# Benton Lake Wetland Management District

Arod Lake WPA, Big Sag WPA, Blackfoot WPA, Jarina WPA, Kleinschmidt Lake WPA, Savik WPA, Schrammeck Lake WPA, and Upsata WPA

Benton Lake and Lee Metcalf ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Survey Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Bull thistle	0.00	0.06	0.06
Common tansy	32.02	0.00	0.00
Hoary alyssum	1,210.04	0.89	0.92
Houndstongue	1,282.21	1.42	0.52
Leafy spurge	261.05	3.2	4.00
Musk thistle	780.53	2.84	2.84
Oxeye daisy	486.66	0.86	0.90
Perennial pepperweed	52.73	0.699	0.447
Russian knapweed	289.50	3.303	3.516
Spotted knapweed	3,104.90	112.54	116.36
St. Johnswort	371.95	0.00	0.00
Sulfur cinquefoil	371.95	0.03	0.02
Whitetop/Hoary cress	187.22	4.46	4.46
Yellow toadflax	1,476.67	4.84	4.93
District Totals	4402.18*	137.76	141.59

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

#### Summary

- ➤ ISST performed management and monitoring surveys covering a combined total of over 11,000 acres within the Benton Lake Wetland Management District.
- ➤ Leafy spurge and spotted knapweed were both monitored and treated over the course of three visits to Jarina WPA, with the goal to eradicate the species from the site.
- > Schrammeck Lake WPA herbicide treatments of whitetop/hoary cress in 2014 were highly effective. Most populations sprayed in 2014 had a tremendous reduction in size and/or density.
- Monitoring of musk thistle treatments at Pumphouse Unit proves chemical treatments in 2014 were highly effective for burn down and prevention of seed dispersal.
- Significantly less patches of oxeye daisy were detected in 2015 than in previous years on Blackfoot WPA.
- ➤ At Blackfoot WPA, all historic common tansy areas were searched and no plants were found onsite this season.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature

<sup>\*</sup>Survey areas that were searched for multiple species were only counted once in the district total. More information on survey areas are included in the individual project reports.

➤ Houndstongue treatments at Big Sag WPA are proving highly effective.

## Strike Team Expectation and Accomplishment Checklist

# <u>Arrival Interview</u>

Station: Benton Lake WMD

Unit	Species	Location	Inventory/Moni tor	Treat	Chemical (ref or isst)
Arod Lakes WPA	Perennial Pepperweed	70ac to survey	Point to point treatment, 30m buffer around all historic and newly found infestations.	Chemical	Escort XP
Arod Lakes WPA	Russian Knapweed	220ac to survey	Survey adjacent to known infestation as done in 2014	Chemical Mechanical	Milestone
Big Sag WPA	Houndstongue	38ac to survey	Visit and treat historic locations	Chemical Mechanical	Escort XP
Furnell WPA	Spotted knapweed	2.33ac infested. 1995ac for survey.	Treat known locations from 2015, survey rest of area after July 15	Chemical	Milestone
Brumwell WPA	Spotted knapweed		Survey entire area after July 15, pay extra attention to last known knapweed infestation		
Jarina WPA	Leafy spurge	.04ac of infestation, 1.2ac to survey	Treat known location as in 2014 and survey immediately adjacent to that location	Chemical	Perspective Plateau
Jarina WPA	Spotted knapweed	12.15 ac of infestaton. 300 ac for survey South of road	Treat known locations point to point similar to 2014. Survey entire area South of the road after July 15th.	Chemical	Milestone
Savik WPA	Musk and Canada Thistle	12 acres infested. 50 acres Surveyed.	Treat known/historic locations East along HWY and South 100 yards of North boundary fence for lenth of WPA.	Chemical	Milestone
Schrammeck Lake WPA	Dalmation Toadflax		Treat plants checking historic locations as conducted in 2013. Survey as in 2014.	Chemical	Plateau

Schrammeck Lake WPA	Houndstongue	0.85ac infestation	Treat known/historic locatoins as conducted in 2014. foot survey area immediately adjacent to that location.	Chemical Mechanical	EscortXP
Schrammeck Lake WPA	Whitetop/Hoary Cress	2.67 ac infested 120 to survey	Treat previously mapped locations as conducted in 2014. Survey similar to 2014.	Chemical	Escort Xp
Swan River NWR	yellow toadflax,	.41 acres infested	Treat known locations point to point using 2014 survey info . Survey area adjacnt to infestation.	Chemical	Plateau
Swan River NWR	Meadow hawkweed, orange hawkweed	meadow .005 ac infested, Orange 1.52 ac infested	Treat known locations point to point using 2014 survey info. Survey area adjacnt to infestation.	Chemical	Milestone
Swan River NWR	common tansy	.04 ac infested	Treat known locations point to point using 2014 survey info . Survey area adjacnt to infestation.	Chemical	Escort
Swan River NWR	Oxeye daisy	.005 ac infested	Treat known locations point to point using 2014 survey info . Survey area adjacnt to infestation.	Chemical	Milestone
Swan River NWR	sulfur cinquefoil	.23 ac infested	Treat known locations point to point using 2014 survey info . Survey area adjacnt to infestation.	Chemical	Milestone
Swan River NWR	Spotted Knapweed	2.1 acres infested, 106 acres surveyed	Treat known locations point to point using 2014 survey info . Survey area adjacnt to infestation.	Chemical	Milestone

Notes:

# Exit Interview

Unit	Species	Location	Treatment	Completed
Arod Lakes WPA	Perennial Pepperweed	All historic locations	Backpack sprayed with EscortXP, most locations were free of any regrowth at this time, or had very few small plants. Some new infestations were located around the wetlands, they were sprayed and GPS mapped	6/1/15
Arod Lakes WPA	Russian Knapweed	All historic locations	ATV handgun sprayed all plants that were located at historic areas.	
Big Sag WPA	Houndstongue	Visited 2014 survey and treatment area	Used shovels for mgmt., walked to the historic infestations, started on the West end of the WPA and treated all Houndstongue plants found. Worked East toward the water dike built in 2014 to search for any weeds, none were found. Surveyed along the shoreline to the road and worked back, digging houndstongue along the way, toward the truck. ISST collected 2 black garbage bags of garbage from the ditch along the way and 1 bag full of houndstongue seed stalks.	5/27/15
Furnell WPA	Spotted knapweed	Visited all historic locations	Most all sites didn't have any regrowth. All areas had old dead stalk present, but little to no regrowth of basals. Basals that were present were 4-6"	6/3/15
Brumwell WPA	Spotted knapweed			
Jarina WPA	Leafy spurge		Visited on 6/8/15, no actively growing plants present.	
Jarina WPA	Spotted knapweed	6/8/15- visited all historic locations	6/8/15- visited all historic  6/8/15, treated all historic locations, except for the two north unit points. Cattle were currently grazing and ISST member did not feel comfortable.	
Savik WPA	Musk and Canada Thistle	Visited all historic Musk thistle locations	Greg and Kurt visited and treated all musk thistle plants, once done with treated musk, they started at the East most population of Canada thistle and began chemically treating it.	6/9/15
Schrammeck Lake WPA	Dalmation Toadflax			
Schrammeck Lake WPA	Houndstongue	Visited all historic locations	Very few seed stalks found. Most plants were basals. Seed stalks found were bagged and disposed of	6/5/15
Schrammeck Lake WPA	Whitetop/Hoary Cress	Visited all historic locations	Point to point chemical treatment of ALL historic locations within WPA. The areas that are being treated every year are decreasing well. The areas that are typically under water are more dense	6/5/15

1.2

1/2

Swan River NWR	yellow toadflax,		Did not treat, consider Fall trimt with Plateau.	
Swan River NWR	Meadow hawkweed, orange hawkweed		Did not locate any hawkward plants From 7/20 - 7/21	
Swan River NWR	common tansy	7	Treated at 3 locations West side Boundary road had	٠
Swan River NWR	Oxeye daisy		already been sprayed by someone other than ISST.	
Swan River NWR	sulfur cinquefoil	27 -	TSS7 mapped all we sprayed and west side road that was sprayed.	
Swan River NWR	Spotted Knapweed			

Concerns with Project: Lots of garbage was removed from Swan River NWR near the Kibsh and at the campsites on westside.

-maybe put a gate on the road going to the campsites?

Station or Site Manager (or Acting): Date: 9/14/15

# Benton Lake Wetland Management District

### Arod Lake WPA

#### Benton Lake ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Surveyed Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Perennial pepperweed	52.73	0.699	0.447
Russian knapweed	289.50	3.303	3.516
Project Site Totals	342.23	4.011	3.972

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

#### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
June 1, 2015 & July 1, 2015	Early Detection Rapid Response	Perennial pepperweed	3	Point to point chemical treatment of historic populations within the WPA.
June 30, 2015 – July 1, 2015	Refuge Management Project	Russian knapweed	3	Point to point chemical treatment of historic populations within the WPA.
September 9, 2015	Refuge Management Project	Russian knapweed	2	Point to point chemical treatment of historic populations within the WPA.

#### Coordination and Cooperation

- Scheduling and treatment priorities were developed from proposals and discussions with Jim Lange, WMD Manager.
  - O Conducted an arrival and exit interview concerning Russian knapweed and perennial pepperweed treatment.

#### Prevention and Education

- > Goal of management efforts were to reduce infestations and prevent further encroachment of infestations within Arod Lake WPA.
- > Perennial pepperweed is easily identified by its waxy leaves with whitish mid-veins. The plant has dense white flower heads in rounded clusters near branch ends. The seedpods are attached by long stalks and the plant grows in dense patches.
- > Perennial pepperweed has rhizomatous creeping roots; reproduction is primarily by rhizomes and

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

root fragments, but also by seed. Although it thrives in most habitats, the ditches, waterways, and seasonally wet areas are optimal habitat for perennial pepperweed.

#### Early Detection and Rapid Response

- > Perennial pepperweed was first detected by the strike team in the southern region of the WPA in 2011. Populations were mapped in 2012 while conducting Russian knapweed priority treatments.
  - o In 2012, 0.17 acres were present.
  - o In 2013, 0.61 acres were mapped and 0.36 acres were treated.
  - o In 2014, ISST located and treated 2.07 acres.

#### Inventory and Monitoring

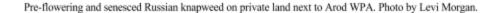
- ➤ ISST searched 289.50 acres (over the course of two separate visits to the WPA); within the vicinity of historical Russian knapweed infestations and 3.303 acres were infested.
  - o 3.303 acres infested calculations is based off survey results from 6/30/2015 7/1/2015 & 9/9/2015.
  - O Utilized five years of historical data for searching and treating historical sites.
  - O Some historical populations were gone yet additional satellite infestations were mapped and treated. New infestation sites had moved across the landscape suggesting seed dispersal.
  - Observed populations of high density Russian knapweed on private land along the fence in some areas.
- ➤ ISST searched 52.73 acres in the southern region of the WPA and found 0.699 acres to be infested with perennial pepperweed in 2015.

#### Management

- ➤ ISST treated 3.516 acres of Russian knapweed during 2 visits in 2015.
  - O Three ISST members treated Russian knapweed populations near the southern most boundaries of the WPA over two days in June and July. Then, a crew of two re-treated the area in September.
- ➤ In 2015, ISST located 0.699 infested acres and treated 0.447 acres of perennial pepperweed. The plants were in the pre-flower growth stage.
  - O ISST visited all historical perennial pepperweed sites within the WPA. Most sites were absent of infestation on June 1, 2015; the infested sites were reduced in density.
  - O Several new infestations around the wetlands were located, mapped, and chemically treated. These newly found populations were of luxuriant (>60%) density.
  - o The WPA wetlands were roughly 100% full in 2015, making 0.252 acres untreatable.
- ➤ All ISST activities in the Benton Lakes WMD were conducted point-to-point around historic observations of known weed populations at the request of the WMD Manager. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established on the rest of the WPA. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff now to determine or answer these types of questions.

#### Herbicide Applied

- > ISST applied 0.61 ounces of Escort XP for perennial pepperweed treatments
- > ISST applied 2.03 ounces of Milestone for Russian knapweed treatments

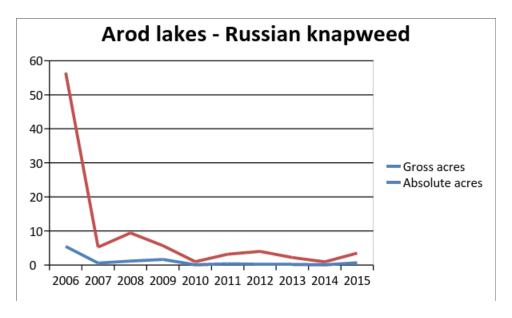




#### Recommendations

- For most effective chemical treatments of perennial pepperweed, timing should be made at post-emergence from seedling to flowering stage. With Escort XP, greatest effectiveness is at flower bud and flowering stage. A NPDES permit is needed for treating canal ditch banks and in canal.
- > Seedlings can be controlled by hand-pulling, but it does not control established plants because shoots quickly re-sprout from root reserves.
- Mowing will stimulate perennial pepperweed plants to re-sprout, but mowing is helpful for removing accumulated thatch, breaking old stems into small fragments, and helps prevent shading of favorable species.
- > Combining mowing or hand pulling with herbicides can be an effective control strategy on this

WPA. To be most effective, ISST recommends mowing or pulling plants at the bolting or flower bud stage and applying herbicides to re-sprouting shoots once they have reached the flower bud stage. If this technique is to be applied, initial treatments will have to be made earlier in the season, preferably in late May or early June.



Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE DAILY PESTICIDE APPLICATION RECORD

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

BUSINESS	LICENSE#
U.S. Fish and Wildlife Service	104342-15
NAME	ADDRESS (Refuge or WPA)
Benton Lake NWR Invasive Species Strike Team	Arod Lahes WPA
CITY, STATE, ZIP	PHONE
Great Falls, MT 59404	406-727-7400 Ext. 213

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Levi Morgan	Knut Schuetz
Date	le-1-15	6-1-15
County	Pondera	Pordera
Time Start/Stop	1100-	1100-
Temperature	75°F	75°F
Relative Humidity	50%	50%
Wind Speed/Direction (from)	6.5 / North	65/North
Pesticide Manufacturer	Dupont	Dupont
Trade Name	Escort	Escort
EPA Reg # or Formulation		
Rate: Product/Diluent Per Acre	102/ac	102/ac
Amount of Chemical Applied	0.13 02	50 010.0
Equipment Used (atv,backpack,truck,saw)	Backpack #3	Backpack #1
Bio-Control (genus species)		-
# released / acre	0	_
Mechanical (mow,hand-pull)	•	_
Plant Phenology & Stage	Leafon	leaf on
Dominant Pest(s)	Perchnial Pepperweed	P. Pepperweed
Equipment Used	Backpack	Backpack
Acres/Area Treated or # of plants	Spot treatment, gps mapped	Spot treatment, gps mapped
GPS Filename	^ ^	

Location #1 (Site specific description)

Location #2 (Site specific description)

- Visited all historical Pepperweed sites Within the WPA. Most sites were absent of infestation in 2015 - 6/1. that were not absent infestation were in the scarce % catagory, - Some new infestations were located around wetlands, % cover was luxuriant. New infestations were cremically treated

with Backpacks spray equip, WPA was very wet on wh - The

COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....)

Shield IVM @ 2 oz / 10 gal

	Start	End	Total
Lovi	3	0.5	2.5
Kurt	3	2.75	.25

probably 2 100% Full

<sup>-</sup> LOTS of Waterfood on Wedlands

Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE DAILY PESTICIDE APPLICATION RECORD

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

BUSINESS	LICENSE#
U.S. Fish and Wildlife Service	104342-15
NAME	ADDRESS (Refuge or WPA)
Benton Lake NWR Invasive Species Strike Team	Arod Lake WPA
CITY, STATE, ZIP	PHONE
Great Falls, MT 59404	406-727-7400 Ext. 213

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Grea McCilora	
Date	(o-H-15	
County	Pordera	
Time Start/Stop	1160 -	
Temperature	750	
Relative Humidity	509p.	
Wind Speed/Direction (from)	6.5 N	
Pesticide Manufacturer	Depent	
Trade Name	Escert	
EPA Reg # or Formulation		
Rate: Product/Diluent Per Acre	102/Al	
Amount of Chemical Applied	0.008 02	
Equipment Used (atv,backpack,truck,saw)	Bachpock #5	
Bio-Control (genus species)		
# released / acre		
Mechanical (mow,hand-pull)	^	
Plant Phenology & Stage	Ceale on	
Dominant Pest(s)	Parrental Pappervised	
Equipment Used	Bedpeck	
Acres/Area Treated or # of plants	Spot treatment, gps mapped	Spot treatment, gps mapped
GPS Filename		7.01

Location #1 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc)	
Location #2 (Site specific description)	Shield IVM @ 2 oz / 10 gal	
	Start End Total	
	0 3 2.75 .25 gal	
	100	

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

All products are diluted with water. Trade Name Aquaneat — NuFarm #228-365 Chaparral — Dow #62719-597	B. Sparklin  Temp.: 67 °F Humidity: 56 %
<ul> <li>Curtail – Dow AgroSciences #62719-48</li> <li>EscortXP – DuPont #352-439</li> <li>Habitat – BASF #241-426</li> <li>Metcel VMF – Agsurf #352-439-8558</li> <li>Milestone – Dow AgroSciences #62719-519</li> <li>Plateau – BASF #241-365</li> <li>Telar XP – DuPont #352-654</li> <li>Tordon &amp; Telar XP</li> <li>Transline – Dow AgroSciences #62719-259</li> <li>Tordon 22K – Dow AgroSciences #62719-6</li> </ul>	<ul> <li>Metcel &amp; Milestone – Tank Mix</li> <li>Agsurf #352-439-8558 / Dow AgroSciences #62719-519</li> <li>☐ Escort XP &amp; Milestone – Tank Mix</li> <li>DuPont #352-439 / Dow AgroSciences #62719-519</li> <li>☐ Other</li> <li>☐ Dye Used/Rate:</li> <li>☐ Adjuvant Used:</li> </ul>
App. Rate:	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Tansy ragwort Whitetop Russian knapweed Yellow toadflax
Plant Phenology & Stage: Basal Rosette Pre Senescing Sen	-Flowering Post-Flowering Pesced
Location #1 (Site specific description):  See LM See GM  Musk Thiste scattered in Prairie, Clumped on levee	Stat 6 End Used 5

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406-544-2552

Date: Time (start/stop):	G. McClure K. Schuetz B. Sparklin  West Temp.: 67 °F Humidity: 56 %
All products are diluted with water. Trade Name-Manual Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct − Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone − Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone − Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:  Adjuvant Used:  Syrtac
Equipment Used: ATV GPA Handgun Backpack GPA App. Rate: Gloc Gallons Sprayed: Amt. of Color Vegetation Treated: Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-Flowe Senescing Senesced	Mechanical   Chemical Applied:
Location #1 (Site specific description):  Re-visited all Perennial peoperweed locations to manifor treatments from May.  Some new growth was present in previously sprayed areas or just adjacent to the infested areas.	MENTS:

US Fish and Wildlife Service - Invasive Species Strike Team 922 Bootlegger Trail Great Falls, MT 59404

406-544-2552

Date: 7/1/15 Time (start/stop): 7:30 - 11:00  Location: (NWR or WPA) Area Lakes wpa  County: Teton  Weather Conditions: Wind: 4 MPH, direction from	G. McClure K. Schuetz B. Sparklin
All products are diluted with water. Trade Name-Man Aquaneat — NuFarm #228-365 Chaparral — Dow #62719-597 Curtail — Dow AgroSciences #62719-48 EscortXP — DuPont #352-439 Habitat — BASF #241-426 Metcel VMF— Agsurf #352-439-8558 Milestone — Dow AgroSciences #62719-519 Plateau — BASF #241-365 Telar XP — DuPont #352-654 Tordon & Telar XP Transline — Dow AgroSciences #62719-259 Tordon 22K — Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:  Adjuvant Used:
Equipment Used: ATV GPA 80 Handgur Backpack GPA  App. Rate: Gallons Sprayed: Amt. of Vegetation Treated: Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Hoary alyssum Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-Flow Senescing Senesced	Chemical Applied: Acres Treated:  Orange hawkweed
Location #1 (Site specific description):  Started @ North most historical data and worked south until meeting  GNN + KS.	MMENTS: Start End 10 8  Total 2

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date: 7-1-15 Time (start/stop): 7:30 - 1/30 Location: (NWR or WPA) Argo WDA	Applicators/Operator: L. Morgan G. McClure K. Schuetz
County:	☐ B. Sparklin
Weather Conditions: Wind:MPH, direction from _	
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:
Equipment Used: ATV GPA Handgun  Backpack GPA  App. Rate: Gallons Sprayed: Amt. of C  Vegetation Treated:  Absinthe wormwood  Dalmatian toadflax	
Baby's breathe Dame's rocket Blueweed Hoary alyssum Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax Russian olive Yellowflag iris Saltcedar Other
Plant Phenology & Stage: Basal Rosette Pre-Flowe Senescing Senesced	
	MENTS:  J Sg

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date: Grant/stop): Grant/stop Location: (NWR or WPA) A ROD WPA  County: Weather Conditions: Wind: MPH, direction from MPH, direction from All products are diluted with water. Trade Name-Manu Aquaneat — NuFarm #228-365  Chaparral — Dow #62719-597  Curtail — Dow AgroSciences #62719-48  EscortXP — DuPont #352-439  Habitat — BASF #241-426  Metcel VMF— Agsurf #352-439-8558	
Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA PO Handgun Backpack GPA	DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Adjuvant Used:  Broadcast  Mechanical
App. Rate: Gallons Sprayed: Amt. of Classical Common teasel  Amt. of Classical Clastical Classical Classical Classical Classical Classical Classic	hemical Applied: 35 Acres Treated:  Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar  Acres Treated:  Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Other
Plant Phenology & Stage: Basal Rosette Pre-Flower Senescing Senesced	ring Flowering Post-Flowering
Location #1 (Site specific description):  SEE GM	MENTS:

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406-544-2552

	4
Date: 30.15 Time (start/stop): 4.50 Location: (NWR or WPA) A MPH, direction	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: F Humidity: // %
All products are diluted with water. Trade Name	
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Shield  Adjuvant Used:
	$\forall$
Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA Ha  Backpack GPA  App. Rate: Gallons Sprayed: An  Vegetation Treated: Absinthe wormwood Dalmatian toadflar Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweel Common teasel Musk thistle	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Tansy ragwort Whitetop Russian knapweed Yellow toadflax
Plant Phenology & Stage: Basal Rosette Pre Senescing Sen	
Location #1 (Site specific description):	COMMENTS:
heat and what increased throughout marring, Stopped spraying as wind got too	Transacted South holfor intected area, See map. Isolated packets of canada thistle.

Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE DAILY PESTICIDE APPLICATION RECORD

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

BUSINESS	LICENSE#
U.S. Fish and Wildlife Service	104765-15
NAME	ADDRESS (Refuge or WPA)
Benton Lake NWR Invasive Species Strike Team	Avod lake
CITY, STATE, ZIP	PHONE
Great Falls, MT 59404	406-727-7400 Ext. 213
	,

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Kurt	
Date	09-09-15	
County	Telon	
Time Start/Stop	8:30 - 2:30	
Temperature	620	
Relative Humidity	56010	
Wind Speed/Direction (from)	2 arch South	
Pesticide Manufacturer	Dow	
Trade Name	Milestone	
EPA Reg # or Formulation		
Rate: Product/Diluent Per Acre	702/AC	
Amount of Chemical Applied	0.2602	***
Equipment Used (atv,backpack,truck,saw)	ATU	•
Bio-Control (genus species)		
# released / acre		
Mechanical (mow,hand-pull)		
Plant Phenology & Stage	senescing	
Dominant Pest(s)		
Equipment Used		
Acres/Area Treated or # of plants	Spot treatment, gps mapped	Spot treatment, gps mapped
GPS Filename		

Location #1 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc)
Location #2 (Site specific description)  Avad WPA Visited all	Shield IVM @ 2 oz / 10 gal
historical sites - plants	Start End Total
were senescing but very	+ 109
conserve against brown	75 39
Were seneschy but very Visible against brun seneschy grasses, musk 5 Canada thotles Chenghou	<del>*</del>
pub 80 % Effectioners from	
1 st application	

Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE DAILY PESTICIDE APPLICATION RECORD

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

BUSINESS	LICENSE#
U.S. Fish and Wildlife Service	104765-15
NAME	ADDRESS (Refuge or WPA)
Benton Lake NWR Invasive Species Strike Team	A God Lados WPA
CITY, STATE, ZIP	PHONE
Great Falls, MT 59404	406-727-7400 Ext. 213

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Gea McCluse	
Date	9-9-15	
County		
Time Start/Stop	900 2- 300	
Temperature	610	
Relative Humidity	5890	
Wind Speed/Direction (from)	2 11/25	
Pesticide Manufacturer	7,7	
Trade Name	MileShore	
EPA Reg # or Formulation		
Rate: Product/Diluent Per Acre	102/20	
Amount of Chemical Applied	0.402	
Equipment Used (atv,backpack,truck,saw)	ATV horagum	
Bio-Control (genus species)	Ú.	= = = = = = = = = = = = = = = = = = = =
# released / acre		
Mechanical (mow,hand-pull)		
Plant Phenology & Stage		
Dominant Pest(s)	Russian Knopussod	
Equipment Used		
Acres/Area Treated or # of plants	Spot treatment, gps mapped	Spot treatment, gps mapped
GPS Filename		, 01 11

Locati	ion #2 (Si	te specific d	escriptio	n)		
Acad	Lotos.	tergoolod	South	1/2	1	religi

Location #1 (Site specific description)

where woods previously found. Traded new spouls.

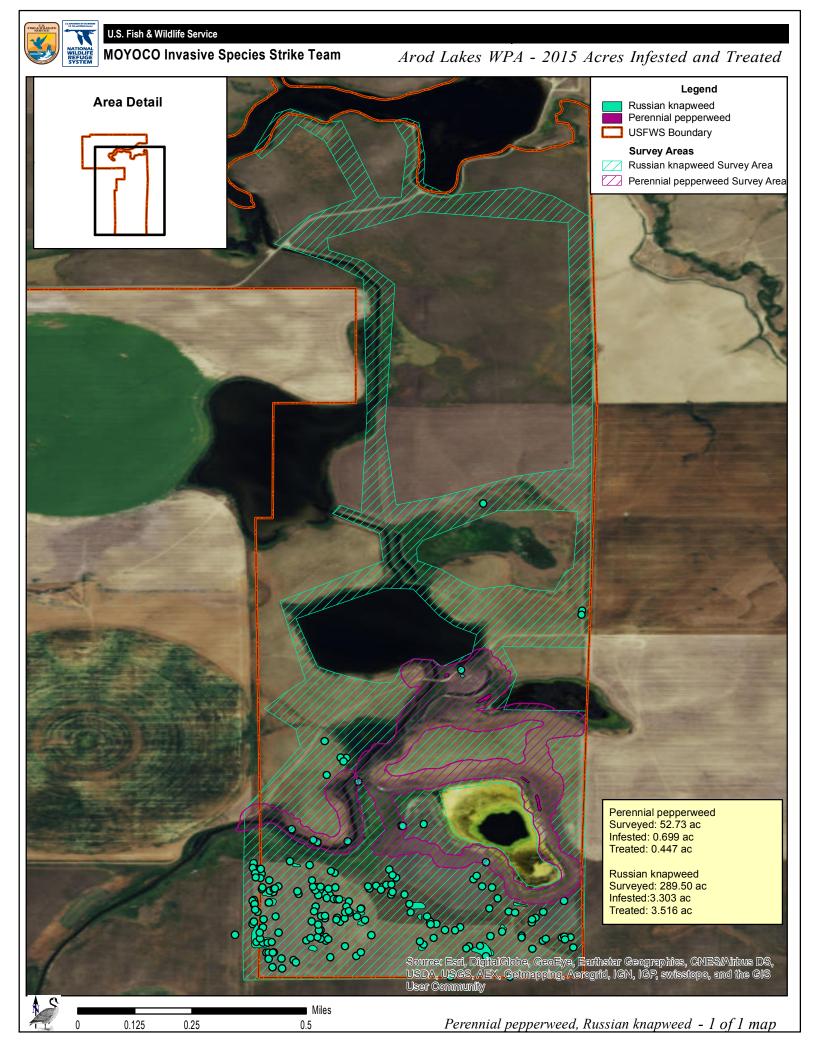
PZP. survey for the wooded polygons.

Delected one significant inheatien that was proviously under mented on the East-West cood through the south section. Russian Knajwood mixed in the canada thrille on the dyke bank.

COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc...)

Shield IVM @ 2 oz / 10 gal Sylta C

Start	End	Total
10		
10	5	5
8		
2		



# Benton Lake Wetland Management District

Big Sag WPA

Benton Lake ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Surveyed Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Houndstongue	77.44	0.52	0.52
<b>Project Site Totals</b>	77.44	0.52	0.52

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

#### Highlights

#### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
May 27, 2015	Refuge Management Project	Houndstongue	3	Point to point mechanical treatment within the WPA.

#### Coordination and Cooperation

Scheduling and treatment priorities were developed from proposals and discussions with WMD Manager, Jim Lange.

#### Prevention and Education

➤ If grazing is used as a management tool on this WPA, removal of senesced houndstongue stalks will help reduce the chance of dispersal.

#### Early Detection and Rapid Response

> Satellite infestations of houndstongue were found and treated near historical populations.

#### Inventory and Monitoring

- ➤ ISST members surveyed 77.44 acres of the WPA in 2015.
- > Other noxious weeds found on the site include: Canada thistle, bull thistle, cheat grass, common mullein, crested wheatgrass, and field pennycress.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

#### Management

➤ ISST mechanically treated houndstongue using a 30 meter buffer area around all historic and no

- > Throughout the entire WPA, senesced seed heads were clipped and bagged for disposal.
- A total of 0.52 acres of houndstongue was treated in 2015. No houndstongue was found near the historical population in the center of the unit for the sixth year in a row.
- ➤ In 2015, five houndstongue plants were found near the prairie dog town.
- ➤ Houndstongue is the only noxious weed treated on this site by the strike team.
- All ISST activities in the Benton Lakes WMD were conducted point-to-point around historic observations of known weed populations at the request of the WMD Manager. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established on the rest of the WPA. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff to now determine or answer these types of questions.

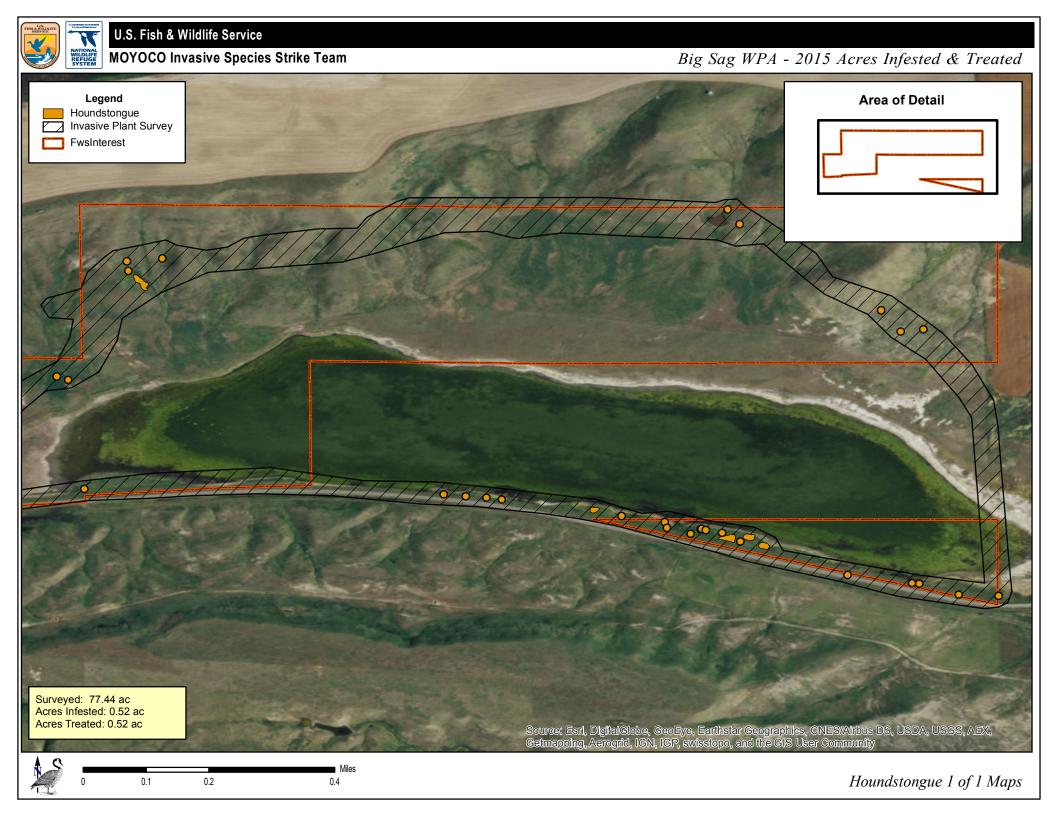
#### Herbicide Applied

> In 2015, ISST treated all houndstongue mechanically due to rainy and windy weather conditions.

#### Recommendations

- > Repeated chemical treatment and timing in 2016 will be most effective for further reducing the infestation.
- > Survey for houndstounge outside of historically treated areas.
- Only one day in May or June 2016 will be required to treat the historical infestations at Big Sag WPA.

Page 2 of 2



# Benton Lake Wetland Management District

### Blackfoot WPA

Benton Lake and Lee Metcalf ISST

# Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Survey Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Black henbane	0	0.14	0.14
Canada thistle	0	0.14	0.14
Common mullein	0	0.01	0.01
Common tansy	32.02*	0	0
Hoary alyssum	32.02*	0.23	0.25
Houndstongue	41.08	0.90	0.91
Leafy spurge	120.61	3.04	3.84
Meadow hawkweed	1.50	0.01	0.005
Musk thistle	0	0.09	0.08
Oxeye daisy	26.06	0.76	0.80
Russian knapweed	0	0.01	0.01
Spotted knapweed	146.83	71.22	72.49
Yellow toadflax	387.30	2.34	2.39
<b>Project Site Totals</b>	755.40	78.89	81.07

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

#### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
0 Ivra 2015	EDRR Project Chemical Treatment	Hoary alyssum	2	Point-to-point monitoring and treatment using historic data.
9-June-2015	Refuge Project Chemical Treatment	Oxeye daisy	2	
16-June-2015	Refuge Project Chemical Treatment	Spotted knapweed, Houndstongue	3-5	Priority areas treated while keeping watch for EDRR species.
to 18-June-2015	EDRR Project Chemical Treatment	Meadow hawkweed, Hoary alyssum, Common tansy	1	Treated new patches of hawkweed and hoary alyssum. Monitored historic locations of tansy.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

<sup>\*</sup> One survey area was searched for multiple species but this survey acreage was only counted once.

	Refuge Project Chemical Treatment	Oxeye daisy	1	Treatment in North 80, target plants were more apparent than in early June.
	Refuge Project Chemical Treatment	Spotted knapweed	1	Continued treatment in priority areas to spray out <i>Milestone</i> before switching to herbicide for other priority applications.
14-Sept-2015	Refuge Project Inventory and Monitoring	Spotted knapweed and other noxious weeds	3	North of Hwy 200, in the southeast corner of this area was surveyed during rainy weather.
to 17-Sept-2015	Refuge Project Chemical Treatment	Leafy spurge	2-4	Point-to-point monitoring and treatment using historic data.
	Refuge Project Chemical Treatment	Yellow toadflax	3-7	Point-to-point monitoring and treatment using historic data.
	Refuge Project Chemical Treatment	All noxious weeds	3	Systematic transecting and treatment of all species from parking area north of Hwy 200 to the gravel pit.
22 Sont 2015	Refuge Project Chemical	Spotted knapweed	3	Treatment of parking areas and fence line north of Hwy 200.
23-Sept-2015	Treatment	Houndstongue	1	Treatment in southeast corner from top of bank to oxbow and rivers edge.
28-Sept-2015 to 30-Sept-2015	Refuge Project Chemical Treatment	Yellow toadflax	3-4	Continued treatments where left off.
	Refuge Project Mechanical Treatment	Hoary alyssum	1	Pulled and bagged all plants found (rosette to post flower) from along Brown's Lake Road.

### Coordination and Cooperation

Crew leaders Jessica Zarate and Levi Morgan coordinated with site manager Kevin Ertl using the "Strike Team Expectation and Accomplishment Checklist" (Appendix A -D) and all details of work to be completed were further discussed in person each week as the crews arrived.

#### Prevention and Education

- Small and isolated infestations are always targeted first as a priority to help prevent their spread into new areas.
- Survey and treatment of long-standing infestations are strategically outlined by the site manager in an effort to reduce the density of and curb the spread of weeds across the landscape.

#### Early Detection and Rapid Response

Meadow hawkweed



- ➤ While surveying for oxeye daisy, the crew identified and treated a patch of meadow hawkweed in the northeast corner of the WPA. A 30 meter buffer was surveyed around this infestation and no additional plants were found.
- ➤ In September, the crew inventoried the southeast region of the site located north of Hwy 200 during rainy weather and found two additional patches of meadow hawkweed. These patches are located on a steep slope and in the pines and would need to be treated with a backpack sprayer but the team did not have sufficient time available for treatment.

#### Hoary alyssum

- This species is a priority for treatment so multiple management efforts (both chemical and mechanical) are performed in a single growing season resulting in more treated acres than infested acres
- ➤ Historically hoary alyssum was primarily found along Brown's Lake Road with a few scattered patches near the access gate south of Hwy 200 and in the southeast near the river. All of the historic areas were surveyed twice for treatment, performing point-to-point surveys plus a 30 meter buffer around these locations.
- > Flowering, post-flower, and seeding plants were all pulled and bagged for disposal off site, prior to spraying seedlings and non-flowering plants.
- Although some new patches were found, there appeared to be less hoary alyssum overall. This year we mapped 0.23 infested acres compared to 0.38 infested acres mapped in 2014.
- > Several sources are now stating hoary alyssum can be found as an annual, winter annual, biennial, or a short lived perennial; regardless, it is a prolific seed producer. Many of the plants found on Brown's Lake Road are very large, not typical of what would be expected of an annual species.
- ➤ Coordination with the County for spraying the road right-of-way is recommended. Multiple herbicide applications with *Escort XP* can be completed as long as application rates are kept low and do not exceed two ounces per acre in an area within the same growing season.

#### Russian knapweed

- Two patches of Russian knapweed were found and treated during the treatment of spotted knapweed and other noxious weeds north of Hwy 200.
- This species was not a priority this season and only those two patches were treated.

#### Inventory and Monitoring

#### Common tansy

➤ Historic areas were surveyed for common tansy in June and this species was not detected this season. There were four common tansy patches totaling 0.02 acres in 2011. Then in 2012, no common tansy was found. Only one patch was detected and treated in 2013. No common tansy was located in 2014. Common tansy monitoring should continue to identify new patches before they can become established.

#### Other Noxious Weeds

> During rainy weather, the team spent a few hours monitoring all noxious weeds an area north of Hwy 200, in the southeast corner. Weeds mapped in this area include common mullein, houndstongue, meadow hawkweed, musk thistle, and spotted knapweed.

#### Management

- All surveys for treating target species on the Blackfoot WPA were conducted point-to-point with a buffered search area around historic locations. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff to answer these types of questions.
- > Frequently changing herbicides to appropriately target the variety of plants to be treated and equipment failures resulted in some delays. Smaller batches of herbicide are often used and extra

water is hauled for cleaning tanks between different mixes.

#### Houndstongue

- > Houndstongue appears to be expanding on this site. It was primarily found in the forested areas of the site, it now seems to be spreading in other areas.
- ➤ Houndstongue was targeted for treatment near a Blackfoot River oxbow located in the southeast region of the site and during surveys for treatment north of Hwy 200. All work was completed with ATV except the oxbow area was treated using a backpack sprayer.
- > In other areas of the site houndstongue was treated opportunistically as time permitted while managing other priority species. A large infestation of houndstongue was found and treated near the fence line southeast of Brown's Lake Road and south of Hwy 200. Some overlap of treatment mapping occurred in this area resulting in a larger amount of acres treated than infested.

#### Oxeve daisy

- ➤ The team conducted point-to-point surveys using historic data in early June to treat known patches but very little oxeye was found to be present at the time of the survey.
- > Timing for treatment of this species was scheduled early in an effort to catch plants in rosette to pre-flower stages, but it's possible it was too early this season.
- ➤ Later in June, several oxeve daisy plants were observed and treated in the historic area, when traveling through the area on the way to treat meadow hawkweed in the northeast corner.
- > Not enough time was available when oxeye plants were found to go back over entire historic areas for re-treatment.
- > Timing oxeye daisy treatment with the appropriate herbicide that has the least harmful effects to woody species is a challenge that is compounded by the

fact that this species is a prolific seeder that can have multiple flushes within a single growing

> Surveys in late June and July may lend to better detection, but treating plants in full flower is not optimal for good control with *Milestone*. Site managers may want to use *Escort XP*, which can be applied when plants are flowering. However, this product can cause more off target damage on

surrounding brush and trees if drift occurs. Chaparral herbicide was used this season as it contains the active ingredients found in both *Milestone* and *Escort XP*, making it a better option for treating this species under a variety of phonological stages.

> Continued monitoring and treatment of this species is advised. Additional time should be scheduled since the terrain and canopy make this area difficult to survey and map.

### Spotted knapweed

- > Spotted knapweed is abundant and wide spread throughout this site and the management focus is on containment. Fence perimeter and satellite infestations are targeted first; followed by the treatment of fields based on prioritized management needs.
- > Spotted knapweed was also inventoried and treated to the extent feasible north of Hwy 200 this year. This area has not been worked by ISST for several years and the project leader requested this area be covered to help determine the extent of the knapweed in the area.

The ability to detect the target species depends on both the plants phenology and its surrounding vegetation. This newly mapped patch was initially detected from a distance since some of the plants had bolted and were flowering (left). The sparse ground cover lent well to also finding adjacent plants that varied in growth stage. Some pre-flowering plants (top right) had not bolted and were only slightly larger than the seedlings (bottom right). Photos by Jessica Zarate.

The 72.49 acres treated is greater than the 71.22 acres infested primarily due to overlap of management polygons. However, some retreatment may have occurred during treatment.

#### Leafy spurge

- ➤ Leafy spurge 3.04 acres infested is slightly less than what was mapped in 2014 (3.70 acres). Several new patches of spurge were detected and while most were outliers of known historic patches, an isolated patch was found north of Hwy 200 under a pine tree near the gravel pit.
- The density of several patches of spurge appeared to be declining. However, leafy spurge is still well distributed throughout the central area south of Highway 200 with the highest concentration northwest of the large pond.
- > In many areas plants were laid over and intermixed with tall grasses making them more difficult to find
- ➤ If left untreated this species will certainly expand and further degrade the site. Because leafy spurge is difficult to control, it may be best to review and implement multiple management methods to most effectively reduce seed production and its spread by roots.

#### Yellow toadflax

- > Priority areas for treatment of this species remained the same as in previous years, working point-to-point to treat the small and isolated patches first before systematically transecting the larger infestations.
- Many of the yellow toadflax plants found were small and at times very small at less than 2 inches tall. In most areas transects were completed at very slow speeds and close together (less than 5 meters apart) because of the difficulty detecting this species among the taller grasses.
- > Yellow toadflax is an aggressive invader and is known to spread rapidly under suitable conditions if left untreated. It is still unclear if current management techniques are effectively reducing this population. However, this species appeared to be absent from several areas where it was found previously.
- > ISST recommends adaptive management strategies are considered to incorporate other management methods that may help control the yellow toadflax infestation onsite.

#### Other species – Black henbane, Canada thistle, Common mullein, Musk thistle

- > Surveys were conducted for the treatment of "all noxious weeds" north of Hwy 200. Additionally, common weeds are occasionally treated incidentally while surveying for other priority species.
- Acres infested for species such as black henbane, Canada thistle, houndstongue, and musk thistle are an estimate based on acreages mapped, but more is known to be present on site.
- > When a specific list of target species is not designated for a project or if the list becomes too long, it become difficult to determine if all crew members are covering the areas for the same set of species and are detecting all of them. For instance, often Canada thistle and common mullein are ignored unless specifically requested for inventory. These species may have been mapped by some individuals and not others.

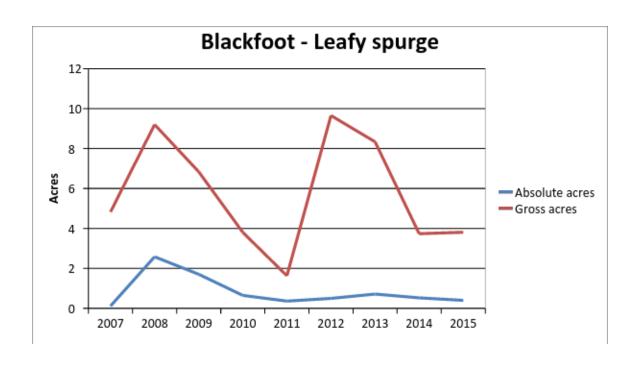
Blackfoot WPA is composed of several habitat types that support a variety of native and non-native plants. Photo by Anna Crockett.

