

LOCAL CHEATGRASS TREATMENT MONITORING

SUBLETTE COUNTY

INVASIVES TASK FORCE

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Pest

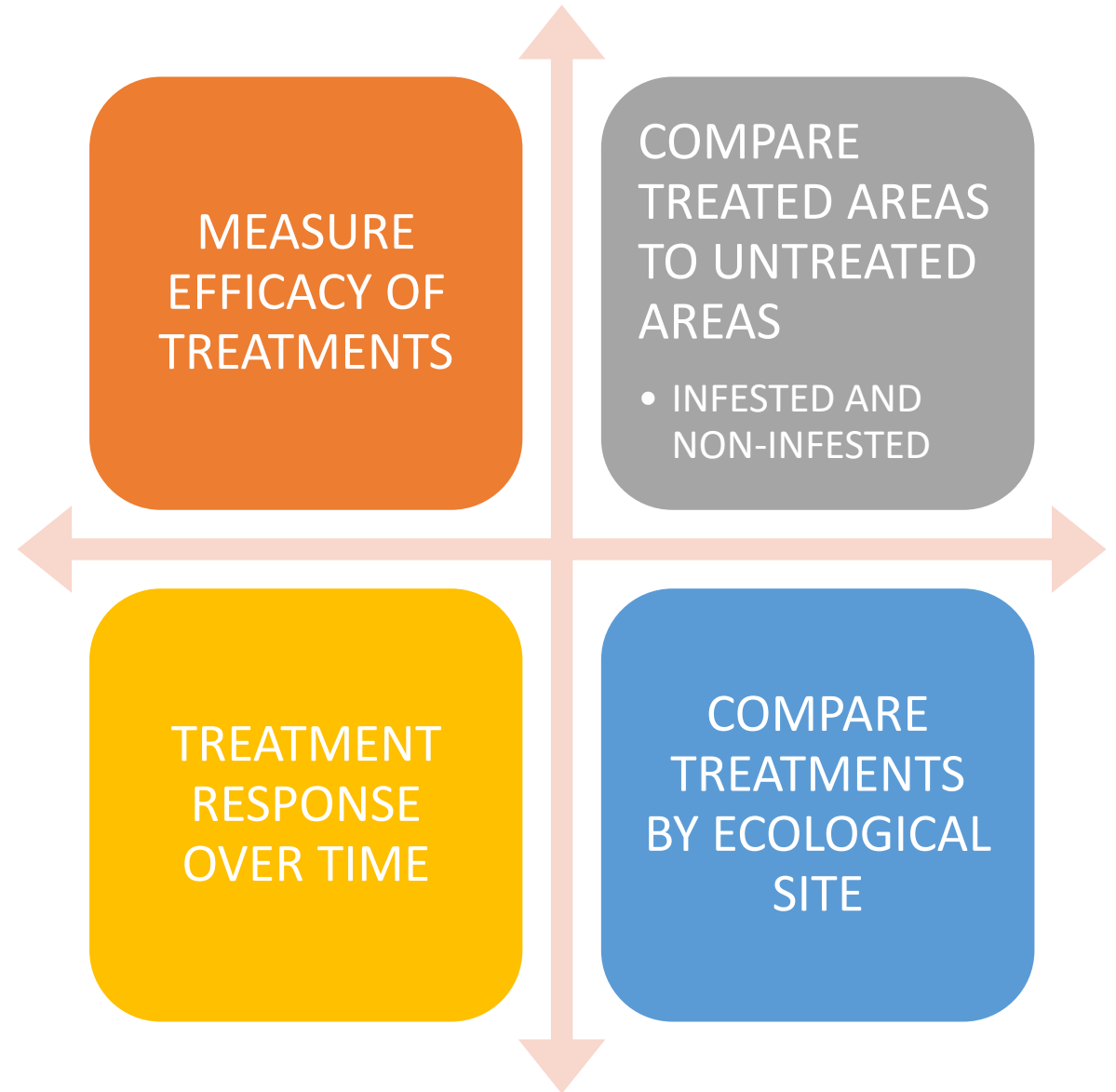
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Wyoming Game & Fish Dept

Troy Fieseler, Habitat Biologist Wyoming Game
& Fish Dept

FEBRUARY 24, 2020



WHY? (PURPOSE)



HOW? (METHODS)



PHOTOS



LINE POINT INTERCEPT



SITE DIVERSITY (PLANT CENSUS)



ASSESS TREATMENT EFFICACY



ASSESS NON-TARGET DAMAGE



MID-JUNE TO EARLY JULY EVERY YEAR

WHERE? 42 TRANSECTS

15 PRIVATE

- USDA-NRCS ASSISTED PROJECTS (EQIP) – 1 TO 2 TRANSECTS PER PROJECT
- DIFFERENT MANAGEMENT SCENARIOS
- DIFFERENT ECOLOGICAL SITES
- DEMONSTRATION TRIAL – LINCOLN CO

