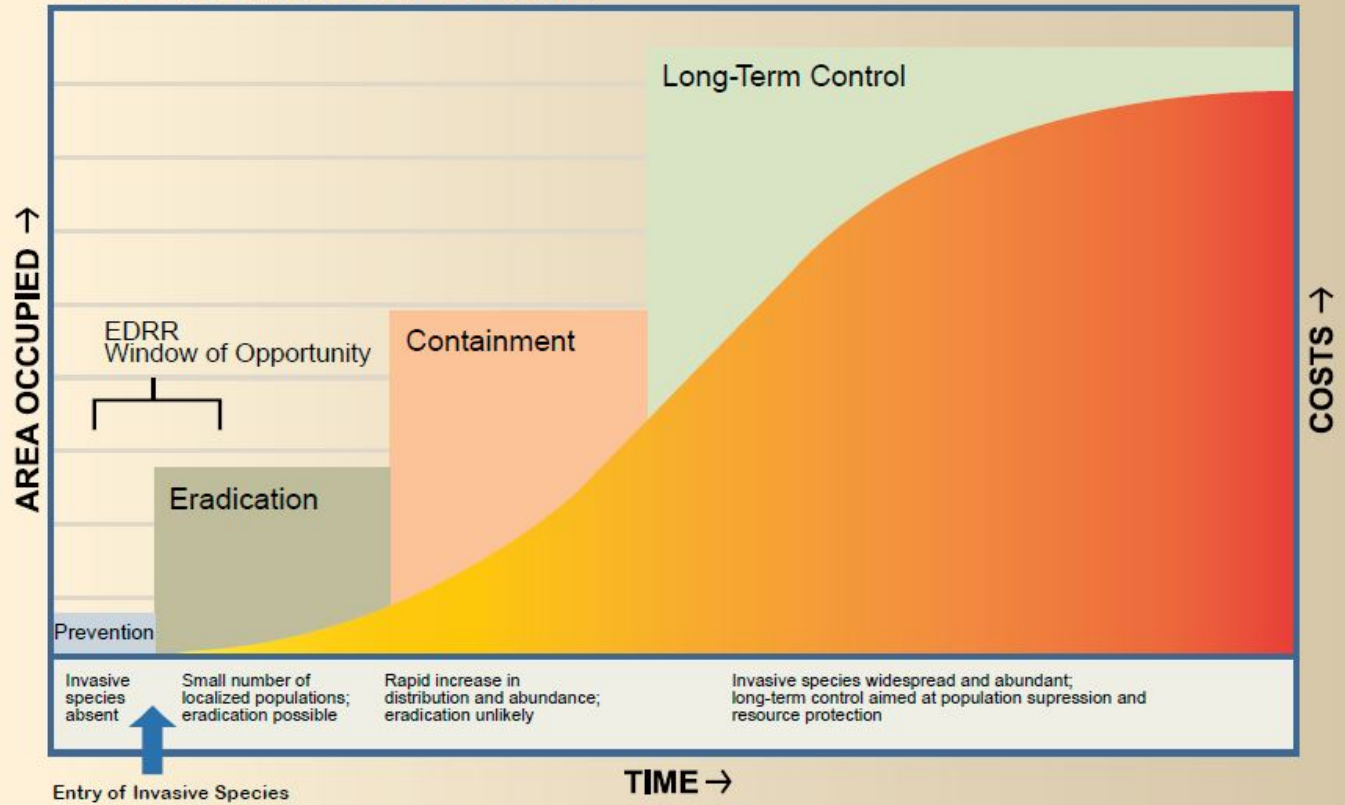
Cheatgrass (BRITE)



CURRENT PROGRAM

- 2 person crews of seasonal FS Biological Technicians or Great Basin Institute Research Technicians for each district.
- Agreements with Cooperators
 - NDOW treatments on Harrison Pass
 - CWMA's
 - Conservation Districts
 - BLM
- Post fire Burn Area Emergency Response funds for EDRR
- Joint Chiefs Funds from WO and State
 - South Sugar Loaf/Corta/Cherry 2020 request - waiting on State funds for noxious weeds EDRR
 - Drafting a proposal for 2021- Paradise Valley (shared stewardship)
- Targeted Grazing: Carson RD and Mountain City, Ruby Mountains, Jarbidge RD
- Prescribed Fire CE – fine fuel reduction
- Aerial Application Weeds EA/EIS

THE INVASION CURVE



There are 4 methodologies for treating weeds: chemical, mechanical, biological and cultural.

Our program relies on Early Detection, Rapid Response (EDRR) to address the majority of our weeds populations.