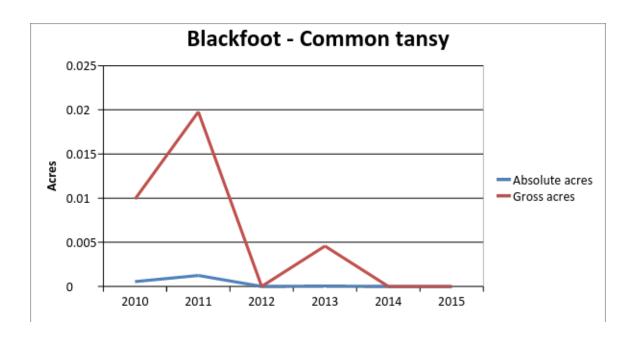
#### Herbicide Applied

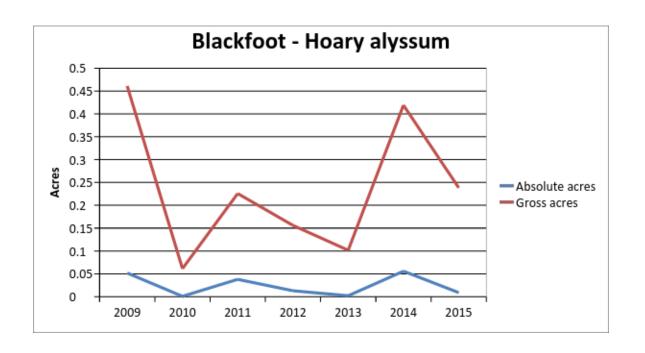
- > 1.97oz of *Chaparral* was used for treatment of hoary alyssum, houndstongue, oxeye daisy and spotted knapweed.
- > 0.08oz of *Escort XP* was used for treatment of houndstongue.
- > 181.82oz of *Milestone* was used for treatment of spotted knapweed, Russian knapweed and musk thistle.
- > 34.20oz of *Plateau* was used for treatment of leafy spurge, yellow toadflax and hoary alyssum.
- > 53.2oz of *Tordon 22K* was used for treatment of spotted knapweed.
- > 189.22oz of *Tordon 22K* and 35.49oz of *Distinct* or *Overdrive* in a tank mix was used for treatment of yellow toadflax, leafy spurge, spotted knapweed, hoary alyssum, musk thistle, and houndstongue.

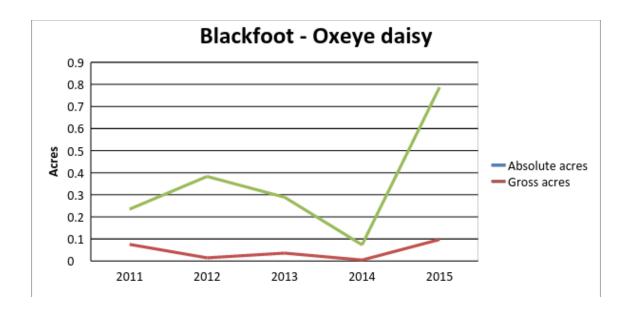
#### Proposed 2016 Schedule

- Continue monitoring for common tansy and sulfur cinquefoil and treat if present. This could be done during any of the site visits early to mid-summer. Sulfur cinquefoil was not surveyed for in 2015 due to other priorities taking precedence.
- > It is recommended that known locations of meadow hawkweed are prioritized for treatment. A systematic inventory could determine the extent of the infestation on site.
- ➤ Hoary alyssum has multiple flushes throughout the growing season and ISST recommends it remains a priority for control at any time it is detected. Monitoring surveys to cover historic areas could begin as early as late May and should continue through fall.
- The manager should also continue to work with the County for treatment of Brown's Lake Road. ISST suggested they use 0.5oz/acre of *Escort XP* in rosette, bolt or early flower stages, so that multiple applications (up to 4 at this rate) can be performed in a single growing season.
- > Oxeye daisy in the North 80 should continue to be treated as a priority. It is recommended that systematic surveys should be conducted in late June early July when plants are flowering to gain a better understanding of the extent of this infestation and assist managers in developing an adaptive management plan for controlling this species.
- Russian knapweed was found to be present north of Hwy 200 this year. Our team originally noted the present of this species onsite in 2013 based on finding it onsite south of the highway.
  - o The actually abundance and extent of this species is unknown.
  - O Herbicide treatment of this species is optimal in the fall.
  - O Biological controls are also now available for this species and could be obtained by the site manager through with the local weed district or the Montana biological control coordinator.
- > Fall spraying of leafy spurge in September is recommended to continue. The manager may also want to try mowing or spraying plants early in the season (prior to seed development) to help reduce seed production.
- ➤ Given the large number of projects on this site, prioritization, scheduling and timing of management is critical. ISST does it's best to schedule projects in a way that allows them to meet all requests from project leaders.









### Appendix A

#### Strike Team Expectation and Accomplishment Checklist

#### **Arrival Interview**

Station: Upsata & Blackfoot & Kleinschmidt WPA Date of Visit: 06/8/15-06/11/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Spotted knapweed		Prioritize areas based on discussion with Kevin	No	Spray & map	Milestone or Chaparral – ISST or Refuge
Hoary alyssum	Upsata	Entire site	Yes, if not treated	No	Excort XP or Chaparral - ISST
Sulfur cinquefoil		Historic location	No	Spray & map	Milestone or Chaparral – ISST or Refuge
Oxeye daisy		Historic location	No	Spray & map	
Hoary alyssum		Point-to-point	No	Spray & map	Chaparral-ISS T; Will switch to Milestone if exclusively spraying spotted knapweed
Oxeye daisy	Blackfoot	historic locations plus 30M buffer around these and new patches	No		
Spotted knapweed		Prioritize areas based on discussion with Kevin	No		
Common tansy & Sulfur cinquefoil		Point-to-point historic locations plus 30M buffer around these and new patches	No		

**Notes:** Work on completing Upsata before moving to the Blackfoot. Gear will be powerwashed at Kevin's between sites.

Met with Kevin after completing Upsata and he would prefer for us to only treat oxeye and hoary at Blackfoot (2 people) and the rest of the crew start priorities on Kleinschmidt. Sent text to Lindy and Bill to get ok to make this change and it was approved. See Exit notes for details of projects worked on Kleinschmidt.

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc...: None.

Station or Site Manager (or		
Acting):	Date:	
(back has Exit Interview)	· · · · · · · · · · · · · · · · · · ·	

Exit Interview

Exit Interview	1		1	-	0 1/1/
Species	Unit	Section of Unit	Inventory/Monito r	Treat	Completed (yes or no with explanation)
Spotted knapweed		Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Yes, all historic areas were treated.
Hoary alyssum	Upsata	Entire site	No.	Yes	Yes, all historic areas were treated but we may have been a little early, not a lot was found.
Sulfur cinquefoil			No	Some treated.	Not priority species but some
Oxeye daisy		Historic location	No	None found.	sulfur cinquefoil was found and treated. Historic patches of oxeye were surveyed for but none was found.
Hoary alyssum	Blackfoot	Point-to-point historic locations plus 30M buffer around these and	No	Yes	Yes, all historic patches were searched and all found was treated, however may have been early, not much was found.
Oxeye daisy		new patches			Yes, historic areas were surveyed and all found was treated.
Meadow hawkweed		Newly detected	Yes	No	One patch found and mapped, needs to be verified and will treat if invasive species.
Spotted knapweed Houndstongue Oxeye daisy St. Johnswort Hoary alyssum	Kleinsch midt	Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Several areas completed, had some problems with historic data display but will continue working on this project next week.
Yellow toadflax Dalmatian		Monitor if incidentally found	Yes	No	No new patches found.

toadflax	and not previously		
	mapped		

#### **Notes:**

Upsata worked and completed this week on June 8<sup>th</sup>. Blackfoot worked by 2 people and the hoary alyssum and oxeye daisy projects were completed on June 9<sup>th</sup>. Kleinschmidt was started by 3 people June 9<sup>th</sup> and then a 5 person crew worked this site on June 10 and 11. We will return to this site on Monday June 15<sup>th</sup>.

#### **Concerns with Project:**

There was heavy rain during the night of June 9<sup>th</sup>. Wet and foggy conditions on June 10<sup>th</sup> resulted in delays to start up the morning of June 10<sup>th</sup>. The team completed administrative tasks in the early morning before heading out.

Station or Site Manager (or	
Acting):	_Date:

#### Appendix B

#### Strike Team Expectation and Accomplishment Checklist

#### **Arrival Interview**

Station: Kleinschmidt & Blackfoot WPA Date of Visit: 06/15/15-06/18/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Spotted knapweed Houndstongue Oxeye daisy Hoary alyssum St. Johnswort	Kleinschmidt	Point-to-point historic locations plus 30M buffer around these and new patches	No	Spray and map	Chaparral – ISST
Yellow toadflax  Dalmatian toadflax		Monitor if incidentally found and not previously mapped	Yes	No	N/A
Spotted knapweed  Common tansy & Sulfur cinquefoil (if time is available)	Blackfoot	Point-to-point historic locations plus 30M buffer around these and new patches	No	Spray & map	Chaparral-IS ST; Will switch to Milestone if exclusively spraying spotted knapweed

#### **Notes:**

Continue working point-to-point at Kleinschmidt until complete and then will move to Blackfoot to treat spotted knapweed in the following priorities areas: 1) along the perimeter, 2) west side near Brown's Lake ("peninsula"), 3) isolated patches.

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc: N	one.	
Station or Site Manager (or		
Acting):	Date:	
(back has Exit Interview)		

Exit Interview

<u>Exit Interview</u>					Completed
Species	Unit	Section of Unit	Inventory /Monitor	Treat	Completed (yes or no with explanation)
Spotted knapweed Houndstongue Oxeye daisy St. Johnswort		Point-to-poi nt historic locations plus 30M	No	Yes	Yes, all historic areas were surveyed plus the buffer. We had a problem with the units displaying the historic layer so
Hoary alyssum	Kleinschmidt	buffer around these and new patches		163	if there are any patches missed it is because they could not be seen but I believe we did get them all.
Yellow toadflax  Dalmatian toadflax	- -	Monitor if incidentally found and not previously mapped	Yes	No	No new patches were found.
Spotted knapweed (and a few houndstongue)					See notes below.
Meadow hawkweed		Point-to-poi nt historic	No	Yes	Yes, photographed and treated patch. Several flowering and many rosettes.
Common tansy	Blackfoot	locations plus 30M buffer around these and new patches	No	Yes	Surveyed historic locations that were near the new patch of meadow hawkweed in the far northeast corner of North 80. No tansy plants were found.

**Notes:** Kleinschmidt worked on June 15<sup>th</sup> using 5 person crew and then was finished by 2 people on June 16<sup>th</sup>. The road up to the cattle guard at the north end was also done. A crew of 3 people started spraying spotted knapweed on the Blackfoot the morning of June 16 and was later joined

by others once Kleinschmidt was done.

Spotted knapweed – In the east, the majority of the knapweed in the southern area (below the old fence line that goes down the middle, east to west) was completed. A large portion of the northern most area of the east was also completed. The perimeter from the large pond NW, to Brown's Lake Road and then west to the second curve (just past the creek) was completed. Some houndstongue was also found and treated opportunistically.

**Concerns with Project:** We were likely a bit early when first treated oxeye, many more plants were found that were not sprayed. I treated all I could but there is likely more out there. We should plan to treat this species after June 15 in the future if possible.

Station or Site Manager (or	
Acting):	

#### Appendix C

#### Strike Team Expectation and Accomplishment Checklist

Arrival In	iterview

Station: Blackfoot WPA Date of Visit: 09/14/15-09/17/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Leafy spurge		Point-to-point historic	No	Yes	ISST: Plateau 11oz/ac with MSO 2pt/ac
Yellow toadflax		locations plus 30M buffer around these and new patches	No	Yes	ISST: Tordon 2pt/ac & Overdrive 6oz/ac with MSO 1pt/ac
Spotted knapweed	Blackfoot WPA	Continue where left off in spring with priority areas: 1. East area near lake 2. WPA boundary 3. Field west of large pond and south of Hwy	No	Yes	ISST and Refuge: Curtail 64oz/ac with no surfactant.

#### **Notes:**

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc: None.		
Station or Site Manager (or		
Acting):	Date:	
(back has Exit Interview)		

#### Exit Interview

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Completed (yes or no with explanation)
Leafy spurge		Point-to-point			Yes, see notes below.
Yellow toadflax	Blackfoot	historic locations plus 30M buffer around these and new patches	No	Yes	No, see notes below.
Spotted knapweed		North of Hwy, eastern section	Yes	No	No, started for part of the day during rain.

#### **Notes:**

Leafy spurge – We treated all historic areas plus buffers and found some new small patches outside of historic locations. In some known locations, spurge was not found or found to be reduced in density and patch size.

Yellow toadflax – I had one person spraying north of the hotwire fence west of the large pond and one person spraying south of the hot wire. These areas are in progress and not done yet. I also had one person between the two ponds near the access road and they found only a few plants in this area. The area east of the pond (near the east boundary) is in progress. Not much was found in that area but a few patches were sprayed. I worked south of the large pond central pond and east of the southernmost pond and I found a couple of small grazed plants only. This area is also in progress and will be continued when we returned.

We didn't have time to work on spotted knapweed treatment but did begin monitoring the NE area during rainy weather.

**Concerns with Project:** In some areas spurge and toadflax were difficult to detect due to Great Basin wildrye. Also some of the spurge was laying down and the same color as the grass making it harder to see. Yellow toadflax was grazed down south of the large pond. A couple of plants were found in this area but it's possible with the grazing and tall grass plants could have been missed. Rain immediately followed treatment on 9/16/15.

Station or Site Manager (or		
Acting):	Date:	

#### Appendix D

#### **Strike Team Expectation and Accomplishment Checklist**

	•	•
Arrival	Inte	erview

Station:	Blackfoot WPA	I	Date of	Visit:	09/28/15	-9/30/15	5

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Yellow toadflax		Continue, point- to-point historic locations plus 30M buffer around these and new patches	No	Yes	ISST: Tordon 2pt/ac & Overdrive 6oz/ac with MSO 1pt/ac
Spotted knapweed	Blackfoot WPA	Continue where left BNL crew left off in addition to spring priority areas:  1. East area near lake 2. WPA boundary 3. Field west of large pond and south of Hwy 4. Monitor and treat north of highway	No	Yes	ISST and Refuge: Curtail 64oz/ac with no surfactant.

#### **Notes:**

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc: No	one.	
Station or Site Manager (or		
Acting):	Date:	
(back has Exit Interview)		

Exit Interview

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Completed (yes or no with explanation)
Yellow toadflax		Point-to-point historic locations plus 30M buffer around these and new patches			Yes, all areas were surveyed and treated.
Hoary alyssum		Along Browns Lake Road plus 30M buffer around plants found	No	Yes	Yes, hand pulled all plants found. Plants were in various stages, rosette, flowering and senescing.
Spotted knapweed	Blackfoot	North of Hwy, eastern section	Yes	No	No, data from previous treatments were compiled and we treated some areas that had not been covered previously. The entire site could not be completed because there was not enough time given the extent of the infestation onsite.

**Notes:** 

#### **Concerns with Project:**

While we made every effort to detect all yellow toadflax plants within the survey area, it is possible that some were missed. Plants were incredibly small in most areas (some only about 1-2 inches tall) and in the taller surrounding grass, you nearly had to be right on top of them to detect them. Our team went very slowly and used tight transects in an effort to treat all toadflax present.

Station or Site Manager (or	
Acting):	Date:

Date: 06/09/15Time (start/stop): 10am-4 pm Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson A. Crockett A. Kaiser D. Miller
Weather Conditions: Wind: 3 MPH, direction fr	-
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal  ☐ Adjuvant Used: Syl-tac 4oz/ac
Equipment Used: ATV GPA 28	indgun Broadcast Mechanical
	amt. of Chemical Applied: 0.09 Acres Treated: 0.04
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other: Black Henbane
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Senes	e-Flowering Flowering Post-Flowering nesced
Location #1 (Site specific description): Worked browns lake road around curve and near gate area. Also worked historical points near gate between 2 ponds (just off highway) and some points in the SE corner Location #2 (Site specific description): North of highway starting at northern most section on the west fence line, worked eastward	COMMENTS:

Date: 06/09/15Time (start/stop): 10am- 4 pm Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson A. Crockett  A. Kaiser D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{3}$ MPH, direction fr	_ · · ·	
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v	
Backpack GPA	Indgun Broadcast  Mechanical	
Vegetation Treated: 2.5oz/ac Gallons Sprayed: 2.5 gal	<b>Amt. of Chemical Applied:</b> <u>0.15</u> <b>Acres Treated:</b> <u>0.06</u>	
Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Senes	e-Flowering Flowering Post-Flowering nesced	
Location #1 (Site specific description): NE corner of northern most block, mostly north of access road  Location #2 (Site specific description):	COMMENTS:  Most of the oxeye was pre-flowering, some had flowers already. Some areas not accessible by atv due to downed logs	

Date: 06/16/15 Time (start/stop): 9am – 3pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $\underline{1}$ MPH, direction fr	•
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac .1%v/v
Backpack GPA	ndgun Broadcast  Mechanical
	mt. of Chemical Applied: 0.1 Acres Treated: 0.04
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre □Senescing □Sen	e-Flowering Post-Flowering Post-Flowering
Location #1 (Site specific description): Blackfoot northern part of peninsula  Location #2 (Site specific description): Along the fence line	COMMENTS: Boom sprayed for a little when broken. Out of chemical at 3pm, fan cord also ripped. Bike repairs for the rest of day.

Date: 06/16/15 Time (start/stop): 9am – 4pm Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson A. Crockett  A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $\underline{1}$ MPH, direction fr	om E Temp.: <u>68</u> °F Humidity: <u>57</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct − Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone − Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone − Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac 4oz/ac
Equipment Used: ATV GPA 24 Ha Backpack GPA Chem. Rate: 2.5oz/ac Gallons Sprayed: 5.75 gal	ndgun Broadcast  Mechanical  Amt. of Chemical Applied: 0.6 Acres Treated: 0.24
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflar Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre □Senescing □Sen	-Flowering     Flowering   Post-Flowering   Post-Flowering
Location #1 (Site specific description): Fence line (inside) west from browns lake road access gate.  Location #2 (Site specific description):	COMMENTS: Spotted knapweed was basal rosette and pre-flowering Hoary alyssum was pre-flowering and flowering

Date: 06/16/15 Time (start/stop): 12:30pm-4pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 4 MPH, direction from	m <u>W</u> Temp.: <u>79</u> °F Humidity: <u>40</u> %
All products are diluted with water. Trade Name-I  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/ac
Equipment Used: ATV GPA 28  Hand Backpack GPA Chem. Rate: 2.5oz/ac Gallons Sprayed: 2 gal Am Vegetation Treated: Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Leafy spurge Common tansy Meadow hawkweed Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-F	Mechanical     Other:     Mechanical     Mechanical     Mechanical     Mechanical     Mechanical     Spotted knapweed     Sulfur cinquefoil     Tall buttercup     Tansy ragwort     Whitetop     Russian knapweed     Yellow toadflax     Russian olive     Yellowflag iris     Saltcedar     Other:
	COMMENTS:

Date: 06/16/15 Time (start/stop): 1:15pm - 4pm Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson A. Crockett A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $\underline{4}$ MPH, direction fr	•
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac .1%v/v
Backpack GPA	Indgun Broadcast  Mechanical  Int. of Chemical Applied: 0.19 Acres Treated: 0.08
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflat         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Pre	Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Location #1 (Site specific description): Along fence parallel to highway, westside before pond. Fence along access road from highway to gate	COMMENTS: Spotted Knapweed – rosette and pre-flower Houndstongue – pre-flower
Location #2 (Site specific description):	

Date: 06/16/15Time (start/stop): 9am – 2pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 1 MPH, direction fr	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller  Tom E/NE Temp: 68 °E Humidity: 57 %
	ž v
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac .1% v/v
Equipment Used: ATV GPA 42 Ha	☐ Mechanical
Vegetation Treated:  Absinthe wormwood Dalmatian toadflar Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweet Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre Senescing Senescing	Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax ed Russian olive Yellowflag iris Saltcedar Other:  -Flowering Flowering Post-Flowering nesced
Location #1 (Site specific description): Westside, southern portion, near lake  Location #2 (Site specific description):	COMMENTS: Slow going because lots of seedlings in sage

Date: 06/17/15Time (start/stop): 8:30am – 3:30 p Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson
<b>Weather Conditions:</b> Wind: $\underline{2}$ MPH, direction fr	<u> </u>
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix
Backpack GPA	ndgun Broadcast  Mechanical  nt. of Chemical Applied: 0.73 Acres Treated: 0.12
Vegetation Treated:  ☐ Absinthe wormwood ☐ Dalmatian toadflate ☐ Baby's breathe ☐ Dame's rocket ☐ Blueweed ☐ Hoary alyssum ☐ Bull thistle ☐ Houndstongue ☐ Canada thistle ☐ Italian bugloss ☐ Cheatgrass ☐ Leafy spurge ☐ Common tansy ☐ Meadow hawkweet ☐ Common teasel ☐ Musk thistle  Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax ed Russian olive Yellowflag iris Saltcedar Other:
Senescing Senescing	nesced
Location #1 (Site specific description): Large polygon on peninsula and west perimeter of peninsula  Location #2 (Site specific description):	COMMENTS: Battery died, switched with bike 3. Cleaned filter of tank, nozzle got clogged.

Date: 06/17/15 Time (start/stop): 8:30am – 4 pm Location: (NWR or WPA) Blackfoot County: Powell	☐ J. Wilson A. Crockett ☐ A. Kaiser ☐ D. Miller
<b>Weather Conditions:</b> Wind: $\underline{2}$ MPH, direction fr	om E Temp.: <u>57</u> °F Humidity: <u>58</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac .1%v/v
Backpack GPA	ndgun Broadcast  Mechanical  Amt. of Chemical Applied: 0.24 Acres Treated: 0.09
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflate         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Presented	Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Senescing Senescing	nesced
Location #1 (Site specific description): Along E boundary fence (along highway) to E access gate  Location #2 (Site specific description):	COMMENTS: Houndstongue – pre-flower and some rosettes Spotted Knapweed – pre-flower

Date: 06/17/15 Time (start/stop): 9am – 4:15 pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 2 MPH, direction from	om <u>E</u> Temp.: <u>57</u> °F Humidity: <u>58</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac 4oz/ac
Equipment Used: ATV GPA 28 Har Backpack GPA  Chem. Rate: 6 oz/ac Gallons Sprayed: 1 gal Am Vegetation Treated:	ndgun Broadcast  Mechanical  nt. of Chemical Applied: 0.21 Acres Treated: 0.04
Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkwee Common teasel Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre- □Senescing □Sen	-Flowering Post-Flowering Pesced
Location #1 (Site specific description): Southwest corner of property along browns lake road  Location #2 (Site specific description):	COMMENTS:

Date: 06/18/15 Time (start/stop): 8am - 11:30 pm Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson  A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 2 MPH, direction fr All products are diluted with water. Trade Name  ☐ Aquaneat – NuFarm #228-365 ☐ Chaparral – Dow #62719-597 ☐ Curtail – Dow AgroSciences #62719-48 ☐ EscortXP – DuPont #352-439 ☐ Habitat – BASF #241-426 ☐ Metcel VMF– Agsurf #352-439-8558 ☐ Milestone – Dow AgroSciences #62719-519 ☐ Plateau – BASF #241-365 ☐ Telar XP – DuPont #352-654 ☐ Tordon & Telar XP ☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6	-
Equipment Used: ATV GPA Handgun Backpack GPA36  Chem. Rate: 2.5 oz/ac Gallons Sprayed: 3.25 gal  Vegetation Treated: Absinthe wormwood Dalmatian toadflat Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweet Common teasel Basal Rosette Pre	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Location #1 (Site specific description): North 80 acres, east side  Location #2 (Site specific description):	COMMENTS:  New patch of hawkweed verified and treated. Several patches of oxeye were found and treated. Areas found sprayed previously were not re-treated.