5 STATE LAND

- 2 LPI AND 3 PHOTO POINT ONLY

8 BLM

- 5 LPI AND 3 PHOTO POINT ONLY

14 USFS (PRE-TREATMENT)

- 5 NEW FORK, 5 BOULDER RIDGE, 4 HALF MOON

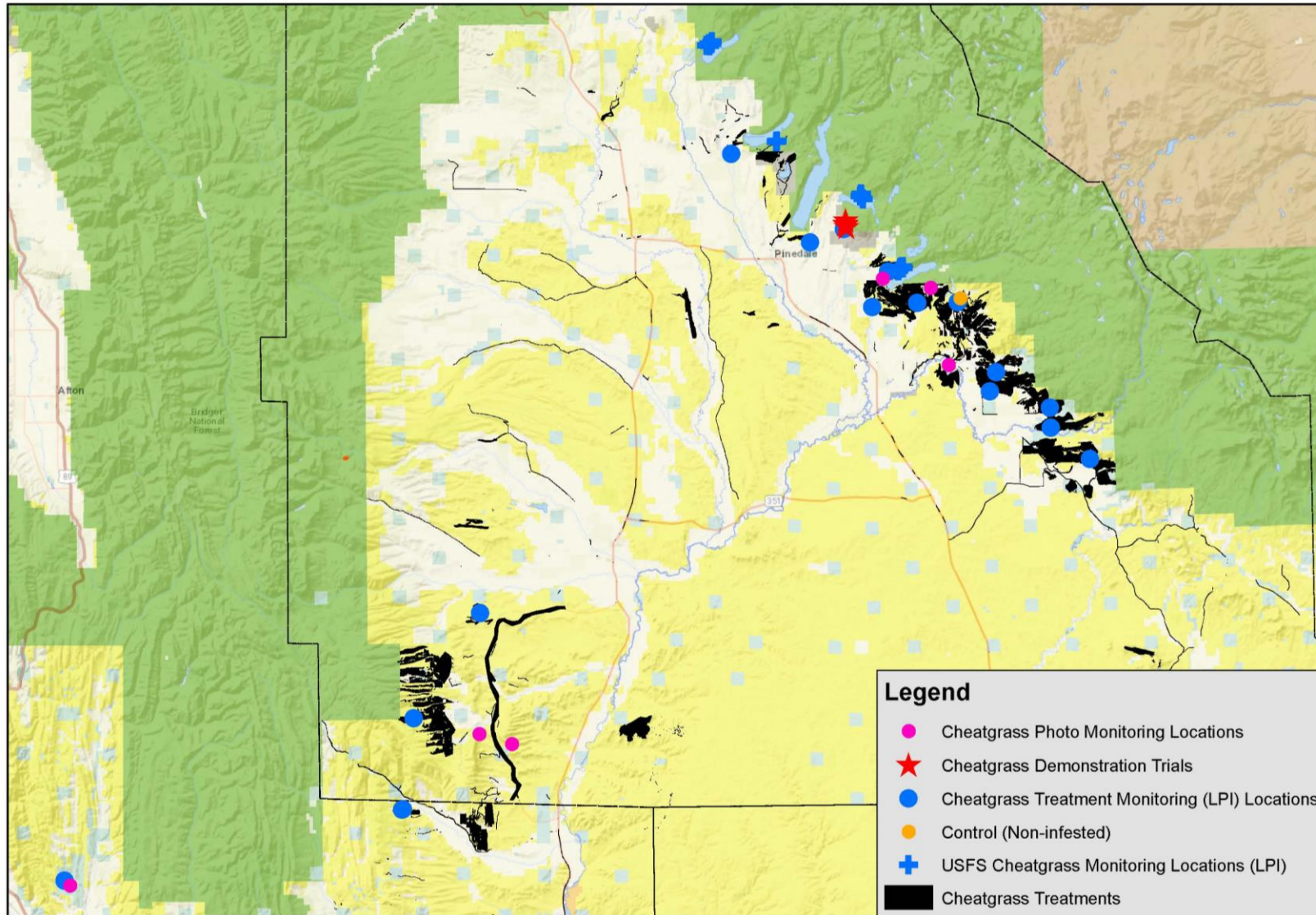
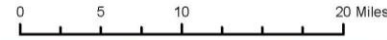
2 WGFD

- FALL CREEK TREATMENT AREA
- HALF MOON DEMONSTRATION TRIAL
 - CONTROL (INFESTED)

1:600,000
1 inch = 9.47 miles

Cheatgrass Monitoring

Date: Feb 12, 2020





2011

**SITE #1
IMAZAPIC 6 OZ**

2012 (1 YAT)