HOW WE TREAT OUR WEEDS

CHEMICAL

- Main method of treatment
- We certify all of our crew members with government applicator licenses through the Nevada Department of Agriculture.
- Our strategy for treatments is EDRR aka targeting new populations. Then we work to address satellite populations that stem from large monocultures.
- Authorized to use 13 chemicals on the Forest
 - Best chemicals for annual grasses: Imazapic, Rimsulfuron, Aminopyralid, Glyphosate and Sulfometuron.
- Our seasonal workforce targets annual grasses in the Fall
- When contracting treatments we aim for both fall and spring treatments

THE FUTURE OF CHEMICAL

- Aerial Application NEPA
 - We are working on approving aerial application for the state of Nevada.
 - Mainly used in post fire rehabilitation
 - Will increase our ability to participate with neighboring projects
 - Weeds don't recognize political boundaries
 - With increase our ability to address large populations of invasives that have moved beyond our current capability of management
- Impending Approval of Indazaflam (esplanade)
 - Estimated to have rangeland label in Nevada in the next year
 - Risk Assessment by a Federal Agency is required to approve use on the forest.
 - Estimated in the next 5 years (at latest)

MECHANICAL

- Our secondary treatment methodology
- Hand pulling, shovels, clipping flowers, and mowing
- Mowing may be mildly effective if done during the proper time frame.
- Other mechanical methods are more successful with broadleaved invasive species.

BIOLOGICAL

- There are no effective insect or microbial biological controls for invasive annual grasses at this time.
- Targeted Grazing as a biological control can be successful when used correctly.
- We are working with the University of Nevada, Reno to increase Targeted Grazing on our Forest.
 - Partnering with our local permittees to reduce fine fuels to limit the potential for wildfires
 - Working on the NEPA for the NE part of the state
 - Fall grazing with cattle
 - Currently having success with sheep on the Carson RD
 - Spring grazing on Wildland Urban Interface of the Waterfall Fire (2004)

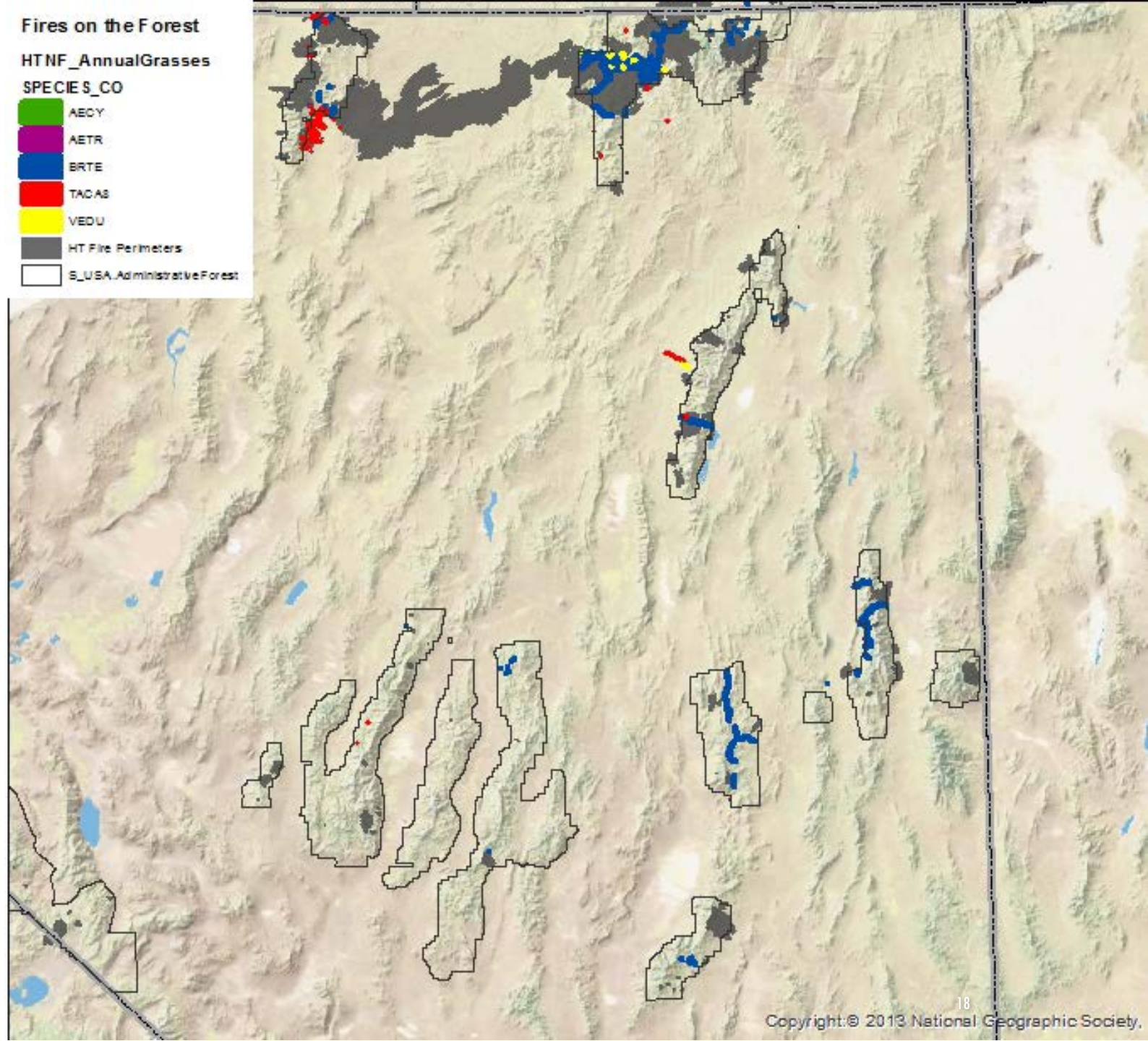
CULTURAL

- Our Cultural methods of management are:
 - Prescribe fire
 - Well managed landscapes
- Prescribed Fire Categorical Exclusion NEPA in progress
 - we will be able to use to treat fine fuels aka our annual invasive grasses.
- Prescribed fire is effective at removing thatch
 - Not effective at killing seeds so needs to be combined with chemical treatments to increase success.
- Managing landscapes can include
 - Maintenance of vegetation and soils
 - Prevention of over grazing
 - Prevention of user created roads and trails