Date: 06/18/15Time (start/stop): 8am – 11:30 pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 2 MPH, direction from	om <u>E</u> Temp.: <u>64</u> °F Humidity: <u>58</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v
	<u> </u>
Backpack GPA  Chem. Rate: 6 oz/ac Gallons Sprayed: 6 gal Am	Mechanical  t. of Chemical Applied: 1.3 Acres Treated: 0.21
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	□ Orange hawkweed       □ Spotted knapweed         □ Oxeye daisy       □ Sulfur cinquefoil         □ Perennial pepperweed       □ Tall buttercup         □ Poison hemlock       □ Tansy ragwort         □ Purple loosestrife       □ Whitetop         □ Russian knapweed       □ Yellow toadflax         d □ Russian olive       □ Yellowflag iris         □ Saltcedar       □ Other:
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre- □Senescing □Sen	Flowering Post-Flowering esced
Location #1 (Site specific description): Southwest corner of property bordering browns lake road and the lake  Location #2 (Site specific description):	COMMENTS:

Date: 06/18/15Time (start/stop): 8:30am-11am Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $\underline{2}$ MPH, direction fr	•
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Favirment Used: ATV GPA 74	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v
Equipment Used: ATV GPA 74 Ha  Backpack GPA	ndgun
<u> </u>	nt. of Chemical Applied: 0.57 Acres Treated: 0.09
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflar Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre □ Senescing □ Sen	-Flowering Flowering Post-Flowering nesced
Location #1 (Site specific description): Large polygon of peninsula	COMMENTS: Could have potentially boom sprayed some areas
Location #2 (Site specific description):	

Date: 06/18/15Time (start/stop): 8:30am-11:30a Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson ☐ A. Crockett ☐ A. Kaiser ☐ D. Miller
<b>Weather Conditions:</b> Wind: $\underline{2}$ MPH, direction fr	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac 4 oz/ac
<b>Equipment Used:</b> $\square$ ATV GPA 24 $\square$ Ha	ndgun Broadcast
Backpack GPA	Mechanical
	Amt. of Chemical Applied: 0.1 Acres Treated: 0.04
Vegetation Treated:  Absinthe wormwood Dalmatian toadflated Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweet Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Senes	e-Flowering Flowering Post-Flowering nesced
Location #1 (Site specific description): Northern fence, to the east of the creek, before big hill  Location #2 (Site specific description):	COMMENTS: Spotted was mostly basal rosette with some almost flowering. Houndstongue was flowering. Sprayed and flower heads were removed.

Date: 06/18/15 Time (start/stop): 10:30am-11:30a Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 2 MPH, direction for	com <u>E</u> Temp.: <u>64</u> °F Humidity: <u>58</u> %
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 78	EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v
Backpack GPA	Mechanical
	Amt. of Chemical Applied: 0.038 Acres Treated: 0.006
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Plant Phenology & Stage: Basal Rosette Pressure Senescing Senescing	e-Flowering Post-Flowering Post-Flowering
Location #1 (Site specific description):  N boundary fence, access gate near W side (after creek) worked along N fence and then down W fence a little ways  Location #2 (Site specific description):	COMMENTS: Remixed from chaparral to milestone

Date: 06/18/15Time (start/stop): 8:30am-10am Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 2 MBH direction for	J. Wilson A. Crockett A. Kaiser D. Miller
Weather Conditions: Wind: 2 MPH, direction fr	<u> </u>
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac .1%v/v
Equipment Used: ☐ ATV GPA_ ☐ Handgun ☐ Backpack GPA 28	☐ Broadcast ☐ Mechanical Amt. of Chemical Applied: 0.089 Acres Treated: 0.036
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflate         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkweet         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Preserved	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax ed Russian olive Yellowflag iris Saltcedar Other:
Location #1 (Site specific description): Just outside perimeter of fence along highway in the cow field  Location #2 (Site specific description):	COMMENTS: Ran out of chemical, monitored 2 more infestations that I ran into. Clipped seed heads and sprayed. Bagged seed stalks

Date: 09/14/15Time (start/stop): 12:30 – 4pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 4 MPH, direction from	<u>W</u> Temp.: <u>70</u> °F Humidity: <u>27</u> %
All products are diluted with water. Trade Name-M  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other
Equipment Used: ATV GPA Handg	<u> </u>
Backpack GPA  Chem. Rate: 11 oz/ac Gallons Sprayed: 2 gal Amt	Mechanical of Chemical Applied: 0.92 Acres Treated: 0.08
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweed Musk thistle	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Whitetop Russian knapweed Yellow toadflax Russian olive Yellowflag iris Saltcedar Other:
Plant Phenology & Stage: Basal Rosette Pre-Floring Senescing Senescing	
`	OMMENTS: ome of the plants are red/look dead.

Date: <u>09/14/15</u> Time (start/stop): <u>11:45am - 4pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u>	Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller
<b>Weather Conditions:</b> Wind: $\underline{4}$ MPH, direction fr	om W Temp.: 70°F Humidity: 27%
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v
Equipment Used: ATV GPA 78	ndgun
Chem. Rate: 6 oz/ac Gallons Sprayed: 8 gal An	
Vegetation Treated:  Absinthe wormwood Dalmatian toadflated Baby's breathe Dame's rocket Hoary alyssum Bull thistle Houndstongue Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweet Musk thistle  Plant Phenology & Stage: Basal Rosette Pre Senescing Senescing	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:
Location #1 (Site specific description):	COMMENTS:
Near highway, NE part of wpa by big pond  Location #2 (Site specific description):	Mostly post-flowering, some rosette.  Spraying out tank of extra milestone  Sprayed on historic point that is now actually a large polygon.

Date: 09/14/15Time (start/stop): 1:30pm – 2:30pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator: J. Zarate J. Wilson A. Crockett A. Kaiser D. Miller
Weather Conditions: Wind: 4 MPH, direction from	om W Temp.: <u>70</u> °F Humidity: <u>27</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 42 Har	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other
Backpack GPA	Mechanical
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
` 1 '	COMMENTS: Plants were starting to turn reddish/orange in some areas

Date: <u>09/14/15</u> Time (start/stop): <u>2 pm - 2:30pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u> Weather Conditions: Wind: <u>4</u> MPH, direction from	J. Wilson A. Crockett A. Kaiser D. Miller
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	•
Equipment Used: ATV GPA_ Handgun Backpack GPA Chem. Rate: 11oz/ac Gallons Sprayed: 1 gal Ar Vegetation Treated: Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkwee Common teasel Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Senescing Senescing Senescing Senescing Senescing Senescing Location #1 (Site specific description):  Near browns lake road entrance  Location #2 (Site specific description):	COMMENTS: Pulled a few plants found near access gate

Date: 09/15/15 Time (start/stop): 10am – 4 pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: $8$ MPH, direction from	m <u>W</u> Temp.: <u>53</u> °F Humidity: <u>70</u> %
All products are diluted with water. Trade Name- Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28 Hand	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac
☐ Backpack GPA [	Mechanical <u>h</u>
Chem. Rate: <u>11oz/ac</u> Gallons Sprayed: <u>15 gal</u> An	nt. of Chemical Applied: <u>5.9</u> Acres Treated: <u>0.53</u>
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweed Musk thistle	□ Orange hawkweed       □ Spotted knapweed         □ Oxeye daisy       □ Sulfur cinquefoil         □ Perennial pepperweed       □ Tall buttercup         □ Poison hemlock       □ Tansy ragwort         □ Purple loosestrife       □ Whitetop         □ Russian knapweed       □ Yellow toadflax         □ Russian olive       □ Yellowflag iris         □ Saltcedar       □ Other:
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-F☐ ☐ Senescing ☐ S	
Location #1 (Site specific description): Historical polygon/points in central section of property  Location #2 (Site specific description):	COMMENTS:

Date: 09/15/15 Time (start/stop): 9am – 4pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 8 MPH, direction fr	Applicators/Operator:  J. Wilson A. Crockett A. Kaiser D. Miller  om W. Temp: 53 °F. Humidity: 70 %
	•
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac
Equipment Used: $\boxtimes$ ATV GPA 42 $\boxtimes$ Ha	ndgun
☐ Backpack GPA	☐ Mechanical
Chem. Rate: 11oz/ac Gallons Sprayed: 9 gal Ar	nt. of Chemical Applied: 2.36 Acres Treated: 0.21
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:
Plant Phenology & Stage: ⊠Basal Rosette □Pre □Senescing □Ser	-Flowering
Location #1 (Site specific description): Near pond in fenced off pasture where our staging area was  Location #2 (Site specific description):	COMMENTS: Most all plants were in post-flowering stage. Found one large spot of spurge that wasn't near any historical points

Date: 09/15/15Time (start/stop): 10am – 4pm  Location: (NWR or WPA) Blackfoot  County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $8$ MPH, direction fro	-
All products are diluted with water. Trade Name- Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac
Equipment Used: $\boxtimes$ ATV GPA 31 $\boxtimes$ Hand	<u> </u>
Backpack GPA	Mechanical
Chem. Rate: 11oz/ac Gallons Sprayed: 11 gal An	nt. of Chemical Applied: 3.9 Acres Treated: 0.35
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax Russian olive Yellowflag iris Saltcedar Other:
	Flowering  Post-Flowering  Second
E edge of NW field on W side of road	COMMENTS:  Most of plants were basal rosettes, only saw a handful that were post-flowering, most plants are small and turning red

Date: 09/15/15 Time (start/stop): 8:30am-2:00pm Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 8 MPH, direction fr	J. Wilson
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	
Equipment Used: ATV GPA 24	Mechanical   Spotted knapweed   Sulfur cinquefoil   Perennial pepperweed   Tall buttercup   Poison hemlock   Tansy ragwort   Purple loosestrife   Whitetop   Mechanical   Me
Location #1 (Site specific description): Central area between the two ponds  Location #2 (Site specific description):	COMMENTS:  Most plants were in great basin wildrye or small and lying down. Hard to detect

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 91515 Time (start/stop): 9:00  Location: (NWR or WPA) Blackfoot WPA  County: Powell  Weather Conditions: Wind: 4.6 MPH, direction from	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 19 °F Humidity: %
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF – Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other Tordon & 22 or /ac  Overdative @ Goz/ac  Dye Used/Rate: History  Adjuvant Used: MSO @ 1pt /ac
Tordon 22K – Dow AgroSciences #62719-6	
Equipment Used: ATV GPA 13 Handgun Backpack GPA	Mechanical   Mechanical   Acres Treated:     Acres Treated:   Ac
Location #1 (Site specific description): COM	MENTS:
Started working point to point in ISST South Side of they for yellow teadflay, plan once we met Anna and Abra, we moved to North side of they and with treated all species from parking area	found ~ 7 small leafy spurge its under a pine tree near grovel pit. It was sprayed by GIM Plateau and mapped.
toward gravel pit.	
mucio giavei pit.	

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Licenses Used: Autorean 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Q.00 =	-On
Date: 9-5 Time (start/stop): 9.00 - 5. Location: (NWR or WPA) Blockfoot	Applicators/Operator: L. Morgan
County: Power	G. McClure K. Schuetz B. Sparklin
Weather Conditions: Wind:MPH, direction from	
All products are diluted with water. Trade Name-Ma	
<ul> <li>Aquaneat – NuFarm #228-365</li> <li>Chaparral – Dow #62719-597</li> <li>Curtail – Dow AgroSciences #62719-48</li> <li>EscortXP – DuPont #352-439</li> <li>Habitat – BASF #241-426</li> <li>Metcel VMF – Agsurf #352-439-8558</li> <li>Milestone – Dow AgroSciences #62719-519</li> <li>Plateau – BASF #241-365</li> </ul>	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other
Telar XP – DuPont #352-654 Tordon & Telar XP	Dye Used/Rate: Hillo
Transline – Dow AgroSciences #62719-259	Adjuvant Used: ASO @ /pint for c
Tordon 22K – Dow AgroSciences #62719-6	t .
Equipment Used: ATV GPA Handgu	n Broadcast
App. Rate:     67 / Gallons Sprayed:   Amt. of	Chemical Applied: 0.13 Acres Treated:
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweed Musk thistle	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Whitetop Russian knapweed Yellow toadflax Russian olive Yellowflag iris Saltcedar Other
Plant Phenology & Stage: Basal Rosette Pre-Flow Senescing Senesce	
	MMENTS:  ad 10  d 9

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 9-15-15 Time (start/stop): 950-3.00  Location: (NWR or WPA) Rlack Sept WPA	Applicators/Operator: L. Morgan G. McClure K. Schuetz
Weather Conditions: Wind: WPH, direction from	B. Sparklin  Sorth Temp.: 49 °F Humidity: 7/ %
All products are diluted with water. Trade Name-Man  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Ufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☑ Other ☐ Tordon @ 32021 Mc ☑ Dye Used/Rate: ☐ Dig Lt ☐ Adjuvant Used: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Equipment Used: ATV GPA 3.0 Handgun    Backpack GPA   Amt. of Counds	Mechanical   Acres Treated:   Acres Tr
Location #1 (Site specific description):  Point to point historical YT  Sites then NW Corner  For all other species and YT  To	MENTS:  text 9g  d 7g  feel 2g

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 9-15 Time (start/stop): 900 - 300 _ 5 _ 5 _ 5 _ 5 _ 5 _ 5 _ 5 _ 5 _ 5 _	G. McClure K. Schuetz B. Sparklin
All products are diluted with water. Trade Name-Man  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☑ Dye Used/Rate: # 1, 1, 1, 1, 0  X Adjuvant Used:
Equipment Used: ATV GPA/OS	☐ Mechanical   Chemical Applied: Acres Treated:   ☐ Orange hawkweed Spotted knapweed   ☐ Oxeye daisy Sulfur cinquefoil   ☐ Perennial pepperweed Tall buttercup   ☐ Poison hemlock Tansy ragwort   ☐ Purple loosestrife Whitetop   ☐ Russian knapweed Yellow toadflax   ☐ Russian olive Yellowflag iris   ☐ Saltcedar Other
	IMENTS:

Date: <u>09/16/15</u> Time (start/stop): <u>8:00am-2:00pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
• ———	
Weather Conditions: Wind: 0 MPH, direction fr  All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP	· · ·
☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ☐ ATV GPA 28 ☐ Ha ☐ Backpack GPA  Chem. Rate: <u>T:32oz/ac</u> , <u>D:6oz/ac</u> Gallons Spraye Treated: <u>0.03</u>	ndgun
Vegetation Treated:       □       Dalmatian toadflast         □       Baby's breathe       □       Dame's rocket         □       Blueweed       □       Hoary alyssum         □       Bull thistle       □       Houndstongue         □       Canada thistle       □       Italian bugloss         □       Cheatgrass       □       Leafy spurge         □       Common tansy       □       Meadow hawkwee         □       Common teasel       □       Musk thistle    Plant Phenology & Stage: □ □ Basal Rosette □ Pre	Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax ed Russian olive Yellowflag iris Saltcedar Other:  -Flowering Flowering Post-Flowering
Senescing Sen	nesced
Location #1 (Site specific description): SE corner of property near the river  Location #2 (Site specific description):	COMMENTS:

Date: <u>09/16/15</u> Time (start/stop): <u>8:00am-2:00pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u>	J. Wilson A. Crockett A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: <u>0</u> MPH, direction from	·
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28 Backpack GPA Chem. Rate: 11oz/ac Gallons Sprayed:10 gal Am	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac  mdgun ☐ Broadcast ☐ Mechanical
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflax         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Pre-	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Tansy ragwort Whitetop Russian knapweed Yellow toadflax Russian olive Saltcedar Other:
Location #1 (Site specific description):	COMMENTS:
Central portion of property to the west of the pond	
Location #2 (Site specific description):	

Date: 09/16/15 Time (start/stop): 8:00am-2:00pm Location: (NWR or WPA) Blackfoot County: Powell	☐ J. Wilson ☐ A. Crockett ☐ A. Kaiser ☐ D. Miller
<b>Weather Conditions:</b> Wind: $\underline{0}$ MPH, direction fr	om _ Temp.: <u>49</u> °F Humidity: <u>70</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac
Equipment Used: ATV GPA 31	<u> </u>
Backpack GPA	Mechanical
	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax
Location #1 (Site specific description): W spur of property near browns lake  Location #2 (Site specific description): N and W of NW pond	COMMENTS: Spurge – rosette, flowering, post-flowering Yellow Toadflax – rosette, flowering and post-flowering

Date: 09/16/15 Time (start/stop): 11am -1pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 0 MPH, direction fr	•
Backpack GPA	□ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 □ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 □ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 □ Other □ Other □ Dye Used/Rate: Highlight 3oz/10g □ Adjuvant Used: MSO 32 oz/ac  mdgun □ Broadcast □ Mechanical
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflate         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Pre	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Location #1 (Site specific description): South of large pond below fence and east of southern most pond  Location #2 (Site specific description):	COMMENTS: 2 points treated, plants were grazed heavily

Date: <u>09/16/15</u> Time (start/stop): <u>10 am - 4 pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u>	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $\underline{0}$ MPH, direction from $\underline{0}$	
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac
	andgun Broadcast
Backpack GPA  Chem. Rate: 11oz/ac Gallons Sprayed:4 gal Am	Mechanical  t. of Chemical Applied: 1.02 Acres Treated: 0.09
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflated to adflated to adflated to adflated to adflated to adflate to adflated to adflate to addlate to	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Whitetop Russian knapweed Yellow toadflax ed Russian olive Saltcedar Other:
	nesced
Location #1 (Site specific description): NE corner, points just NE of largest polygon (N of pond)  Location #2 (Site specific description):	COMMENTS: Also saw houndstongue, spotted knapweed, yellow toadflax, and mullen

Date: 09/16/15Time (start/stop): 8 am - 1 pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:  J. Zarate J. Wilson A. Crockett A. Kaiser D. Miller
Weather Conditions: Wind: <u>0</u> MPH, direction from	om _ Temp.: <u>49</u> °F Humidity: <u>70</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10g ☐ Adjuvant Used: MSO 32 oz/ac
Equipment Used: ATV GPA 78 Har	<u> </u>
Backpack GPA Chem Rate: 1107/ac Gallons Sprayed: 7 gal Amt	Mechanical  of Chemical Applied: 0.99 Acres Treated: 0.09
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax
Plant Phenology & Stage: ⊠Basal Rosette □Pre- □Senescing □Sen	-Flowering  Post-Flowering  lesced
Location #1 (Site specific description): Finished area by pond in first pasture (leafy spurge)  Location #2 (Site specific description): Worked corridor between 2 ponds by highway (Yellow toadflax)	COMMENTS: YT was basal rosette, only sprayed 2 small patches

Date: <u>09/17/15</u> Time (start/stop): <u>9:45am - 1 pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u>	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 1 MPH, direction fr	om <u>E</u> Temp.: <u>38</u> °F Humidity: <u>83</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	P-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: ☐ Adjuvant Used:
Equipment Used: ATV GPA Handgun Backpack GPA Chem. Rate:Gallons Sprayed:Amt. of Chegetation Treated: Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweet Musk thistle	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax
Plant Phenology & Stage: ⊠Basal Rosette ⊡Pre ⊠Senescing ☐Ser	-Flowering  Post-Flowering  I Post-Flowering  I Post-Flowering
Location #1 (Site specific description): SE corner of property near river  Location #2 (Site specific description):	COMMENTS:

Date: <u>09/17/15</u> Time (start/stop): <u>9:45am - 1 pm</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u> Weather Conditions: Wind: <u>1</u> MPH, direction fr	J. Wilson A. Crockett A. Kaiser D. Miller
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: MSO 16 oz/ac
Backpack GPA	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Senes	-Flowering Post-Flowering nesced
Location #1 (Site specific description): SE corner of property near river and historical polygon near wpa entrance  Location #2 (Site specific description):	COMMENTS:

Date: 09/17/15Time (start/stop): 10 am - 1 pm Location: (NWR or WPA) Blackfoot County: Powell	☐ J. Wilson ☐ A. Crockett ☐ A. Kaiser ☐ D. Miller
Weather Conditions: Wind: 1 MPH, direction fr	•
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: MSO 32 oz/ac
Backpack GPA	ndgun
Vegetation Treated:  Absinthe wormwood	Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax ed Russian olive Yellowflag iris Saltcedar Other:  -Flowering Flowering Post-Flowering nesced
Location #1 (Site specific description): Middle of field to the W of N pond  Location #2 (Site specific description):	COMMENTS: Spurge was turning red, most basal rosette Toadflax plants were really small, mostly rosettes, some post flowering

Date: <u>09/17/15</u> Time (start/stop): <u>10 am - 1:30 pr</u> Location: (NWR or <u>WPA</u> ) <u>Blackfoot</u> County: <u>Powell</u>	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
<b>Weather Conditions:</b> Wind: $\underline{1}$ MPH, direction fr	rom <u>E</u> Temp.: <u>38</u> °F Humidity: <u>83</u> %
All products are diluted with water. Trade Nam Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal  ☐ Adjuvant Used: MSO 16 oz/ac
Backpack GPA	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Senes	e-Flowering  Post-Flowering  nesced
Location #1 (Site specific description): Along middle fence, border of points/polygons "priority field"	COMMENTS: Very small plants, toadflax. Few missed spurge plants were treated
Location #2 (Site specific description): East of North section split by fence, towards and up to parking area	

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Date: 973 Time (start/stop): 900 30 Location: (NWR or WPA) Block County: Powel Weather Conditions: Wind: MPH, direction from All products are diluted with water. Trade Name-Ma	B. Sparklin  Temp.: <u>51</u> °F Humidity: <u>79</u> %
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: #1.L.te  Adjuvant Used:
Equipment Used:  ATV GPA	Mechanical   Chemical Applied: O.32   Acres Treated:     Orange hawkweed   Spotted knapweed   Oxeye daisy   Sulfur cinquefoil   Tall buttercup   Tall buttercup   Tansy ragwort   Purple loosestrife   Whitetop   Wellow toadflax   Russian olive   Yellowflag iris   Saltcedar   Other   Other
Senescing Senesci	
	7

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Date: 09-13-15 Time (start/stop): 730-5 Location: (NWR or WPA) Backfast With County: fowell  Weather Conditions: Wind: MPH, direction for the MI products are diluted with water. Trade Name- Aquaneat - NuFarm #228-365 Chaparral - Dow #62719-597 Curtail - Dow AgroSciences #62719-48 EscortXP - DuPont #352-439 Habitat - BASF #241-426 Metcel VMF- Agsurf #352-439-8558	B. Sparklin  Temp.: 5/ °F Humidity: 79 %
Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Other  Dye Used/Rate:  Adjuvant Used:  Sylvant
App. Rate: Port Gallons Sprayed:	☐ Mechanical
Senescing Sene	
Spayed South Parking lot	Steat 1/2 Told 1/9

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Date: 19-2-15 Time (start/stop): 7.30-3005  Location: (NWR or WPA) Block Sect With  County: 00001  Weather Conditions: Wind: AMPH, direction from	
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	facturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:  Adjuvant Used:
Equipment Used: ATV GPA  Handgun  Backpack GPA  App. Rate: Gallons Sprayed: Amt. of Cl Vegetation Treated:  Absinthe wormwood Dalmatian toadflax  Baby's breathe Dame's rocket  Blueweed Hoary alyssum  Bull thistle Houndstongue  Canada thistle Italian bugloss  Cheatgrass Leafy spurge  Common tansy Meadow hawkweed  Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-Flower  Senescing Senesced	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other
Location #1 (Site specific description):  Treated partials of  stat  preparty along fence from Add  Add  Add  Add  Add  Add  Add  Add	MENTS:  - /0g - /0

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Date: 1/23 15 Time (start/stop): 130 - 97  Location: (NWR or WPA) Blackfoot WPA  County: Weather Conditions: Wind: MPH, direction	Applicators/Operator: \( \times \) L. Morgan \( \times \) G. McClure \( \times \) K. Schuetz \( \times \) B. Sparklin \( \text{from} \) Temp.: \( \frac{51}{0} \) F Humidity: \( \text{79} \) %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6		
Equipment Used: ATV GPA Har Backpack GPA No. Rate: Gallons Sprayed: 5 Am Vegetation Treated: Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Musk thistle	Mechanical   Spotted knapweed   Sulfur cinquefoil   Perennial pepperweed   Tall buttercup   Poison hemlock   Tansy ragwort   Purple loosestrife   Whitetop   Russian knapweed   Yellow toadflax	
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced		
Location #1 (Site specific description): Sprayed hourdstongue in SE corner of WPA From top of the bank to Oxbow 3 Rivers edge.	COMMENTS:  3 crow members first surveyed and mapped the area, LM then returned with backpack sprayer and sprayed the insestations.	