Species	% Cover
Cheatgrass	0%
P. grass	56%
P. forb	0%
A. forb	0%
Shrub	24%



2013

DROUGHT

2011 Pre-Treatment

Species	% Cover
Cheatgrass	54%
P. grass	55%
P. Forb	3%
A. Forb	3%
1 NATIVE 1NON-NATIVE	
Shrub	18%



2012

DROUGHT

2013 (2 YAT)

Species	% Cover
Cheatgrass	2%
P. grass	33%
P. forb	1%
A. forb	0%
Shrub	17%

TREATED SEP 2011

2014

WARM & WET –
THE YEAR OF
CHEATGRASS

SITE #1
IMAZAPIC 8 OZ

2015 (1 YAT)

Species	% Cover
Cheatgrass	2%
P. grass	74%
P. forb	1%
A. forb	0%
Shrub	17%

2016



2014 (3 YAT)

Species	% Cover
Cheatgrass	78%
P. grass	55%
P. forb	2%
A. forb	2%
Shrub	14%

2015



2016 (2 YAT)

Species	% Cover
Cheatgrass	13%
P. grass	81%
P. forb	0%
A. forb	2%
Shrub	22%

TREATED OCT 2014

2019

COLD – NOT
GOOD YEAR
FOR
CHEATGRASS

**SITE #1
IMAZAPIC 8 OZ**

2018 (4 YAT)

Species	% Cover
Cheatgrass	71%
P. grass	61%
P. forb	3%
A. forb	0%
Shrub	20%

THE YEAR OF
THE ANNUAL

2017 (3 YAT)

Species	% Cover
Cheatgrass	40%
P. grass	84%
P. forb	4%
A. Forb	6%
2 NATIVE	
Shrub	22%

2019 (1 YAT)

Species	% Cover
Cheatgrass	14%
P. grass	52%
P. forb	3%
A. Forb	3%
1 NATIVE	
Shrub	15%

