What is the trend in invasive species within the CFLRP project area?

Musk thistle (Carduus nutans) observed at the August 2-3-2 Partnership field meeting .

Intended monitoring:	Completed monitoring:
Summarize the number of acres inventoried for invasive species, the number of individuals found, and the number of acres treated.	Inventory and treatment acreage was pulled from US Forest Service reporting databases.
Record percent cover of invasives of collaborative concern in forest monitoring plots.	Invasive species data was collected as percent cover within every monitoring plot (n=72)
Conduct repeat photo points at treatment sites to allow for visual comparison over time.	Pre-treatment photo points were taken at every forest plot. Photos were also taken of each invasive plant found in plots.

Overview of results:

Invasive species of collaborative concern monitoring plot detection:

Non Native Species of Collaborative Concern

Species	Common Name	Number of Plots Detected	Mean Quadrant % Cover
Bromus tectorum	Cheatgrass	3	1.67
Carduus nutans	Musk Thistle	2	0.25
Cirsium arvense	Canada Thistle	0	0.00
Cirsium vulgare	Bull Thistle	0	0.00
Verbascum thapsus	Woolly Mullein	1	0.50

Cheat grass
(Bromus tectorum)

Musk thistle
(Carduus nutans)

Woolly mullein
(Verbascum thapsus)

Summary of plot-based invasive plant species monitoring:

	Dates surveyed	**# of plots sampled**	**# of plots with invasives of collaborative concern**	**Avg. canopy cover of invasives per plot**
Pre-treatment	07/17/23 - 08/29/23	72	6	1 %
Post-treatment	N/A - to begin 2024	-	-	-

Incidental non native species that were reported within monitoring plots:

Incidental Non Native Species	
Species	Common Name
Alyssum simplex	Alyssum
Bromus inermis	Smooth Brome
Descurainia pinnata	Western Tansymustard
Erodium cicutarium	Redstem Storksbill
Lactuca serriola	Prickly Lettuce
Melilotus officinalis	Yellow Sweet Clover
Tragopogon dubius	Yellow Salsify

Yellow Salsify (Tragopogon dubius)

Notes from the field:

The five invasive species of collaborative concern were determined through conversations with land managers and scientists studying vegetation response post fire. This list was limited to five species, rather than incorporating more non natives, in an attempt to simplify the monitoring identification effort and to track trends in some of the most successful post fire species.

Incidental non-native species were recorded on a few monitoring sites. Incidental observations do not necessarily represent all non-native species present in forest plots. Monitoring technicians had varying levels of botany training and recorded incidentals when aware of them.

With regard to invasive species treatments (i.e., preventing, controlling, or eradicating), the US Forest Service reporting databases accounted for 1930.5 acres treated. The effectiveness of treatments are not measured or reported.

Table summarizes adaptive management (AM) watch-outs as defined in Edition 1 of the 232 Partnership Multiparty Monitoring plan. AM watch-outs were determined by the 232 Partnership at the February 2023 meeting in Taos, NM. Yellow boxes indicate the watch-out was met, or not measured, and should be considered for collaborative discussion.

AM Watch-out	Commentary
Number of individuals per acre inventoried increases or does not change.	Baseline data only - no comparative data.
Treated acres are double counted in agency database.	Not known.
Planned treatments are completed for a given area but follow-up treatments are needed to reach desired conditions.	Baseline data only - no comparative data.
Ground cover of invasive species in treatment areas increases at a greater rate than across FIA ad control plots in similar ecosystem types.	Baseline data only - no comparative data

Monitoring Committee Recommendations and Takeaways

- Make sure we can answer monitoring questions with the data being gathered (invasives monitoring as an example).
- Utilize plots as data-rich sites for testing new scaling frameworks from plot to drone to satellite, leverage new data.
- Define "desired conditions" in AM watch-outs to provide metrics and goals for action.
- There is a lot of work to be done thinking about, and monitoring, large trees.
- Insect and disease monitoring needs to be incorporated into forest plot monitoring.
- Is it fair or useful to compare 232 data to FIA data?

Rio Chama CFLRP monitoring efforts and collaborative discussions are ongoing. Please direct comments and questions to cody@forestguild.org

RIO CHAMA Collaborative Forest Landscape Restoration Project

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