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of I w		
Date: 9/23/15 Time (start/stop): 9300 - 3000 Location: (NWR or WPA) Blackfoot WPA	Applicators/Operator: X L. Morgan G. McClure K. Schuetz	
County: Pore!	B. Sparklin	
Weather Conditions: Wind:MPH, direction from _	Temp.: 51 °F Humidity: 79 %	
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259		
Tordon 22K – Dow AgroSciences #62719-6  Equipment Used:   ATV GPA  ☐ Handgun  ☐ Backpack GPA  App. Rate: 101 ac Gallons Sprayed: 73 Amt. of C	Broadcast  Mechanical  Mechanical	
Vegetation Treated: Gallons Sprayed: 73 Amt. of C	hemical Applied: 31, 34 Acres Treated:	
Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Italian bugloss Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Other Other	
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced		
Location #1 (Site specific description):  Boom sprayed Spotted knapweed on the North side of the Hwy.  Started at parking area and worked west to county road, sprayed from road to WPA fence all the way to the WPA entrance gate.  Sprayed to passes of interior of WPA	9 9 28 9 49 D 68 8 73	

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Date: 9-73 Time (start/stop):	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 51 °F Humidity: 79 %
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: ####################################
App. Rate:  Backpack GPA  Gallons Sprayed:  Dalmatian toadflax  Baby's breathe  Blueweed  Hoary alyssum  Bull thistle  Canada thistle  Cheatgrass  Cheatgrass  Common tansy  Common teasel  ATV GPA  Dalmatian toadflax  Hoary alyssum  Houndstongue  Italian bugloss  Cheatgrass  Leafy spurge  Meadow hawkweed  Musk thistle  Plant Phenology & Stage:  Basal Rosette  Pre-Flower	Mechanical   Mechanical   Memical Applied:   Memical Applied:   Acres Treated:   Spotted knapweed   Oxeye daisy   Sulfur cinquefoil   Tall buttercup   Perennial pepperweed   Tansy ragwort   Purple loosestrife   Whitetop   Russian knapweed   Yellow toadflax   Russian olive   Yellowflag iris   Saltcedar   Other   Other
Senescing Senesced  Location #1 (Site specific description):  COM  Star  20  20  20  20  20  20  20  20  20  2	MENTS:  Frol   T

Date: 09/28/15 Time (start/stop): 2 pm - 4 pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 1 MPH, direction from	Applicators/Operator:  J. Wilson A. Crockett A. Kaiser D. Miller  om_ NW_Temp: 75 °F_ Humidity: 22 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	
Equipment Used:	Mechanical  Amt. of Chemical Applied: T:2.2 D:0.43 Acres  Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  d Russian olive  Saltcedar  Other:
	resced
Location #1 (Site specific description): NE gate/parking area, just SE of parking area  Location #2 (Site specific description): Central/SW of parking area before middle fence	COMMENTS: Very small plants, tight transect lines . Poor visibility

Date: 09/28/15Time (start/stop): 2 pm - 4 pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 1 MPH, direction fr All products are diluted with water. Trade Name	
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	<ul> <li>☑ Tordon &amp; Distinct – Tank Mix</li> <li>Dow AgroSciences #62719-6 / BASF #7969-150</li> <li>☐ Metcel &amp; Milestone – Tank Mix</li> <li>Agsurf #352-439-8558 / Dow AgroSciences #62719-519</li> <li>☐ Escort XP &amp; Milestone – Tank Mix</li> <li>DuPont #352-439 / Dow AgroSciences #62719-519</li> <li>☐ Other</li> <li>☑ Dye Used/Rate: Highlight 3oz/10gal</li> <li>☑ Adjuvant Used: MSO 16 oz/ac</li> </ul>
Backpack GPA  Chem. Rate: T:32oz/ac D:6 Gallons Sprayed: 2 g  Treated: 0.01  Vegetation Treated:  Absinthe wormwood	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Whitetop  Yellow toadflax  Yellowflag iris  Other:
Location #1 (Site specific description): Along fence, E side into field below electric fence, middle of refuge  Location #2 (Site specific description):	COMMENTS: Both spurge and toadflax were leaf-on

Date: 09/28/15 Time (start/stop): 1:30 pm – 4 pm Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 1 MPH, direction from	J. Wilson
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 24	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: MSO 32 oz/ac
Backpack GPA	Mechanical  Mechanical Applied: 2.75 Acres Treated: 0.25
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Chemical Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax
	nesced
Location #1 (Site specific description): SE area, south of central pond east of large southernmost pond  Location #2 (Site specific description):	COMMENTS: Very small plants found 1in1.5 tall patches

Date: 09/29/15Time (start/stop): 9 am -4 pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{0}$ MPH, direction fr	om Temp.: <u>75</u> °F Humidity: <u>23</u> %	
	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: MSO 32 oz/ac   mdgun ☐ Broadcast	
Backpack GPA  Chem Pate: 11 oz/oc Collans Spreyed: 6 col. A	Mechanical  Amt. of Chemical Applied: 2.75 Acres Treated: 0.25	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Cheatgrass Common tansy Common teasel  Vegetation Treated:  Dalmatian toadflay Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): South central area east of large pond  Location #2 (Site specific description): East side of wpa	COMMENTS: Several patches found but they were very small (<1in. tall) and hard to see. Area covered very slowly	

Date: 09/29/15Time (start/stop): 1pm – 4:15 pm Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 0 MPH, direction fr All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP	
Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Adjuvant Used: MSO 16 oz/ac
Backpack GPA  Chem. Rate: T:32oz/ac D:6 Gallons Sprayed: 2 g  Treated: 0.03  Vegetation Treated:  Absinthe wormwood □ Dalmatian toadflate Baby's breathe □ Dame's rocket Blueweed □ Hoary alyssum Bull thistle □ Houndstongue Canada thistle □ Italian bugloss Cheatgrass □ Leafy spurge Common tansy □ Meadow hawkweet Common teasel □ Musk thistle  Plant Phenology & Stage: □ Basal Rosette □ Pre	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Other:
Location #1 (Site specific description): South central area near fence line  Location #2 (Site specific description): South east corner near the river	COMMENTS:

Date: 09/29/15 Time (start/stop): 9 am - 4 pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 0 MPH, direction fr	Applicators/Operator:  J. Wilson A. Crockett \( \sum_ \) A. Kaiser D. Miller  om Temp.: 34 °F Humidity: 60 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	
Treated: 0.06   Vegetation Treated: Dalmatian toadflax   Baby's breathe Dame's rocket   Blueweed Hoary alyssum   Bull thistle Houndstongue   Canada thistle Italian bugloss   Cheatgrass Leafy spurge   Common tansy Meadow hawkwee   Common teasel Musk thistle	Mechanical  Amt. of Chemical Applied: T:2.1 D: 0.4 Acres  Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Russian knapweed  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Senes	-Flowering Post-Flowering Post-Flowering
Location #1 (Site specific description): Along middle fence, E side, S of electric fence to bottom fence  Location #2 (Site specific description): NE corner of property to top of ponds	COMMENTS: Mostly sprayed toadflax, it was leaf-on or senesced Spurge was leaf-on

Date: 09/29/15Time (start/stop): 10 am - 4:15 pm Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 0 MPH, direction fr All products are diluted with water. Trade Name Aquaneat - NuFarm #228-365 Chaparral - Dow #62719-597 Curtail - Dow AgroSciences #62719-48 EscortXP - DuPont #352-439 Habitat - BASF #241-426 Metcel VMF- Agsurf #352-439-8558 Milestone - Dow AgroSciences #62719-519 Plateau - BASF #241-365 Telar XP - DuPont #352-654 Tordon & Telar XP	J. Wilson A. Crockett A. Kaiser D. Miller  Temp.: 34 °F Humidity: 60 %
Backpack GPA  Chem. Rate: T:32oz/ac D:6 Gallons Sprayed: 8 g  Treated: 0.19  Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweel Common teasel Musk thistle	mdgun Broadcast  Mechanical  gal Amt. of Chemical Applied: T:6 D: 1.14 Acres   Orange hawkweed Spotted knapweed  Oxeye daisy Sulfur cinquefoil  Perennial pepperweed Tall buttercup  Poison hemlock Tansy ragwort  Purple loosestrife Whitetop  Russian knapweed Yellow toadflax  ed Russian olive Yellowflag iris  Saltcedar Other:
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre☐ Senescing ☐ Sen	-Flowering Post-Flowering Pesced
Location #1 (Site specific description): Priority area (south of parking area, central wpa)  Location #2 (Site specific description):	COMMENTS: Toadflax was small and red/yellow/green Spent some time calculating for backpack mixtures added to bikes

Date: 09/30/15 Time (start/stop): 9:30 am – 11 am Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 1 MPH, direction for All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654	J. Wilson A. Crockett A. Kaiser D. Miller  Tom SW Temp.: 49°F Humidity: 45%
☐ Tordon & Telar XP ☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6	Adjuvant Used: MSO 16 oz/ac
Backpack GPA  Chem. Rate: T:32oz/ac D:6 Gallons Sprayed: 1 g  Treated: 0.01  Vegetation Treated:  Absinthe wormwood	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:
Location #1 (Site specific description): SE corner near river and highway	COMMENTS:
Location #2 (Site specific description):	

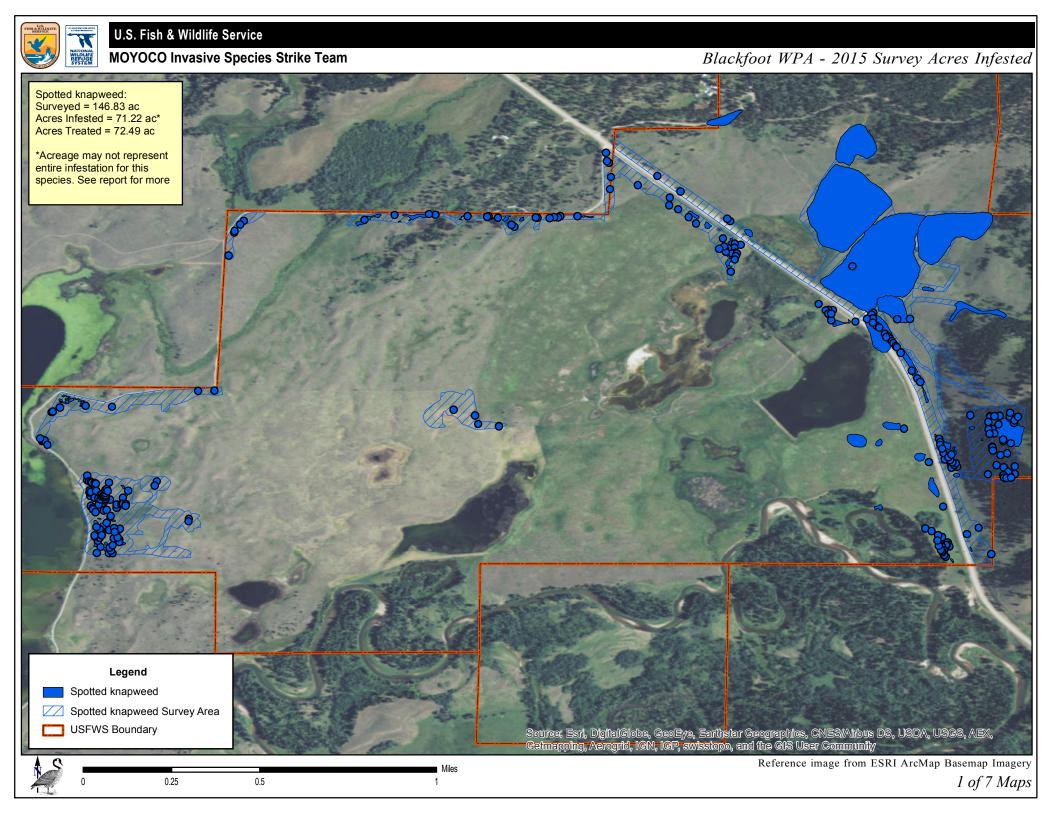
Date: 09/30/15Time (start/stop): 9:45am – 3:30pt Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 1 MPH, direction from the All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF – Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	J. Wilson A. Crockett A. Kaiser D. Miller  om SW Temp.: 49 F Humidity: 45 %	
□ Tordon 22K - Dow AgroSciences #62719-6         Equipment Used: □ ATV GPA 118 □ Handgun □ Broadcast □ Backpack GPA □ Mechanical         Chem. Rate: T:32oz/ac D:6 Gallons Sprayed: 5 gal Amt. of Chemical Applied: T:1.3 D: 0.25 Acres         Treated: 0.04         Vegetation Treated: □ Absinthe wormwood □ Dalmatian toadflax □ Orange hawkweed □ Spotted knapweed □ Baby's breathe □ Dame's rocket □ Oxeye daisy □ Sulfur cinquefoil □ Blueweed □ Hoary alyssum □ Perennial pepperweed □ Tall buttercup □ Bull thistle □ Houndstongue □ Poison hemlock □ Tansy ragwort □ Canada thistle □ Italian bugloss □ Purple loosestrife □ Whitetop □ Cheatgrass □ Leafy spurge □ Russian knapweed □ Yellow toadflax □ Common tansy □ Meadow hawkweed □ Russian olive □ Yellowflag iris □ Common teasel □ Musk thistle □ Saltcedar □ Other:         Plant Phenology & Stage: □ Basal Rosette □ Pre-Flowering □ Flowering □ Post-Flowering □ Senescing □ Senesced		
Location #1 (Site specific description): NE corner above ponds, SW side of road  Location #2 (Site specific description): Center of wpa SE of road	COMMENTS: Location 1 was toadflax, leaf-on or senesced Location 2 was spotted knapweed, basal rosette or senesced	

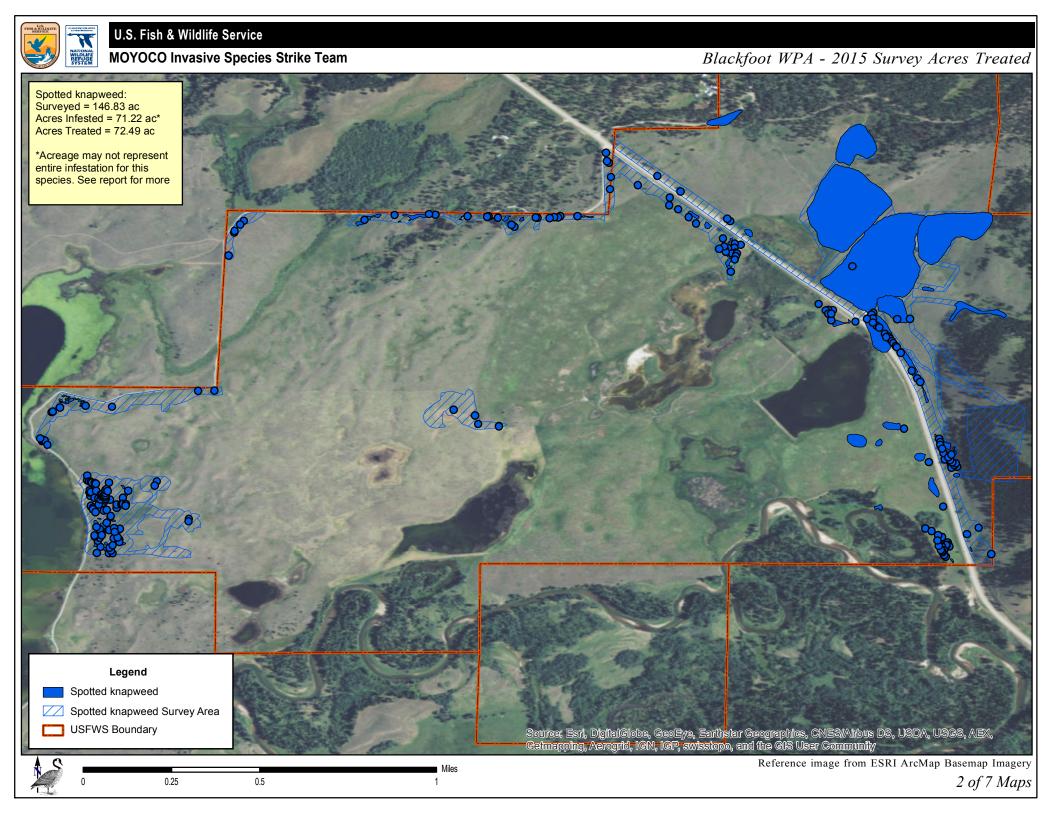
Date: 09/30/15 Time (start/stop): 2 pm - 3 pm Location: (NWR or WPA) Blackfoot County: Powell	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller	
Weather Conditions: Wind: 1 MPH, direction fr	om <u>SW</u> Temp.: <u>49</u> °F Humidity: <u>45</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	<ul> <li>☑ Tordon &amp; Distinct – Tank Mix</li> <li>Dow AgroSciences #62719-6 / BASF #7969-150</li> <li>☐ Metcel &amp; Milestone – Tank Mix</li> <li>Agsurf #352-439-8558 / Dow AgroSciences #62719-519</li> <li>☐ Escort XP &amp; Milestone – Tank Mix</li> <li>DuPont #352-439 / Dow AgroSciences #62719-519</li> <li>☐ Other</li> <li>☑ Dye Used/Rate: Highlight 3oz/10gal</li> <li>☑ Adjuvant Used: MSO 16 oz/ac</li> </ul>	
Equipment Used: ATV GPA 78 Handgun Broadcast Backpack GPA Mechanical  Chem. Rate: T:32oz/ac D:6 Gallons Sprayed: 11 gal Amt. of Chemical Applied: T:4.5 D: 0.84 Acres  Treated: 0.14		
Vegetation Treated:  ☐ Absinthe wormwood ☐ Dalmatian toadflated ☐ Baby's breathe ☐ Dame's rocket ☐ Blueweed ☐ Hoary alyssum ☐ Bull thistle ☐ Houndstongue ☐ Canada thistle ☐ Italian bugloss ☐ Cheatgrass ☐ Leafy spurge ☐ Common tansy ☐ Meadow hawkweed ☐ Musk thistle  Plant Phenology & Stage: ☐ Basal Rosette ☐ Preserved ☐ Preserve	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:	
Location #1 (Site specific description):	COMMENTS:	
SE corner near river and highway	COMMITTIES.	
Location #2 (Site specific description):		

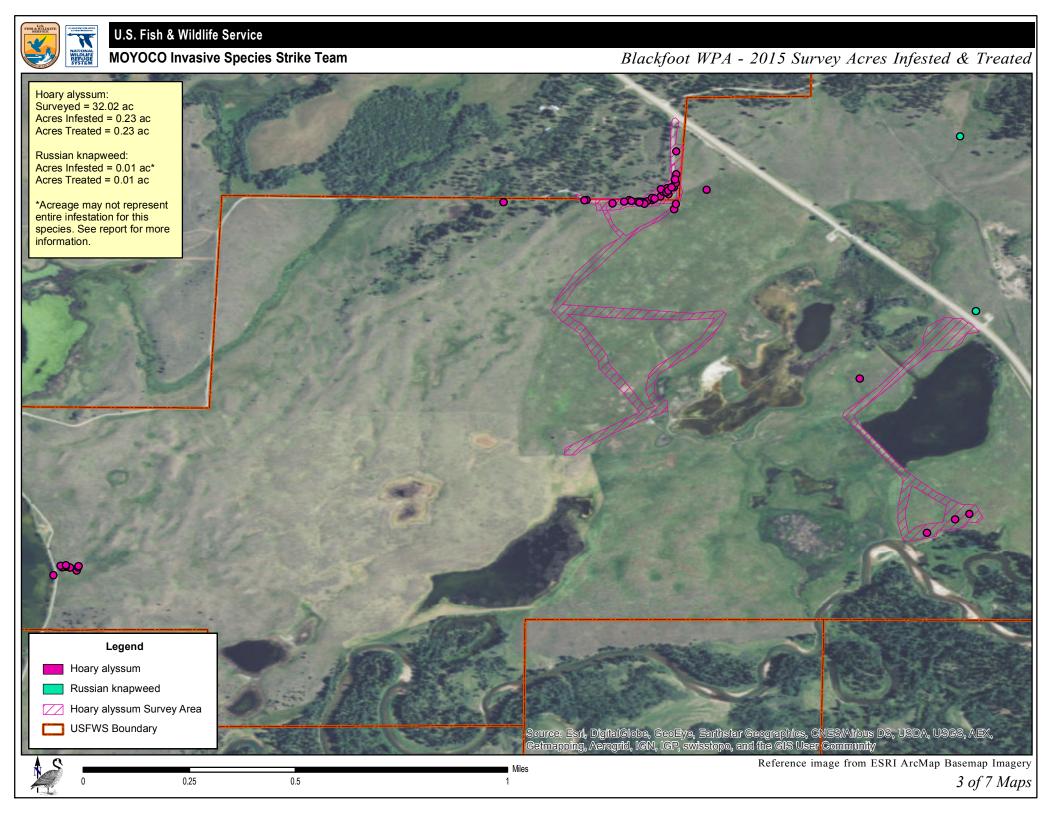
Date: 09/30/15Time (start/stop): 9 am - 3pm Location: (NWR or WPA) Blackfoot County: Powell  Weather Conditions: Wind: 1 MPH, direction fr All products are diluted with water. Trade Name Aquaneat - NuFarm #228-365 Chaparral - Dow #62719-597 Curtail - Dow AgroSciences #62719-48 EscortXP - DuPont #352-439 Habitat - BASF #241-426 Metcel VMF- Agsurf #352-439-8558 Milestone - Dow AgroSciences #62719-519 Plateau - BASF #241-365 Telar XP - DuPont #352-654 Tordon & Telar XP Transline - Dow AgroSciences #62719-259 Tordon 22K - Dow AgroSciences #62719-6	·
Equipment Used: ATV GPA 13	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Other:
Location #1 (Site specific description): Large polygons just south of parking area, north central wpa  Location #2 (Site specific description):	COMMENTS: Small plants, some yellow/red