2018

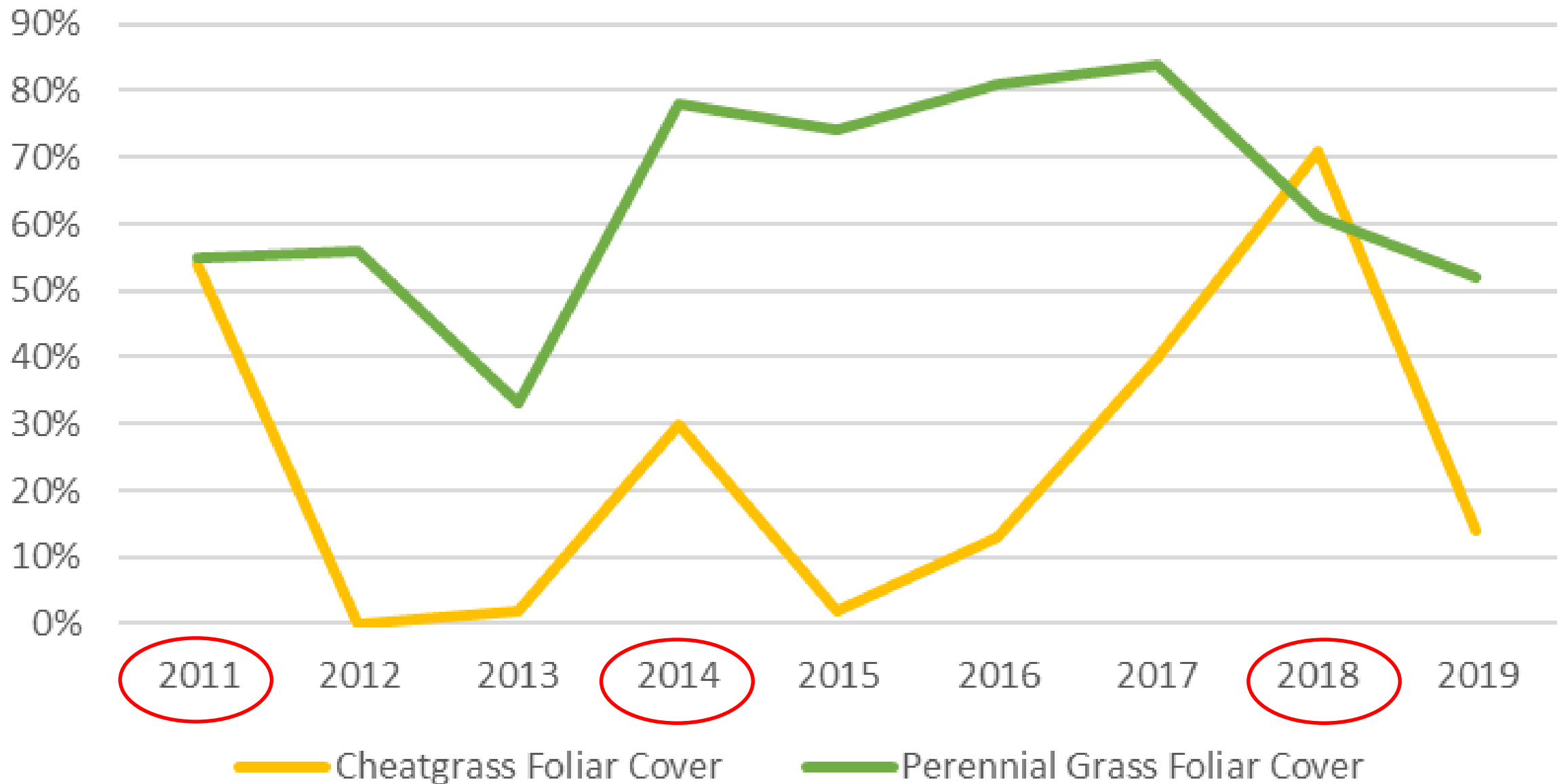


BLM
2-yr Post
10/29/17

42718
BLM

TREATED OCT 2018

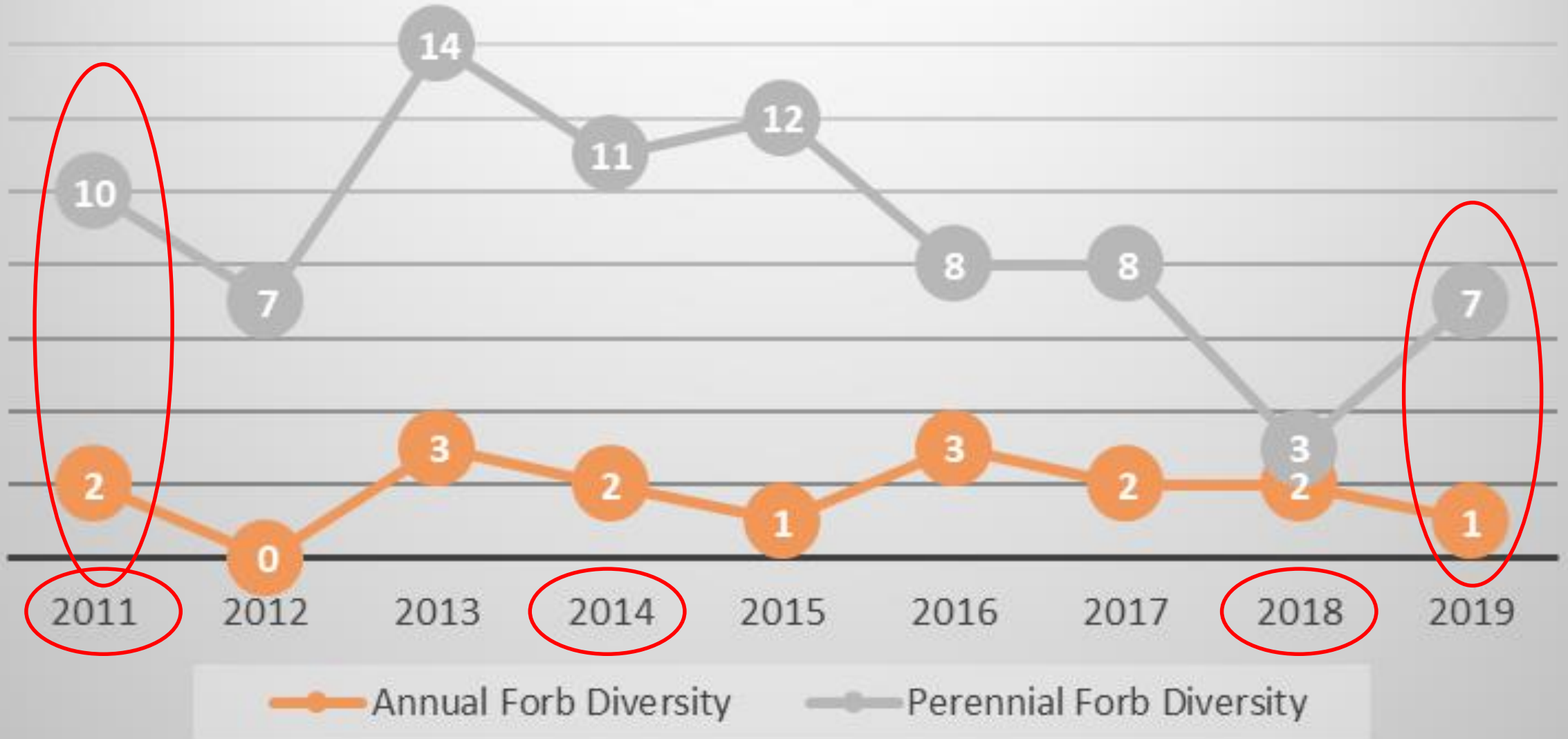
SITE #1 (% COVER OVER TIME)



SITE #1

ALL P. FORBS NATIVE
A. FORBS – 1 NATIVE/1 NON-NATIVE

ALL P. FORBS NATIVE
A. FORBS – NATIVE





4 ANNUAL FORBS
 2 NATIVE
 2 NON-NATIVE

REMEMBER, THIS WAS THE YEAR OF
 THE ANNUAL!