PREVENTION

- We have several prevention measures in place:
 - Weed free hay
 - Weed free seed
 - Weed wash stations at fire camps
 - Weed free standards for equipment for all forest programs
 - We are working on a weed free gravel certification program with NDA.
- Public outreach is increasing awareness on the negative impacts of noxious weeds to the environment
 - Potential to have a huge impact to the program
 - Posting signs at trailheads for weed free requirements
 - Education through social media
 - Participating with local management groups like Conservation Districts and Cooperative Weed Management Areas (CWMAs)

WILDFIRES ON THE HUMBOLDT-TOIYABE



WILDFIRES ON THE FOREST

Prevention

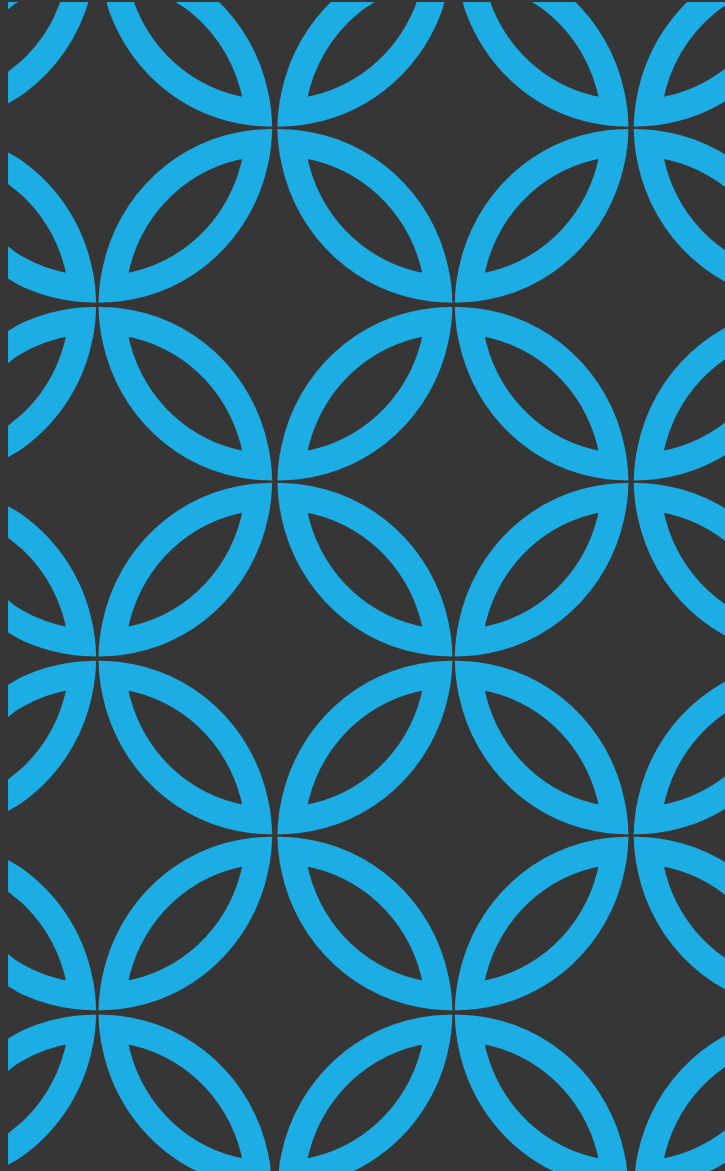
- Reduction of fine fuels
 - Prescribed fire
 - Targeted grazing
- Maintaining resilient landscapes

Post Fire Rehabilitation

- Identifying resilient landscapes
- Seeding appropriately
 - Native
 - Weed Free
- Using Burn Area Emergency Response funding to it's full extent
- EDRR
- Continuous monitoring for noxious weeds into the foreseeable future

COORDINATION EFFORTS

- Working with Nevada Department of Agriculture (NDA) to increase local Biocontrol populations
- Teamed up with Ethan Mower to upload Forest Service data to EDDMaps
- Working with BLM, CWMA (HWCWMA specifically), Conservation Districts, Tribal Governments, NDA, SEC to address invasive annual grasses specifically
- Working with University of Nevada, Reno and Peter Weisberg's crew to map medusahead aerially
- Working with local livestock managers to targeted graze annual grasses
- Participating in local weeds pulling events



COORDINATION IS KEY

Shared Stewardship

Cooperative Agreements

Grants

Etc.

The tools are available, let's get to work!



Thank you!

Map Disclaimer:

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