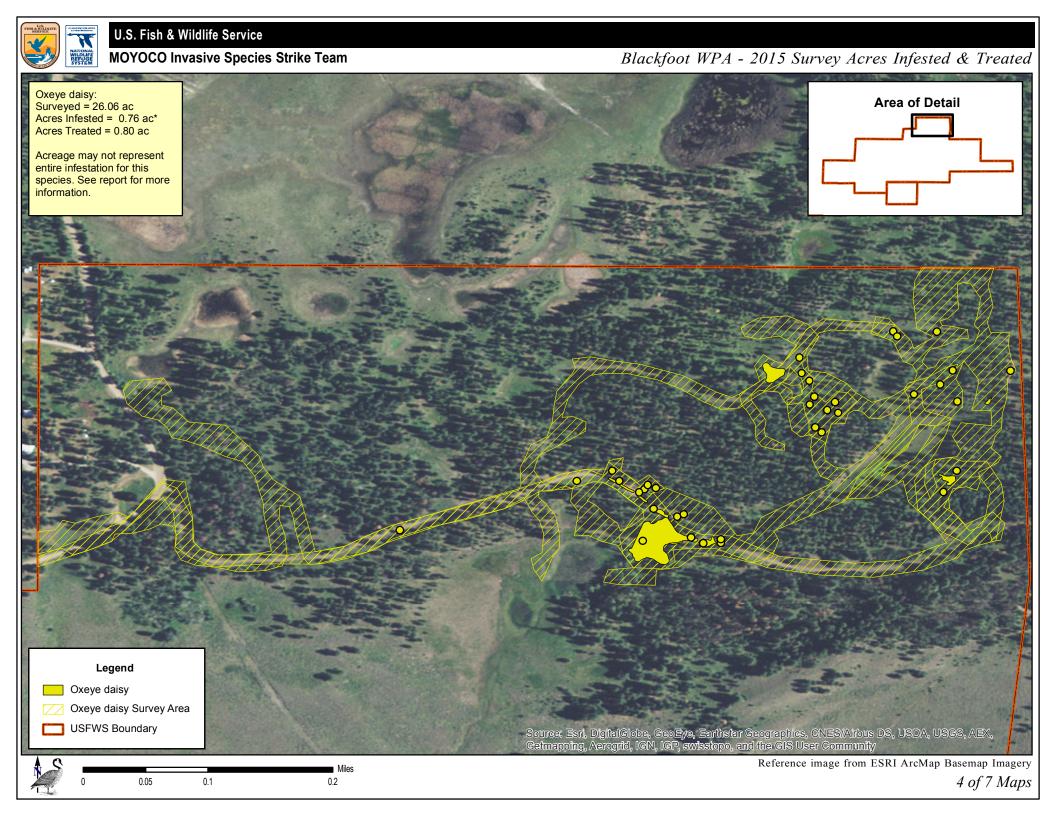
Date: 09/30/15Time (start/stop): 3 pm - 4pm Location: (NWR or WPA) Blackfoot County: Powell Weather Conditions: Wind: 1 MPH, direction fr	Applicators/Operator:  J. Wilson A. Crockett A. Kaiser D. Miller	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used:	
<b>Equipment Used:</b> ATV GPA 13 Ha Backpack GPA	ndgun 🔀 Broadcast	
Chem. Rate: 32 oz/ac Gallons Sprayed: 10 gal	Amt. of Chemical Applied: 24.6 Acres Treated: 0.77	
Vegetation Treated:  Absinthe wormwood Dalmatian toadflar Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkwee	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): Along the fence and in from the gate on the road between the two ponds  Location #2 (Site specific description):	COMMENTS: Lots of dead stalks	

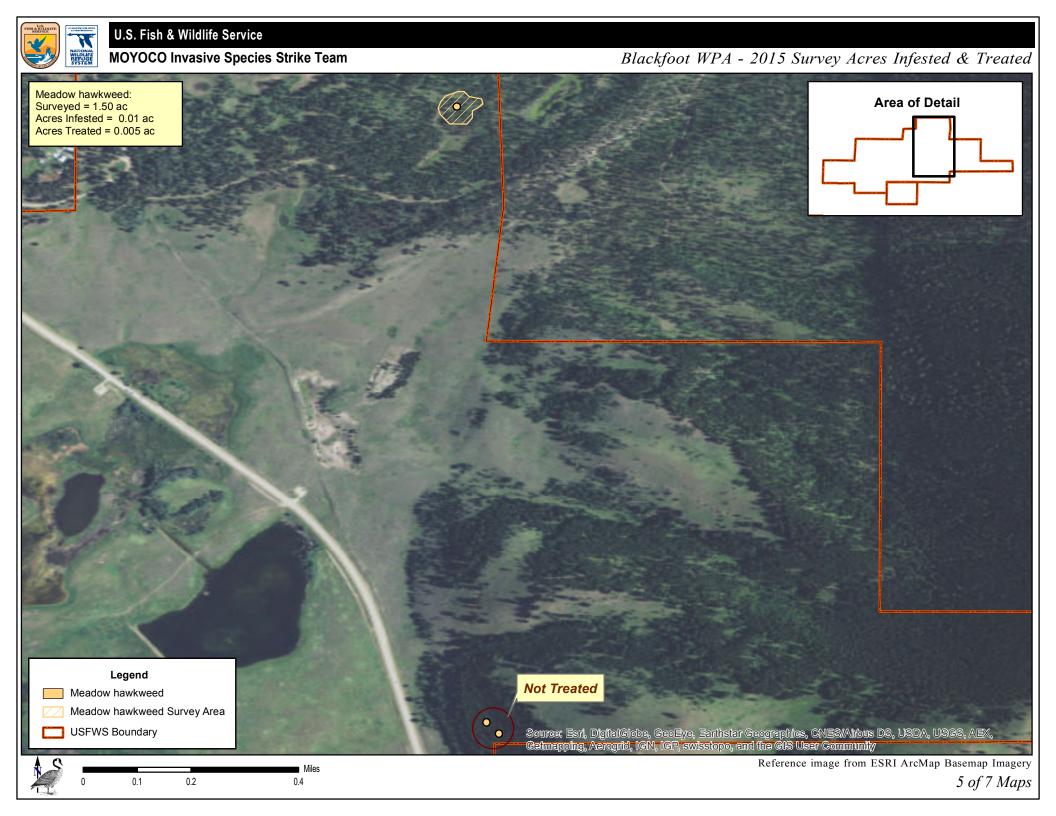
Date: 09/30/15 Time (start/stop): 9:30 am – 11 am Location: (NWR or WPA) Blackfoot County: Powell	J. Wilson  A. Crockett  A. Kaiser D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{1}$ MPH, direction fr	om <u>SW</u> Temp.: <u>49</u> °F Humidity: <u>45</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: ☐ Adjuvant Used:	
Equipment Used: ATV GPA Handgun Broadcast Backpack GPA Mechanical handpull Chem. Rate: Gallons Sprayed: Amt. of Chemical Applied: Acres Treated: 0.25 Vegetation Treated:		
Absinthe wormwood  Baby's breathe  Blueweed  Bull thistle  Canada thistle  Cheatgrass  Common tansy  Common teasel  Dalmatian toadflar  Dame's rocket  Hoary alyssum  Houndstongue  Italian bugloss  Leafy spurge  Meadow hawkweet  Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): Along browns lake road  Location #2 (Site specific description):	COMMENTS: Pulled all plants found including rosettes. Removed about half a contractor bag full	

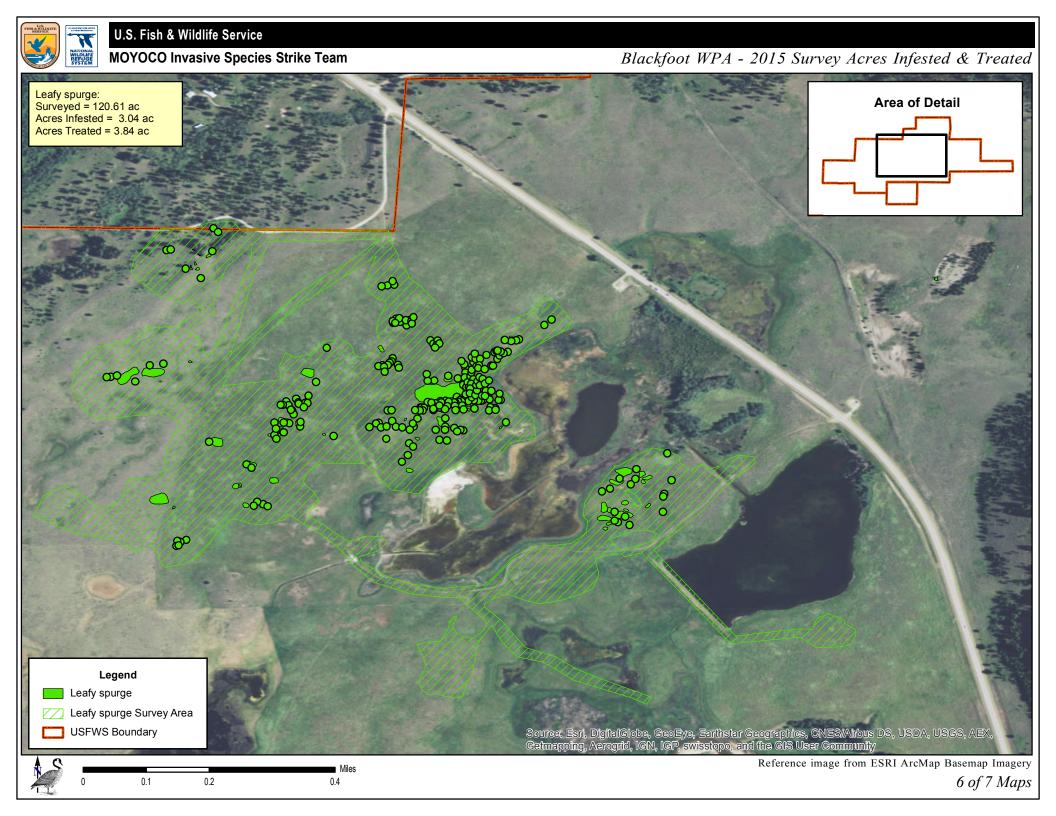


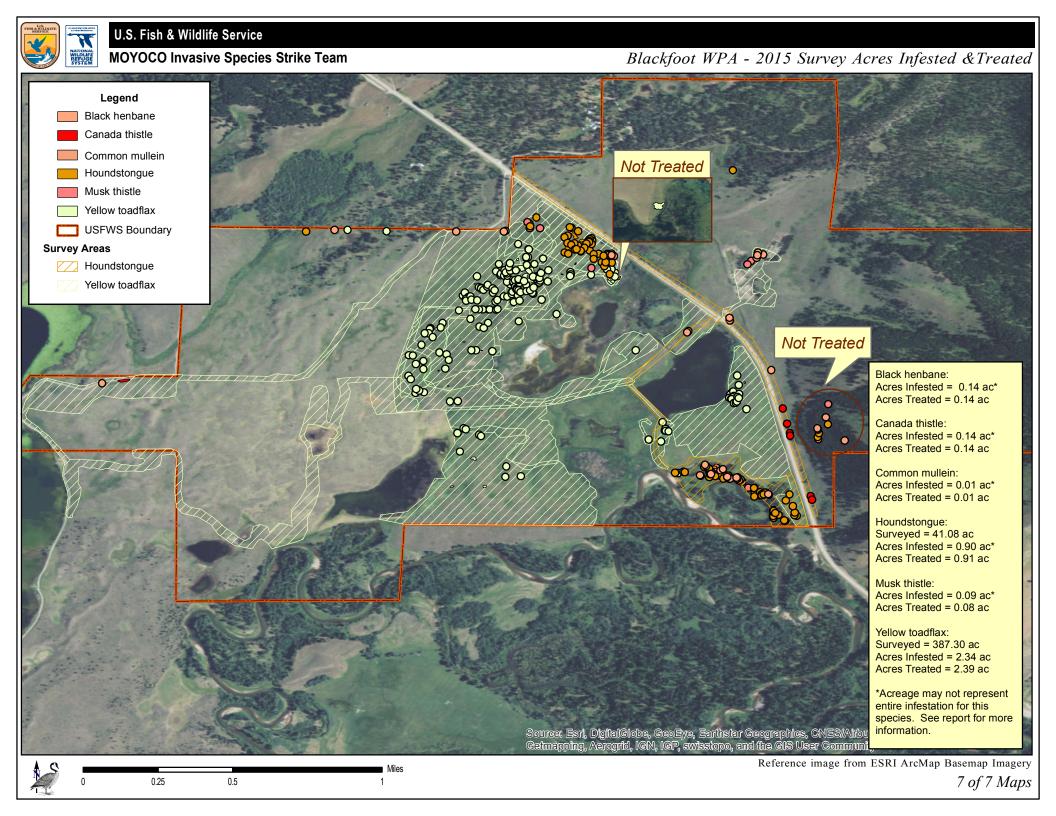












# Benton Lake Wetland Management District

## Furnell WPA

### Benton Lake ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Surveyed Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Spotted knapweed	1337.02	7.34	7.34
<b>Project Site Totals</b>	1337.02	7.34	7.34

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
June 3, 2015	EDRR	Spotted knapweed	3	Surveyed adjacent to known infestations and 100m buffer out from road.
August 31, 2015	EDRR	Spotted knapweed	2	Began surveying the WPA in areas that haven't previously been surveyed for noxious weeds.
September 1-2, 2015	EDRR	Spotted knapweed	2	Point-to-point chemical and mechanical treatment of previously mapped and treated infestations. Expand survey area from August 2014 visit.

### Coordination and Cooperation

- Scheduling and treatment priorities were developed from proposals and discussions with WMD Manager, Jim Lange.
  - O Conducted an arrival and exit interview with Jim Lange concerning spotted knapweed chemical treatments.

### Prevention and Education

- This site requires monitoring for new satellite infestations and species because the road passing through the WPA is a vector.
- > Spotted knapweed was targeted on this site to prevent its further spread to surrounding areas.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

### Early Detection and Rapid Response

- Early detection and rapid response treatment of weeds is critical to keep large tracts of land free of invasive and noxious species that degrade wildlife habitat.
- ➤ In 2014, Jim Lange located the infested area, documented the area on a map, and relayed the information to ISST. ISST deemed the invasion a priority and began surveys and chemical treatments immediately.

### Inventory and Monitoring

- > GPS data were collected by ISST to provide information on patch size and locations of application. The GPS track logs, provided by ISST showing these locations, were used to digitize the survey area and calculates the estimated survey area acres.
- ➤ ISST members searched 1337.02 acres within Furnell WPA for spotted knapweed.

### Management

- ➤ ISST treated 7.34 acres of spotted knapweed over two visits in 2015.
  - O June 3, 2015, ISST visited all historic infestations within the WPA boundary and between the gravel road and WPA fence line.
  - O The areas that were treated in 2014 had little to no regrowth present on 6/3/2015. The historical patches had old dead stalks, but basal plants were sparse if present at all.
  - On August 31, 2015, Two ISST crew members began surveying the Northeast portion of the WPA; no new infestations were found.
  - O September 1-2, 2015 consisted of monitoring June 2015 treatments and surveying the Northwest portion of the WPA; 6/3/2015 treatments appeared to be effective.
  - Other than the historical data at Furnell WPA, only two additional patches of spotted knapweed were located, chemically treated, and GPS mapped. The acreage of the two patches was 5.2 acres and 0.42 acres. Both are located near the road cutting through the East side of the WPA.
- > All ISST activities in the Benton Lakes WMD were conducted point-to-point around historic observations of known weed populations at the request of the WMD Manager. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established on the rest of the WPA. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff to now determine or answer these types of questions.

### Herbicide Applied

> ISST chemically treated spotted knapweed with 5.26 ounces of *Milestone*.

#### Recommendations

- > The follow up visit in August/September showed that initial spotted knapweed treatments in June were effective on the infestations within the WPA, chemical treatments should be continued to further reduce infestations and patch sizes.
- The road passing through the WPA is a proven vector for spotted knapweed invasion on the WPA. Two visits in 2016 should be considered and scheduled to ensure the already established populations do not spread further toward the interior of the WPA.

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

·	G. McClure K. Schuetz B. Sparklin  from South Temp.: 59 °F Humidity: 70 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF – Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix   Dow AgroSciences #62719-6 / BASF #7969-150   Metcel & Milestone – Tank Mix   Agsurf #352-439-8558 / Dow AgroSciences #62719-519   Escort XP & Milestone – Tank Mix   DuPont #352-439 / Dow AgroSciences #62719-519   Other   Dye Used/Rate:   Swild   SYL-TAC
Backpack GPA   Sprayed: 5   An Vegetation Treated:   Dalmatian toadflate   Dame's rocket   Dame's rocket   Blueweed   Hoary alyssum   Houndstongue   Italian bugloss   Canada thistle   Italian bugloss   Leafy spurge   Common tansy   Meadow hawkweed   Musk thistle   Plant Phenology & Stage:   Basal Rosette   Presented   Senescing   Senescin	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax ed Russian olive Yellowflag iris Saltcedar Other  Post-Flowering Post-Flowering nesced
Location #1 (Site specific description):  Visited all Historic infestations  On WPA i Along roadside.	COMMENTS: Historical infestation that were freated in 2014 had little to no regrowth present on 6/3/15. Patches had old dead Starks, but bessels were sparse if present at all.

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406-544-2552

Date: G-3-15 Time (start/stop): 900-317  Location: (NWR or WPA) Final WPA  County: 100 Weather Conditions: Wind: 36 MPH, direction from Manual Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF – Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	B. Sparklin  Temp.: 59°F Humidity: 70 %
App. Rate: 7% Gallons Sprayed: Amt. of Control of Contr	□ Orange hawkweed □ Spotted knapweed   □ Oxeye daisy □ Sulfur cinquefoil   □ Perennial pepperweed □ Tall buttercup   □ Poison hemlock □ Tansy ragwort   □ Purple loosestrife □ Whitetop   □ Russian knapweed □ Yellow toadflax   □ Russian olive □ Yellowflag iris   □ Saltcedar □ Other   ering □ Flowering □ Post-Flowering
Senescing Senesced  Location #1 (Site specific description):  COM	IMENTS:

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406-544-2552

Date: 6-3-15 Time (start/stop): 9/06- Location: (NWR or WPA) Farnell WITH County: 1006e Weather Conditions: Wind: 3.8MPH, direction	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin  Temp.: 59 °F Humidity: 70 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF – Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Shild Sylice
Backpack GPA  App. Rate: 7 Gallons Sprayed:	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Sulfur cinquefoil Tall buttercup Whitetop Yellow toadflax Yellowflag iris Other
Location #1 (Site specific description):  See LM	Mgmt Checkent did not work

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9-1-15 Time (start/stop): 8,00-4,00  Location: (NWR or WPA) Ful nell (NVA  County: Liberty  Weather Conditions Winds to MRU direction for	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin
Weather Conditions: Wind: MPH, direction from MPH, direction from All products are diluted with water. Trade Name-Man Aquaneat – NuFarm #228-365	ufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix
<ul> <li>Chaparral − Dow #62719-597</li> <li>Curtail − Dow AgroSciences #62719-48</li> <li>EscortXP − DuPont #352-439</li> <li>Habitat − BASF #241-426</li> </ul>	Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519
Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365	☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other
<ul> <li>Telar XP − DuPont #352-654</li> <li>Tordon &amp; Telar XP</li> <li>Transline − Dow AgroSciences #62719-259</li> <li>Tordon 22K − Dow AgroSciences #62719-6</li> </ul>	Dye Used/Rate: Hilight Adjuvant Used: Syliac
Equipment Used: ATV GPA 80 Handgun  Backpack GPA	☐ Broadcast ☐ Mechanical Chemical Applied:
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Other
Plant Phenology & Stage: Basal Rosette Pre-Flower Senescing Senesced	Flowering Post-Flowering
Location #1 (Site specific description):  8-3+15 - Surveyed NE part  no new infestoltions  9-1-15 Surveyed remainder  of NE quadrant, manitered  spring treatment - very effective	MENTS:
9-3-15 surveyed NW anadrent band	lates Canada Hustle he 1/ thistle ma