Species	% Cover
Cheatgrass	0%
P. grass	57%
P. forb	0%
A. forb	0%
Shrub	27%

2019 (1 YAT)

SITE #2
TREATED SEP 2018
IMAZAPIC 8 OZ

JUNE 2019



1 ANNUAL FORB
 NATIVE

Species	% Cover
Cheatgrass	33%
P. grass	47%
P. forb	0%
A. forb	33%
Shrub	27%

OCTOBER 2017

2017 (PRE-TREATMENT)

SITE #2 2019
(1 YAT)



SEEDLING ANTELOPE BITTERBRUSH

SEEDLING BOTTLEBRUSH SQUIRRELTAIL





JUNE 26 2017 PRE-TREAT



**CHEATGRASS 71%
2 NON-NATIVE FORBS**



JUNE 17 2019 (2 YAT)

**CHEATGRASS 38%
2 NATIVE FORBS**

**SITE #3
TREATED AUG 2017
HAZAPIC 8 OZ**

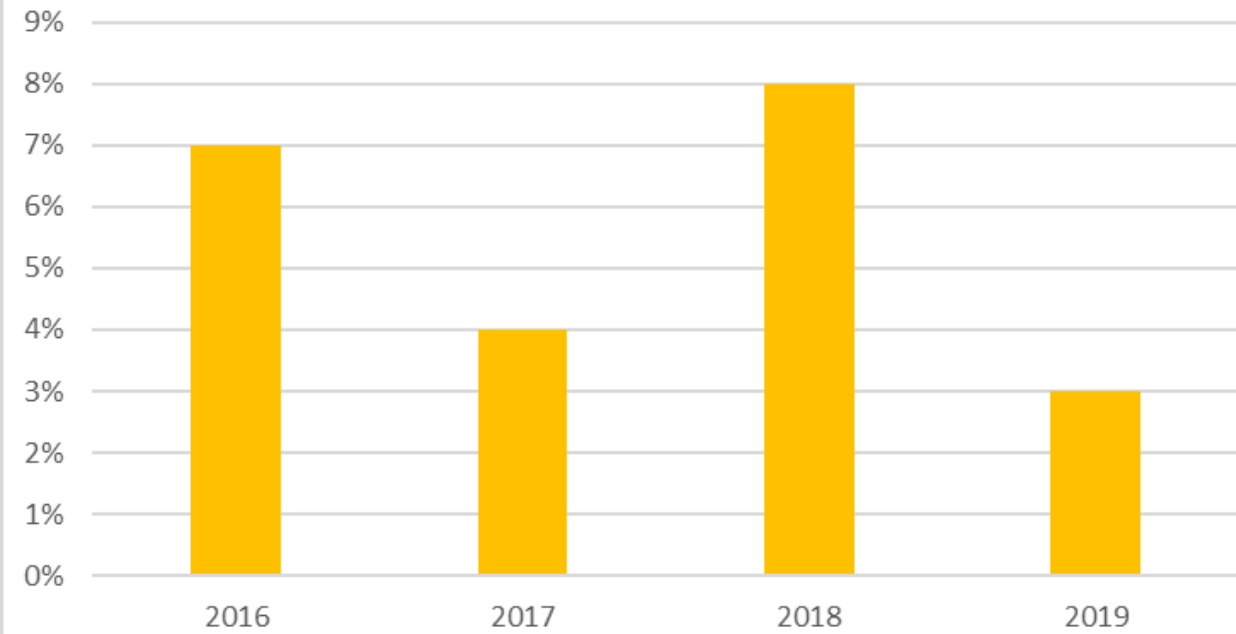
**(1 YAT)
CHEATGRASS 15%
2 NON-NATIVE FORBS**



STEEP SLOPE

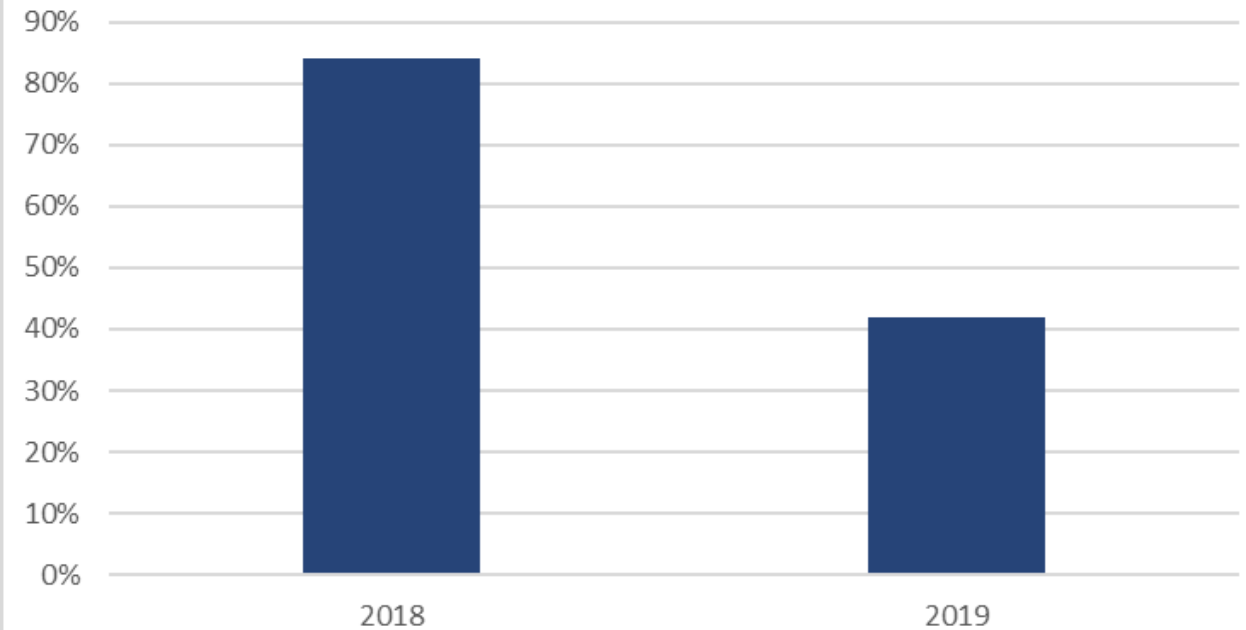


CONTROL (NON-INFESTED)



ECOLOGICAL SITE:
COARSE UPLAND
(FOOTHILLS & MOUNTAINS WEST)

CONTROL (INFESTED)

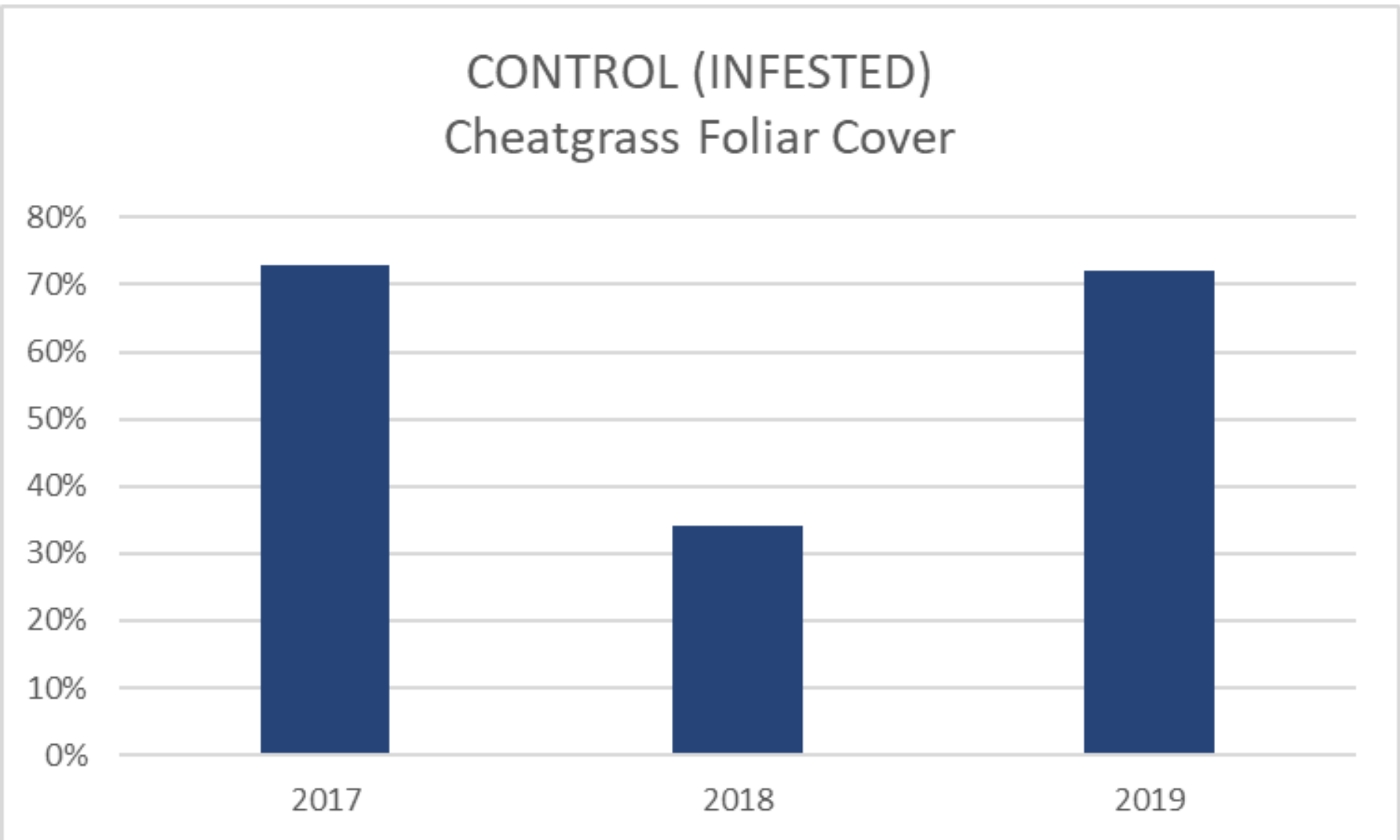


2019 COLD WET YEAR

2017 & 2019 WET YEARS
TEMP NOT FACTOR

ECOLOGICAL SITE:
GRAVELLY
(GREEN RIVER BASIN)