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

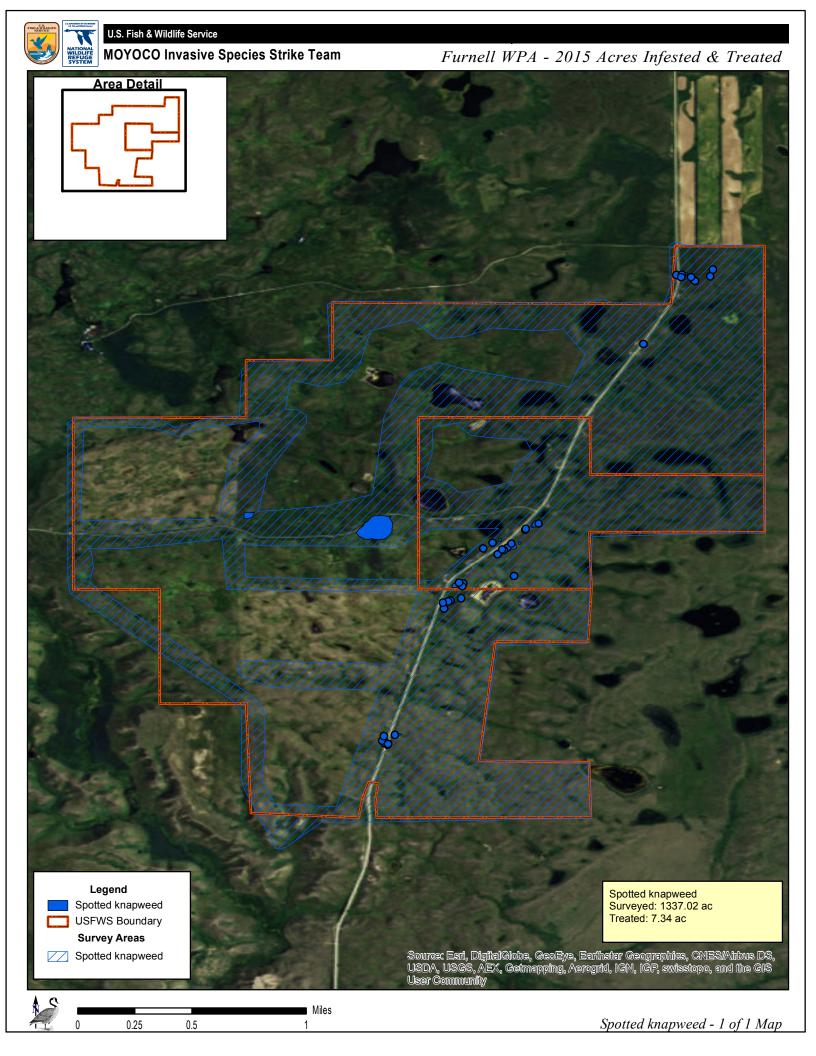
Date: 9.1-15 Time (start/stop):  Location: (NWR or WPA) Former  County:  Weather Conditions: Wind:  MPH, direction from	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 5 °F Humidity: 7 %
All products are diluted with water. Trade Name-Manual Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF – Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Infacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:
Equipment Used: ATV GPA Handgun  Backpack GPA  App. Rate: Gallons Sprayed: Amt. of C	☐ Broadcast ☐ Mechanical Chemical Applied: Acres Treated:
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowe Senescing ☐ Senesced	ring  Flowering  Post-Flowering
Location #1 (Site specific description):  Someged East Stodo of road, Stoding of the  The corner of school & Displaced some  New Totches adjoernned to known interhers.	MENTS: - Chal total - Gal

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Date: 9-2-15 Time (start/stop): 7.30-3.49  Location: (NWR or WPA) Fund wpm  County: Liberty  Weather Conditions: Wind: 3 MPH, direction from	☐ B. Sparklin
All products are diluted with water. Trade Name-Man  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Infacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other
Equipment Used: ATV GPA  Handgun  Backpack GPA  App. Rate: 62 Callons Sprayed: Amt. of C  Vegetation Treated:  Absinthe wormwood Dalmatian toadflax  Baby's breathe Dame's rocket  Blueweed Hoary alyssum  Bull thistle Houndstongue  Canada thistle Italian bugloss  Cheatgrass Leafy spurge  Common tansy Meadow hawkweed  Common teasel Musk thistle	Mechanical
Plant Phenology & Stage: Basal Rosette Pre-Flower Senescing Senesced	ering Flowering Post-Flowering
	MENTS:
Southeastern quadrant and alless road with some western section hordering property lines bull thistle and canada thirtle	

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Date: 9-7-15 Time (start/stop): 73-7:45  Location: (NWR or WPA) Formell  County:  Weather Conditions: Wind: MPH, direction from	B. Sparklin Temp.: 64°F Humidity: 36 %
All products are diluted with water. Trade Name-Manu  Aquaneat − NuFarm #228-365  Chaparral − Dow #62719-597  Curtail − Dow AgroSciences #62719-48  EscortXP − DuPont #352-439  Habitat − BASF #241-426  Metcel VMF− Agsurf #352-439-8558  Milestone − Dow AgroSciences #62719-519  Plateau − BASF #241-365  Telar XP − DuPont #352-654  Tordon & Telar XP  Transline − Dow AgroSciences #62719-259  Tordon 22K − Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate:  ☐ Dye Used/Rate:  ☐ Adjuvant Used:  ☐ Syllac
Equipment Used: ATV GPA Handgun  Backpack GPA  App. Rate: Gallons Sprayed: Amt. of C  Vegetation Treated:  Absinthe wormwood Dalmatian toadflax  Baby's breathe Dame's rocket  Blueweed Hoary alyssum  Bull thistle Houndstongue  Canada thistle Italian bugloss  Cheatgrass Leafy spurge  Common tansy Meadow hawkweed  Common teasel Musk thistle	Mechanical   Memical Applied:
Plant Phenology & Stage: Basal Rosette Pre-Flower  Senescing Senesced  Location #1 (Site specific description):  Finished savay at each side of relige surrayed  Red Final Edited from a bulker zone  around hest ferce line.	MENTS:



# Benton Lake Wetland Management District

Jarina WPA

Benton Lake ISST

## Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Surveyed Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Bull thistle	*	0.06	0.06
Houndstongue	*	0.01	0.01
Leafy spurge	18.71	0.12	0.12
Musk thistle	*	0.22	0.23
Spotted knapweed	443.03	12.34	13.64
Project Site Totals	461.74	12.75	14.06

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

## Highlights

### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
June 8, 2015	Refuge Management Project	Spotted knapweed	4	Point to point chemical treatment of historic populations within the WPA.
August 11-13, 2015	Refuge Management Project	Spotted knapweed	4	Point to point chemical treatment of historic populations within the WPA.
August 11, 2015	EDRR	Leafy spurge	1	Point to point chemical treatment of historic population within the WPA.

### Coordination and Cooperation

- Scheduling and treatment priorities were developed from proposals and discussions with WMD Manager, Jim Lange.
  - O Conducted an arrival and exit interview with Jim Lange concerning leafy spurge chemical treatments.

### Prevention and Education

This site requires monitoring for new satellite infestations and species because the road passing through the WPA acts as a vector.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

<sup>\*</sup>Species was chemically treated and GPS mapped, but no specific survey was designated.

➤ Leafy spurge and spotted knapweed were targeted on this site to prevent further spread to surrounding areas.

### Early Detection and Rapid Response

- Early detection and rapid response treatment of weeds is critical to keep large tracts of land free of invasive and noxious species that degrade wildlife habitat.
- > ISST mapped .05 acres of leafy spurge while managing other targeted weed species in 2012.
- ➤ In 2015, while treating spotted knapweed, ISST located a new leafy spurge infestation of 0.11 acres.

### Inventory and Monitoring

- > GPS data were collected by ISST to provide information on patch size and locations of application. The GPS track logs were used to digitize the survey area and calculate the survey area acres
- > ISST members searched 18.71 acres within Jarina WPA for leafy spurge.
  - O The known leafy spurge infestation was visited in June to check for any regrowth; very little leafy spurge had re-sprouted. Each time ISST visited Jarina WPA to treat spotted knapweed, the spurge site was visited and any spurge plants with seed heads were clipped and bagged.
  - On 8/11/15, ISST treated about 20 leafy spurge plants, in the Southernmost historical population, that were immature for being so late in the season.
  - O A new population of leafy spurge was discovered while searching for spotted knapweed. The patch was 0.11 acres in size, but the density was 1-10%. The plants were 3-5 inches tall and flowering.
- ➤ ISST members searched 443.03 acres (12.34 acres infested) around historical locations and a buffer around spotted knapweed infestations.
- > Other weed species noted by crew members but not targeted include: Canada thistle, field pennycress, and houndstongue.

### Management

- ➤ ISST treated 0.12 acres of leafy spurge over two visits in 2015.
  - On June 6, ISST members clipped, bagged, and disposed of the flowers and seed heads.
  - On August 11, one ISST member visited both leafy spurge patches, clipped and bagged seed heads and chemically treated both areas using a backpack sprayer.
- > ISST treated 13.64 acres of spotted knapweed over three visits in 2015.
  - O Locations were primarily along the Swift Dam Road, the westernmost pond, and near the southern boundary.
  - O Spotted knapweed tends to grow along the roadside and in dry, bare areas.
- ➤ While treating spotted knapweed and leafy spurge, ISST members treated 0.06 acres of bull thistle, 0.01 acres of houndstongue, and 0.23 acres of musk thistle; chemical amounts were not totaled for these species.
- All ISST activities in the Benton Lakes WMD were conducted point-to-point around historic observations of known weed populations at the request of the WMD Manager. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established on the rest of the WPA. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff to now determine or answer these types of questions.

### Herbicide Applied

➤ ISST chemically treated leafy spurge with 0.14 ounces of *Plateau*.

ISST members used 59.07 ounces of *Milestone* to chemically treat historical locations. Spotted knapweed treatments were made using ATV's and broadcast spraying techniques.

## Recommendations

- > Leafy spurge infestations may need to be communicated to neighbor to decrease reinvasions.
  - O Mowing every 2 to 4 weeks can reduce seed production.
  - O Mowing may result in more uniform regrowth, which can lead to more effective herbicide applications.
  - O Chemical treatment at preemergence or early postemergence in fall when plants begin to grow but before hard freeze should be continued.
- > Spotted knapweed infestations are decreasing within the WPA, chemical treatments should be continued to further reduce infestations and patch sizes.



Looking at Jarina WPA. Photo by: Levi Morgan

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Date: 6/8/15 Time (start/stop): 11:00 - 120  Location: (NWR or WPA) Jarria a  County: Pondera  Weather Conditions: Wind: 8 MPH, direction fr	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 79°F Humidity: 36%
All products are diluted with water. Trade Name-N Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: ☐ Adjuvant Used:
Backpack GPA   Gallons Sprayed:   Smrt.	Mechanical   Acres Treated:     Orange hawkweed   Spotted knapweed   Oxeye daisy   Sulfur cinquefoil   Perennial pepperweed   Tall buttercup   Poison hemlock   Tansy ragwort   Purple loosestrife   Whitetop   Russian knapweed   Yellow toadflax   Russian olive   Yellowflag iris   Saltcedar   Other   Other   Other
Location #1 (Site specific description):	end 3.5  1.5gal

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Date: 6-8-15 Time (start/stop):	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 49 °F Humidity: 36 %  Anufacturer, EPA Registration #:
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF – Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: ☐ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Equipment Used: ATV GPA Handg  Backpack GPA  App. Rate: 702/00 Gallons Sprayed: Amt. o	Mechanical
Vegetation Treated:  Absinthe wormwood □ Dalmatian toadflax □ Baby's breathe □ Dame's rocket □ Blueweed □ Hoary alyssum □ Bull thistle □ Houndstongue □ Canada thistle □ Italian bugloss □ Cheatgrass □ Leafy spurge □ Common tansy □ Meadow hawkweed □ Common teasel □ Musk thistle  Plant Phenology & Stage: □ Basal Rosette ▼ Pre-Flo	□ Orange hawkweed ☒ Spotted knapweed   □ Oxeye daisy ☐ Sulfur cinquefoil   □ Perennial pepperweed ☐ Tall buttercup   □ Poison hemlock ☐ Tansy ragwort   □ Purple loosestrife ☐ Whitetop   ☐ Russian knapweed ☐ Yellow toadflax   ☐ Russian olive ☐ Yellowflag iris   ☐ Saltcedar ☐ Other
Senescing Senesc	
Location #1 (Site specific description):	DMMENTS: .7308/10g  1 10g  1 10g  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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406-544-2552

Date: 6/8/15 Time (start/stop): 11:00-1:00  Location: (NWR or WPA) Javina WPA  County: Pondera  Weather Conditions: Wind: 8 MPH, direction from	G. McClure K. Schuetz B. Sparklin
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Ifacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Adjuvant Used:
Backpack GPA	Orange hawkweed Spotted knapweed Sulfur cinquefoil Perennial pepperweed Tall buttercup Tansy ragwort Whitetop Russian knapweed Yellow toadflax Russian olive Saltcedar Other
Location #1 (Site specific description):  Sprayed the Southern ditch of County  road from West boundary to parking area.  Sprayed southern area of county road ditch from East boundary to parking lot.	MENTS: Sprayed Ugal

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/ /-			
Date: 6-8-15 Time (start/stop): //i00 - 5,00  Location: (NWR or WPA) Jarina	Applicators/Operator: L. Morgan		
Location: (NWR or WPA)	G. McClure K. Schuetz		
Weather Conditions: Wind: \( \frac{\gamma}{\text{MPH}}, \text{ direction from } \( \frac{\sqrt{\text{MPH}}}{\text{direction from }} \)	B. Sparklin		
All products are diluted with water. Trade Name-Manu			
Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597	Tordon & Distinct – Tank Mix		
Curtail – Dow AgroSciences #62719-48	Dow AgroSciences #62719-6 / BASF #7969-150		
EscortXP – DuPont #352-439	Metcel & Milestone – Tank Mix		
Habitat – BASF #241-426	Agsurf #352-439-8558 / Dow AgroSciences #62719-519		
Metcel VMF– Agsurf #352-439-8558	Escort XP & Milestone – Tank Mix		
Milestone – Dow AgroSciences #62719-519	DuPont #352-439 / Dow AgroSciences #62719-519		
Plateau – BASF #241-365	Other		
Telar XP – DuPont #352-654	Dye Used/Rate: Shield Adjuvant Used:		
Tordon & Telar XP  Transling Day: A grassian and #62710, 250	Adjuvant Used: Gullaco		
<ul><li>☐ Transline – Dow AgroSciences #62719-259</li><li>☐ Tordon 22K – Dow AgroSciences #62719-6</li></ul>	Jan W		
Equipment Used: ATV GPA Handgun	Broadcast		
Backpack GPA	Mechanical		
App. Rate: 702/A Gallons Sprayed: 8 Amt. of Cl	hemical Applied: 0,29 Acres Treated:		
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Other		
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced			
Location #1 (Site specific description): COMN	MENTS:		
Cochtima			
-Sprayed infestation group near Du	nd 63		
pend on souther section of Jarina lot	wayed 49		
Jarina Ot	al 10		
northern point was not sprayed SI	wayed		
due to cattle in the field straked north and west Row ditch -			
strated north and west Row ditch -	Westburdery to parking		

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	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 82 °F Humidity: 38 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Shield ☐ Adjuvant Used:
	Mechanical   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Tall buttercup   Tansy ragwort   Mechanical   Mechanical   Mechanical   Tall buttercup   Tansy ragwort   Mechanical   Mechanical
Location #1 (Site specific description):  See Lan	COMMENTS:

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Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed) Date: 8/11/15 Time (start/stop): 9:00 **Applicators/Operator:** L. Morgan Location: (NWR or WPA) Javina WPA G. McClure K. Schuetz B. Sparklin County: Pondera Weather Conditions: Wind: 24 MPH, direction from West Temp.: 82 °F Humidity: 39 All products are diluted with water. Trade Name-Manufacturer, EPA Registration #: Aquaneat – NuFarm #228-365 Tordon & Distinct – Tank Mix Chaparral – Dow #62719-597 Dow AgroSciences #62719-6 / BASF #7969-150 Curtail – Dow AgroSciences #62719-48 Metcel & Milestone – Tank Mix EscortXP - DuPont #352-439 Agsurf #352-439-8558 / Dow AgroSciences #62719-519 Habitat – BASF #241-426 Escort XP & Milestone – Tank Mix Metcel VMF- Agsurf #352-439-8558 DuPont #352-439 / Dow AgroSciences #62719-519 Milestone – Dow AgroSciences #62719-519 Other Plateau – BASF #241-365 Telar XP - DuPont #352-654 Dye Used/Rate: Sweld Adjuvant Used: MSO Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6 Equipment Used: ATV GPA Handgun Broadcast Vegetation Treated: Absinthe wormwood Dalmatian toadflax Orange hawkweed Spotted knapweed Baby's breathe Dame's rocket Oxeye daisy Sulfur cinquefoil Blueweed Hoary alyssum Perennial pepperweed Tall buttercup Bull thistle Houndstongue Poison hemlock Tansy ragwort Canada thistle Italian bugloss Purple loosestrife Whitetop Cheatgrass Leafy spurge Russian knapweed Yellow toadflax Meadow hawkweed Yellowflag iris Common tansy Russian olive Common teasel Musk thistle Saltcedar Other Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senesced Senescing BP #1 1.10 02/2gal 3.202 MSO/2gal Location #1 (Site specific description): **COMMENTS:** Ereated 26t plants that were immature for 30 late in Season near shrab line, some burn on shrubs from previous breatments

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All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365	G. McClure K. Schuetz B. Sparklin  from West Temp.: 82 °F Humidity: 39 %		
Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62710 6	Dye Used/Rate: Oynamask  Adjuvant Used: Syl Tac		
Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 80			
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced			
Location #1 (Site specific description):	COMMENTS:  Start   End   btal   4		

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Date:	G. McClure K. Schuetz B. Sparklin  Sw Temp.: 78 °F Humidity: 35 %
Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Adjuvant Used: Syl Tac
Backpack GPA   Backpack GPA   Amt. of General Genera	☐ Mechanical   Chemical Applied: 26.862 Acres Treated:      Orange hawkweed
Location #1 (Site specific description):  CON  5.36	MENTS:  Start End Total  10



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Date: 17-15 Time (start/stop): 7:30  Location: (NWR or WPA) (Start/stop): 7:30  County: 10-10-10-10-10-10-10-10-10-10-10-10-10-1	B. Sparklin
All products are diluted with water. Trade Name-Name Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF – Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Dywardk  Adjuvant Used: Sylface
Equipment Used: ATV GPA	Mechanical   Of Chemical Applied:
	Stat 10g erel 7g 3gsprayed

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406-544-2552

	B. Sparklin From _5₩ Temp.: 78 °F Humidity: _35 %
All products are diluted with water. Trade Name- Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Adjuvant Used:
Equipment Used: ATV GPA  Hand Backpack GPA  App. Rate: Gallons Sprayed: Amt.  Vegetation Treated: Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-F	☐ Mechanical   Acres Treated:      Spotted knapweed   Sulfur cinquefoil   Sulfur cinquefoil   Tall buttercup   Tansy ragwort   Tansy ragwort   Whitetop   Whitetop   Yellow toadflax   Yellowflag iris   Saltcedar   Other   O
Senescing Sene  Location #1 (Site specific description):	COMMENTS:

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 8/13/15 Time (start/stop): 7:00 - 4:00  Location: (NWR or WPA) JAHNA WPA	Applicators/Operator: L. Morgan G. McClure K. Schuetz		
County: Pordera	B. Sparklin		
Weather Conditions: Wind: 4.5 MPH, direction from			
All products are diluted with water. Trade Name-Man  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:  Adjuvant Used:  Dynamark  Adjuvant Used:  Dynamark		
Equipment Used: ATV GPA 13.06 Handgun	Broadcast		
Backpack GPA	Mechanical		
App. Rate: 702/00 Gallons Sprayed: Amt. of C	Chemical Applied: Acres Treated:		
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Oxeye daisy □ Perennial pepperweed □ Poison hemlock □ Purple loosestrife □ Russian knapweed □ Russian olive □ Spotted knapweed □ Tall buttercup □ Tansy ragwort □ Whitetop □ Yellow toadflax □ Yellowflag iris □ Saltcedar □ Other □ Other		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced			
Location #1 (Site specific description): COMMENTS:			
	Start End 1716 10 8 20 10 9 30 10 9 40 10 0 50 5 0 55		

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date: 8-13-15 Time (start/stop): 7-30 Location: (NWR or WPA) Solver  County: Porder &  Weather Conditions: Wind: 4.5MPH, direction:	G. McClure K. Schuetz B. Sparklin		
All products are diluted with water. Trade Name- Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: ☐ Other ☐ Adjuvant Used:		
Equipment Used: ATV GPA	Mechanical   Acres Treated:   Consider the considering of the consid		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced			
Location #1 (Site specific description):	COMMENTS:  Short 79  Prod 69  19 Mayord		

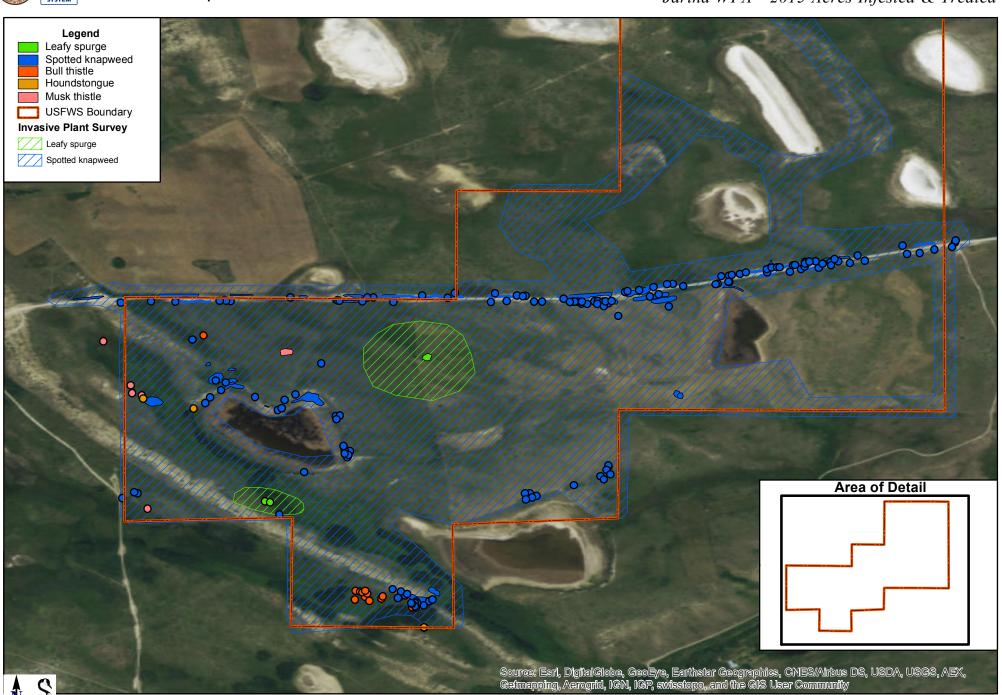
US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

*	
Date: 8-13-15 Time (start/stop): 7.00  Location: (NWR or WPA)	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin  Temp.: 69 °F Humidity: 36, / %
All products are diluted with water. Trade Name-N Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	
Equipment Used: ATV GPA ATV GPA AMI.  Backpack GPA AMI.  Vegetation Treated:  Absinthe wormwood Dalmatian toadflax  Baby's breathe Dame's rocket  Blueweed Hoary alyssum  Bull thistle Houndstongue  Canada thistle Italian bugloss  Cheatgrass Leafy spurge  Common tansy Meadow hawkweed  Common teasel Musk thistle	Mechanical
Plant Phenology & Stage: Basal Rosette Pre-Flank Senescing Senescing Senescing	
Location #1 (Site specific description):	OMMENTS:
Firshed main section of Drina encompassing main lake some musk that eard hourds. Longue infertations	Α

## U.S. Fish & Wildlife Service

MOYOCO Invasive Species Strike Team

Jarina WPA - 2015 Acres Infested & Treated



# Benton Lake Wetland Management District

## Kleinschmidt Lake WPA

Benton Lake and Lee Metcalf ISST

## Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Survey Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Dalmatian toadflax	967.64*	0	0
Hoary alyssum	967.64*	0	0
Houndstongue	967.64*	0.18	0.18
Musk thistle	595.69*	0.03	0.03
Oxeye daisy	371.95*	0.10	0.10
Spotted knapweed	967.64*	0.99	1.02
St. Johnswort	371.95*	0	0
Sulfur cinquefoil	371.95*	0.01	0.01
Yellow toadflax	967.64*	0.06	0.06
<b>Project Site Totals</b>	967.64	1.37	1.40

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes	
9-June-2015	EDRR Chemical Treatment	Houndstongue, Oxeye daisy, Spotted knapweed, St. Johnswort  Yellow toadflax, Dalmatian toadflax		Point-to-point treatment for all target species.  Monitored for toadflax in	
to 11-June-2015	EDRR Inventory and Monitoring			all areas covered, used historic data to map only new infestations.	
15-June-2015	EDRR Chemical Treatment	nical daisy, Spotted knapweed,		Continued treatment and monitoring for target weeds.	
16-June-2015	EDRR Inventory and Monitoring	Yellow toadflax, Dalmatian toadflax	2-5		
14-Sept-2015 To 15-Sept-2015	EDRR Chemical	Yellow toadflax, Dalmatian toadflax	3	Point-to-point treatment for all target species.	
22-Sept-2015 Treatment		Spotted knapweed		Sprayed while surveying for toadflax, followed by	

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

<sup>\*</sup> One survey area was searched for multiple species but this survey acreage was only counted once.

		point-to-point treatment using historic data.
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### Coordination and Cooperation

Crew leaders Jessica Zarate and Levi Morgan coordinated with site manager Kevin Ertl using the "Strike Team Expectation and Accomplishment Checklist" (Appendix A) and all details of work to be completed were further discussed in person each week as the crews arrived.