CONTROL (INFESTED)
Cheatgrass Foliar Cover

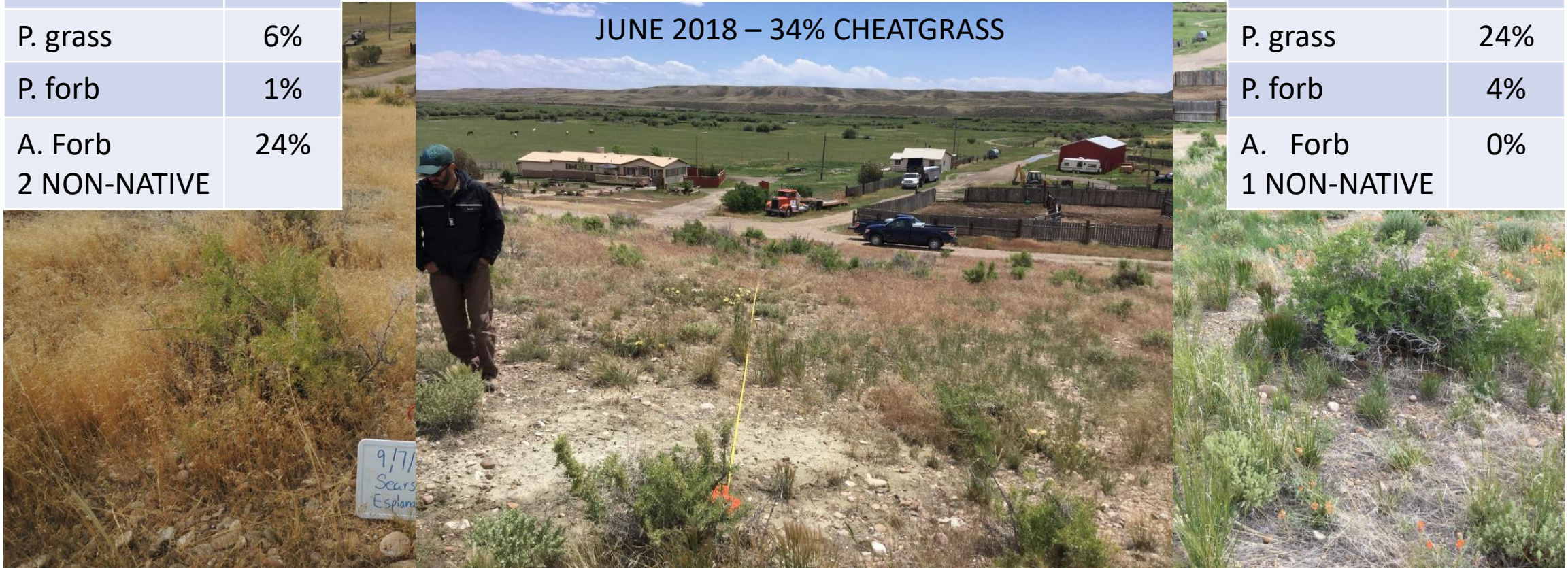


Species	% Cover
Cheatgrass	73%
P. grass	6%
P. forb	1%
A. Forb 2 NON-NATIVE	24%

INDAZIFLAM 7 OZ TREATED SEP 7 2017

JUNE 2018 – 34% CHEATGRASS

Species	% Cover
Cheatgrass	0%
P. grass	24%
P. forb	4%
A. Forb 1 NON-NATIVE	0%



SEP 2017

JUNE 2019

LINCOLN COUNTY

SUMMARY RESULTS



INFESTED PLANT COMMUNITIES ARE TYPICALLY INTACT

GRAZING DEFERMENT USED WHEN DEGRADED



TREATMENT EFFICACY 2 YEARS AFTER TREATMENT

EXCEPTIONS: WARM, WET YEARS AND DIFFICULT TERRAIN



PERENNIAL VEGETATION INCREASES AFTER TREATMENT



FORBS HIGHLY VARIABLE DUE TO WEATHER PATTERNS

NATIVE ANNUAL FORBS REPLACING NON-NATIVE ANNUAL FORBS IN SOME CASES



MINIMAL NON-TARGET DAMAGE, RECOVERY WITHIN 1 YEAR

RESPONSES



MONITORING PROTOCOL CHANGE

PRE-TREATMENT NEEDS TO
OCCUR IN JUNE
IMPROVING DIVERSITY
PROTOCOL



TREATMENT PROTOCOL CHANGES

EVERY 2 YEARS, 3 APPLICATIONS
(6 YEARS)
STEEPER SLOPES WITH >70%
CHEATGRASS MAY NEED BACK
TO BACK TREATMENT UNTIL
CONTROL ACHIEVED



CONTINUE TO STRIVE FOR INTEGRATED PEST MANAGEMENT

NEED LONG-TERM TOOLS TO
BREAK SEED CYCLE



NEED TO ANALYZE TREATMENT TIMING RELATIVE TO WEATHER PATTERNS

2020 PLANS



CONTINUE TO MONITOR 21 EXISTING LPI TRANSECTS



CONTINUE TO MONITOR 5 EXISTING PHOTO POINT TRANSECTS



ADD 1 NEW PRIVATE LPI TRANSECT



ADD 10 NEW USFS LPI TRANSECTS

5 FREMONT RIDGE
5 WILLOW CREEK

County	Plot	Treatment	Treatment Rate	Application Method	Treatment MON YEAR	Treatment Year	Post-Treatment Management	Year	MLRA	Ecological Site	Aspect	Slope	SMU	Soil Component	Cheatgrass Foliar Cover	Other Annual Grasses	Perennial Grass Foliar Cover	Annual Forb Foliar Cover
Sublette	WY-HM-Plot 1	Esplanade & Plateau	5 oz & 8 oz	aerial - helicopter	Oct 2018	Year 1	ungrazed	2019	43B	CU 15-19W	S		6322	McCort	8%	0%	74%	0%
Sublette	WY-HM-Plot 2	Control		aerial - helicopter	Oct 2018	Pre-Treat	ungrazed	2018	43B	CU 15-19W	S		6322	McCort	84%	0%	60%	32%
Sublette	WY-HM-Plot 2	Esplanade	5 oz	aerial - helicopter	Oct 2018	Year 1	ungrazed	2019	43B	CU 15-19W	S		6322	McCort	0%	0%	83%	1%
Sublette	WY-HM-Plot 3	Control		aerial - helicopter	Oct 2018	Pre-Treat	ungrazed	2018	43B	CU 15-19W	S		6322	McCort	45%	0%	45%	11%
Sublette	WY-HM-Plot 3	Rimsulfuron	4 oz	aerial - helicopter	Oct 2018	Year 1	ungrazed	2019	43B	CU 15-19W	S		6322	McCort	2%	0%	42%	4%
Sublette	WY-HM-Plot 4	Control		untreated	untreated	Year 1	ungrazed	2019	43B	CU 15-19W	S		6322	McCort	42%	0%	66%	34%
Sublette	Jenny-BRTE	Control		aerial - helicopter	Sep 2018	Pre-Treat	1 yr deferment	2017	34A	CU 10-14W	S		3601	Pointer, rubbly	33%	0%	47%	33%
Sublette	Jenny-BRTE	Panoramic	8 oz	aerial - helicopter	Sep 2018	Year 1	1 yr deferment	2019	34A	CU 10-14W	S		3601	Pointer, rubbly	0%	0%	57%	0%
Sublette	EFHills-State-T2	Control		aerial - helicopter	Oct 2017	Pre-Treat	no deferment	2017	43B	CU 15-19W	S		3601	Pointer, rubbly	68%	0%	56%	0%
Sublette	EFHills-State-T2	Panoramic	8 oz	aerial - helicopter	Oct 2017	Year 1	no deferment	2018	43B	CU 15-19W	S		3601	Pointer, rubbly	32%	0%	47%	0%
Sublette	EFHills-State-T2	Panoramic	8 oz	aerial - helicopter	Oct 2017	Year 2	no deferment	2019	43B	CU 15-19W	S		3601	Pointer, rubbly	42%	0%	55%	1%
Sublette	EF-BRTE-T1	Control		aerial - helicopter	Aug 2017	Pre-Treat	grazed	2017	43B	CU 15-19W	S		3405	Jerry	36%	0%	30%	5%
Sublette	EF-BRTE-T1	Panoramic	8 oz	aerial - helicopter	Aug 2017	Year 1	1 yr deferment	2018	43B	CU 15-19W	S		3405	Jerry	25%	0%	79%	0%

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