### Prevention and Education

- > Preventing the spread of small infestations is essential to protect the large weed-free tracts of land present at this site.
- ➤ Inventorying sites every 3-5 years can help detect new infestations while they are small and before they become a large management burden.

### Early Detection and Rapid Response

#### Hoary alyssum

- The north parking area where hoary alyssum was removed in 2014 was systematically transected and ISST watched for this species during the entire survey period in June and September. No hoary alyssum plants were found this season
- ➤ Hoary alyssum is a type of mustard that can spread quickly by wind distributed seed if left unmanaged and these seeds can germinate under suitable conditions throughout the growing season. Future efforts to detect and treat this species are highly recommended.

### Dalmatian toadflax

- ➤ Historic locations were searched thoroughly in June and September. The crews also watched for this species throughout the site during the entire survey period. No Dalmatian toadflax plants were found during the 2015 field season.
- > In 2014, a few Dalmatian toadflax plants were found near the center of the site, on a hillside just north of the two-track and electric cattle fence. At that time 8 post-flower stems were clipped and bagged for disposal offsite and then these plants were sprayed in late August.
- ➤ Dalmatian toadflax can be very difficult to control. It reproduces both by long spreading roots and seeds. Eradication is possible given the small size of the infestation but will likely require multiple treatments each season.
- ➤ ISST recommends that flowers and developing seed heads should be clipped each year in late June or early July to prevent seeding and then chemically treated in the fall.

### Inventory and Monitoring

#### St. Johnswort

- ➤ No St. Johnswort was detected this season. The team searched the historic locations and kept watch for this species during the survey period in June which covered more than 370 acres. Isolated patches of St. Johnswort were last treated in 2013.
- > ISST recommends that monitoring and control of this species continues if found to help prevent resurgence on site.

### Yellow toadflax

- ➤ Because yellow toadflax is difficult to detect on this site, ISST monitored for yellow toadflax in June while targeting other species for management covering approximately 371.95 acres. Although patches of yellow toadflax were detected, no new infestations were mapped in June.
- > Yellow toadflax is an aggressive invader that can spread quickly under suitable conditions when left untreated, even for only a short time. Ongoing management of this species is recommended while infestations present are small and containment and eradication is most feasible.

### Management

#### Houndstongue

- ➤ Houndstongue was treated point-to-point based on historic locations with a 30 meter buffer searched around historic and new plants found. ISST surveyed 371.95 acres in June and 595.69 acres in September treating a total of 0.18 acres.
- > Kevin Ertl instructed the crew to treat those plants on adjacent private property to the north that they could reach from the fence line. These plants were not mapped or included in the acreage total
- This species primarily occurs in the wooded areas in the northwest portion of the site and will be a challenge to control because wildlife readily spread the seeds of this plant. Efforts to contain and control this species should continue to help reduce its ability to spread further across the site.

### Oxeye daisy

- Surveys for oxeye daisy were completed in June and all plants found at that time were sprayed. A total of 0.10 acre of oxeye daisy was treated, about the same amount as was managed in 2014 (0.12 acres). The infestation does not appear to be dispersing across the landscape, all known oxeye daisy are still located only in the northern portion of the site.
- ➤ Based on current literature, it is best to treat oxeye daisy with *Milestone* if plants are in early stages of development prior to full flower and efficacy can begin to drop off if treated too late in phenology. This can be problematic because plants are more readily seen when flowering and most likely to be detected in this stage.
- > Escort XP can also be used for treatment and may have better results when treating plants in full flower.

### Spotted knapweed

- ➤ ISST targeted spotted knapweed for treatment in June and September of 2015 and mapped a total of 0.99 acres infested and treated 1.02 acres.
- Patches of knapweed are dispersed across the site with most of the dense patches located along the north and west boundaries. All small and isolated patches should be treated as a priority in an effort to protect large areas of land that are currently free from infestations.
- The site manager is working cooperatively with adjacent landowners and requested ISST spray the weeds found along the roadway starting from the WPA parking area to the cattle guard. The team covered the road and right-of-ways in June up to the fences on either side of the road.

### Yellow toadflax

- > Small scattered patches of yellow toadflax were treated in the northern and western portions of the site
- ➤ Point-to-point surveys of historic locations of yellow toadflax were conducted in September, but ISST also watched for this species throughout the survey period. The team surveyed a total of 595.69 acres during their fall visit and treated only 0.06 acres of yellow toadflax in this survey area.
- ➤ While continued treatment of yellow toadflax is essential for containment and reduction, eradication will likely be costly and difficult. Isolated and small patches should be treated as a priority with focus on both preventing seed production and annual herbicide treatment.
- > ISST recommends the site manager consider trying to establish biological control agents on the large patches to help suppress seeding. These patches could still be sprayed in the fall but with biocontrols present, timing of application and/or collection and redistribution will need to be considered to maintain insect populations.

### Musk thistle, Bull thistle and Canada thistle

- Thistles were not indicated as a priority species for treatment when the team sprayed the site in June. However, since all noxious weeds were requested to be treated in September, ISST sprayed musk thistle as it was incidentally found. More musk thistle is known to be present on site than was seen in June but was likely not readily detectable during the fall survey period.
- > Canada thistle and bull thistle are also present onsite but not treated this season. While Canada

- thistle may have been identifiable in September, a significant amount of time would be required to adequately treat and map infestations present.
- > Bull thistle occurs to a lesser extent than Canada thistle but may have not been easily identified in fall and therefore was not found or treated this season.

### Herbicide Applied

- > 0.95oz of *Chaparral* was used for treatment of houndstongue, oxeye daisy, spotted knapweed sulfur cinquefoil.
- > 0.57oz of *Milestone* was used for treatment of spotted knapweed and musk thistle
- ➤ 6.87oz of *Tordon 22K* and 1.29oz of *Overdrive* were used in tank mixes for treatment of spotted knapweed and yellow toadflax.

### Proposed 2016 Schedule

- Management of known infestations is highly recommended with priority given to smaller and isolated patches.
- Late June through July is likely the best time to adequately survey and treat all of the current priority species (with the exception of yellow toadflax).
- ➤ Developing flowers of Dalmatian toadflax could be clipped at this time.
- Monitoring for species that were once found but not detected (like hoary alyssum, Dalmatian toadflax, or St. Johnswort) should also continue to help ensure these weeds do not re-establish and gain a foot hold onsite.
- ➤ Site manager may want to consider continuing to use *Charparral* for species targeted in June/July because it would be more efficient.



Keeping Kleinschmidt Lake WPA as a priority for treatment is important because it supports relatively few weeds; as well as a diverse composition of native plants and intact habitats that support a variety of wildlife species. Photo by Jessica Zarate.

- > Currently, target species are typically treated with either *Milestone* or *Escort XP* requiring areas to be covered more than once. Using *Chaparral* would allow for an area to be covered by one person and spray all target species at the same time.
- > Chaparral herbicide contains both active ingredients of Milestone and Escort XP, making it suitable for treating multiple species at the same time. The downside it that this is less selective so overspray could result in more off target kill than Milestone and Escort XP alone.
- Clipping isolated patches of yellow toadflax should occur late summer when plants are flowering which is often in August. Herbicide treatment of this species and Dalmatian toadflax is optimal typically in September.

### Appendix A

## Strike Team Expectation and Accomplishment Checklist Arrival Interview

Station: Upsata & Blackfoot & Kleinschmidt WPA Date of Visit: 06/8/15-06/11/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Spotted knapweed	Upsata	Prioritize areas based on discussion with Kevin	No	Spray & map	Milestone or Chaparral – ISST or Refuge
Hoary alyssum		Entire site	Yes, if not treated	No	Excort XP or Chaparral - ISST
Sulfur cinquefoil		Historic location	No	Spray & map	Milestone or Chaparral –
Oxeye daisy		Historic location	No	Spray & map	ISST or Refuge
Hoary alyssum		Point-to-point	No		
Oxeye daisy	Blackfoot	historic locations plus 30M buffer around these and new patches	No	Spray & map	Chaparral-IS ST; Will switch to Milestone if exclusively spraying spotted knapweed
Spotted knapweed		Prioritize areas based on discussion with Kevin	No		
Common tansy & Sulfur cinquefoil		Point-to-point historic locations plus 30M buffer around these and new patches	No		

**Notes:** Work on completing Upsata before moving to the Blackfoot. Gear will be powerwashed at Kevin's between sites.

Met with Kevin after completing Upsata and he would prefer for us to only treat oxeye and hoary at Blackfoot (2 people) and the rest of the crew start priorities on Kleinschmidt. Sent text to Lindy and Bill to get ok to make this change and it was approved. See Exit notes for details of projects worked on Kleinschmidt.

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc...: None.

Station or Site Manager (or		
Acting):	Date:	
(back has Exit Interview)		

Exit Interview

Species Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Completed (yes or no with explanation)
Spotted knapweed	Upsata	Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Yes, all historic areas were treated.
Hoary alyssum		Entire site	No.	Yes	Yes, all historic areas were treated but we may have been a little early, not a lot was found.
Sulfur cinquefoil			No	Some treated.	Not priority species but some
Oxeye daisy		Historic location	No	None found.	sulfur cinquefoil was found and treated. Historic patches of oxeye were surveyed for but none was found.
Hoary alyssum	Blackfoot	Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Yes, all historic patches were searched and all found was treated, however may have been early, not much was found.
Oxeye daisy					Yes, historic areas were surveyed and all found was treated.
Meadow hawkweed		Newly detected	Yes	No	One patch found and mapped, needs to be verified and will treat if invasive species.
Spotted knapweed Houndstongue Oxeye daisy St. Johnswort Hoary alyssum	Kleinschmi dt	Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Several areas completed, had some problems with historic data display but will continue working on this project next week.
Yellow toadflax  Dalmatian toadflax		Monitor if incidentally found and not	Yes	No	No new patches found.

	previously		
	mapped		

### **Notes:**

Upsata worked and completed this week on June 8<sup>th</sup>. Blackfoot worked by 2 people and the hoary alyssum and oxeye daisy projects were completed on June 9<sup>th</sup>. Kleinschmidt was started by 3 people June 9<sup>th</sup> and then a 5 person crew worked this site on June 10 and 11. We will return to this site on Monday June 15<sup>th</sup>.

### **Concerns with Project:**

There was heavy rain during the night of June 9<sup>th</sup>. Wet and foggy conditions on June 10<sup>th</sup> resulted in delays to start up the morning of June 10<sup>th</sup>. The team completed administrative tasks in the early morning before heading out.

Station or Site Manager (or	
Acting):	_Date:

## Appendix B

### Strike Team Expectation and Accomplishment Checklist

Arrival Interview

Station: Kleinschmidt & Blackfoot WPA

Date of Visit: 06/15/15-06/18/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Spotted knapweed Houndstongue Oxeye daisy Hoary alyssum St. Johnswort	Kleinschmidt	Point-to-point historic locations plus 30M buffer around these and new patches	No	Spray and map	Chaparral – ISST
Yellow toadflax  Dalmatian toadflax		Monitor if incidentally found and not previously mapped	Yes	No	N/A
Spotted knapweed  Common tansy & Sulfur cinquefoil (if time is available)	Blackfoot	Point-to-point historic locations plus 30M buffer around these and new patches	No	Spray & map	Chaparral-IS ST; Will switch to Milestone if exclusively spraying spotted knapweed

### **Notes:**

Continue working point-to-point at Kleinschmidt until complete and then will move to Blackfoot to treat spotted knapweed in the following priorities areas: 1) along the perimeter, 2) west side near Brown's Lake ("peninsula"), 3) isolated patches.

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc: No	one.
Station or Site Manager (or	
Acting):	Date:
(back has Exit Interview)	

Exit Interview

Exit Interview					Completed (yes
Species	Unit	Section of Unit	Inventory /Monitor	Treat	or no with explanation)
Spotted knapweed Houndstongue Oxeye daisy St. Johnswort Hoary alyssum	Kleinschmidt	Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Yes, all historic areas were surveyed plus the buffer. We had a problem with the units displaying the historic layer so if there are any patches missed it is because they could not be seen but I believe we did get them all.
Yellow toadflax Dalmatian toadflax		Monitor if incidentally found and not previously mapped	Yes	No	No new patches were found.
Spotted knapweed (and a few houndstongue		Point-to-point historic locations plus 30M buffer around these and new patches			See notes below.
Meadow hawkweed			No	Yes	Yes, photographed and treated patch. Several flowering and many rosettes.
Common tansy	Blackfoot		No	Yes	Surveyed historic locations that were near the new patch of meadow hawkweed in the far northeast corner of North 80. No tansy plants were found.

**Notes:** Kleinschmidt worked on June 15<sup>th</sup> using 5 person crew and then was finished by 2 people on June 16<sup>th</sup>. The road up to the cattle guard at the north end was also done. A crew of 3 people started spraying spotted knapweed on the Blackfoot the morning of June 16 and was later joined by others once Kleinschmidt was done.

Spotted knapweed – In the east, the majority of the knapweed in the southern area (below the old fence line that goes down the middle, east to west) was completed. A large portion of the northern most area of the east was also completed. The perimeter from the large pond NW, to Brown's Lake Road and then west to the second curve (just past the creek) was completed. Some houndstongue was also found and treated opportunistically.

Concerns with Project: We were likely a bit early when fir	est treated oxeye, many more plants
were found that were not sprayed. I treated all I could but the	ere is likely more out there. We
should plan to treat this species after June 15 in the future if I	possible.
Station or Site Manager (or	
Acting): Date	<u>.                                    </u>

## Appendix C

Licenses Used:		
O&Date: 06/9/15 Time (start/stop): 12pm - 4pm Location: (NWR or WPA) Kleinschmidt County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{3}$ MPH, direction fr	om <u>S</u> Temp.: <u>75</u> °F Humidity: <u>34</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 24 Backpack GPA	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal Adjuvant Used: Syl-tac 4oz/ac  Mechanical  Amt. of Chemical Applied: 0.1 Acres Treated: 0.04  Orange hawkweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Other:	
Senescing Senescing	nesced	
Location #1 (Site specific description): Historic locations plus 30m buffer on west side  Location #2 (Site specific description):	COMMENTS: Searched for spotted knapweed, hoary alyssum, houndstongue, oxey daisy and other EDRR species.  Spotted knapweed found was very small and hard to see.	

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
O&Date: 06/9/15 Time (start/stop): 12pm - 4pm Location: (NWR or WPA) Kleinschmidt County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Wilson A. Crockett  A. Kaiser D. Miller		
Weather Conditions: Wind: 3 MPH, direction fr	om <u>S</u> Temp.: <u>75</u> °F Humidity: <u>35</u> %		
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v		
Vegetation Treated:  Absinthe wormwood Dalmatian toadflar Baby's breathe Dame's rocket  Blueweed Hoary alyssum  Bull thistle Houndstongue  Canada thistle Italian bugloss  Cheatgrass Leafy spurge  Common tansy Meadow hawkwee  Musk thistle  Plant Phenology & Stage: Basal Rosette Pre	Mechanical   Me		
Location #1 (Site specific description): Along the west boundary headed north from the southwest corner. Stopped before the tree section.  Location #2 (Site specific description):	COMMENTS: Very small knapweed plants. First round was without new data. After lunch (starting at 2pm) had new data points.		

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
08000125 (EPA Certification in Indian Country)			
Date: 06/9/15 Time (start/stop): 12pm - 4pm Location: (NWR or WPA) Kleinschmidt County: Powell	Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller		
Weather Conditions: Wind: 3 MPH, direction fr	om <u>S</u> Temp.: <u>75</u> °F Humidity: <u>34</u> %		
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1% v/v		
Equipment Used: ATV GPA 78 Har Backpack GPA Chem. Rate: 2.5oz/ac Gallons Sprayed: 0.25 gal	ndgun Broadcast  Mechanical  Amt. of Chemical Applied: 0.008 Acres Treated: 0.003		
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Italian bugloss Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkwee Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre	Orange hawkweed  Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other:		
Location #1 (Site specific description): Southwest corner along property fence line  Location #2 (Site specific description): Points going almost straight north of first location, worked into area of trees approaching the north boundary fence.	COMMENTS: Only sprayed spotted knapweed but actively searched for houndstongue, hoary alyssum and oxeye along the way. Started day with just over 9 gallons in tank from upsata. Did not have historic data on gps when doing loc. 1. Got data after lunch.		

Licenses Used:		
Date: 06/10/15 Time (start/stop): 12pm - 2 Location: (NWR or WPA) Kleinschmidt County: Powell	Application in Indian Country   Applicators   D. Zarate   J. Wilson   A. Crockett   A. Kaiser   D. Miller	
Weather Conditions: Wind: 3 MPH, direction fr	om <u>SE</u> Temp.: <u>77</u> °F Humidity: <u>48</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1% v/v	
☐ Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ☐ ATV GPA 74 ☐ Ha ☐ Backpack GPA  Chem. Rate: 2 507/ac Gallons Sprayed: 3 gal. A	ndgun Broadcast  Mechanical  mt. of Chemical Applied: 0.1 Acres Treated: 0.04	
Vegetation Treated:  ☐ Absinthe wormwood ☐ Dalmatian toadflar ☐ Baby's breathe ☐ Dame's rocket ☐ Blueweed ☐ Hoary alyssum ☐ Bull thistle ☐ Italian bugloss ☐ Canada thistle ☐ Italian bugloss ☐ Cheatgrass ☐ Leafy spurge ☐ Common tansy ☐ Meadow hawkweed ☐ Common teasel ☐ Musk thistle  Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre	Orange hawkweed  Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed  Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax	
Location #1 (Site specific description):  NW corner besides area that needs to be backpack sprayed.  Location #2 (Site specific description):	COMMENTS: One houndstongue in area that wasn't historic data. Very small-medium sized knapweed. Other areas need to be backpack sprayed.	

Licenses Used:     Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
O8  Date: 06/10/15Time (start/stop): 12pm – 4pm  Location: (NWR or WPA) Kleinschmidt  County: Powell	000125 (EPA Certification in Indian Country)  Applicators/Operator:  J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller		
Weather Conditions: Wind: 3 MPH, direction from	om <u>SE</u> Temp.: <u>77</u> °F Humidity: <u>48</u> %		
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28  Backpack GPA	-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/ac		
☐ Canada thistle       ☐ Italian bugloss         ☐ Cheatgrass       ☐ Leafy spurge         ☐ Common tansy       ☐ Meadow hawkweed         ☐ Common teasel       ☐ Musk thistle         Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-☐ Senescing ☐ Senescing	Purple loosestrife Russian knapweed Russian olive Saltcedar Whitetop Yellow toadflax Yellowflag iris Other:		
Location #2 (Site specific description):			

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
O8  Date: 06/10/15Time (start/stop): 11:45am-3:30pm  Location: (NWR or WPA) Kleinschmidt  County: Powell	1000125 (EPA Certification in Indian Country)  1 Applicators/Operator:  J. Zarate  1 J. Wilson  A. Crockett  1 A. Kaiser D. Miller	
Weather Conditions: Wind: 3 MPH, direction from		
All products are diluted with water. Trade Name	-	
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v	
Tordon 22K – Dow AgroSciences #62719-6		
Equipment Used: $\boxtimes$ ATV GPA $\underline{42}$ $\boxtimes$ Har	$\equiv$	
Backpack GPA Chem. Rate: 2.5oz/ac Gallons Sprayed: 0.5 gal_A	Mechanical  Amt. of Chemical Applied: 0.025 Acres Treated: 0.0	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweed Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Northeast, central area close to large wetland	COMMENTS: Spotted knapweed – basal rosette Oxeye Daisy – pre flowering/flowering	

Licenses Used:		
Date: 06/10/15Time (start/stop): 11:45am-4:00pm Location: (NWR or WPA) Kleinschmidt County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:  J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
Weather Conditions: Wind: 3 MPH, direction fr	rom <u>SW</u> Temp.: <u>77</u> °F Humidity: <u>48</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 78 Backpack GPA	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal Adjuvant Used: Syl-tac .1%v/v	
<del></del>	Amt. of Chemical Applied: 0.008 Acres Treated: 0.003	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflate Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): Finished up along N boundary fence, the south most fenceline of W side of wpa  Location #2 (Site specific description):	COMMENTS: Surveyed historic polys for houndstongue, oxeye, st. Johns and spotted knapweed. Worked in area that showed sign of bear activity. Houndstongue – basal rosette/pre flower Oxeye – pre flower.	

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
	8000125 (EPA Certification in Indian Country)		
	Applicators/Operator: J. Zarate  J. Wilson A. Crockett		
Location: (NWR or WPA) Kleinschmidt			
County: Powell  Weather Conditions: Wind: 3 MPH direction fr	A. Kaiser D. Miller		
Weather Conditions: Wind: 3 MPH, direction fr	· · · · · · · · · · · · · · · · · · ·		
All products are diluted with water. Trade Name			
Aquaneat – NuFarm #228-365	☐ Tordon & Distinct – Tank Mix		
☐ Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150		
☐ Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix		
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519		
Habitat – BASF #241-426			
Metcel VMF– Agsurf #352-439-8558	Escort XP & Milestone – Tank Mix		
Milestone – Dow AgroSciences #62719-519	DuPont #352-439 / Dow AgroSciences #62719-519		
Plateau – BASF #241-365	Other		
Telar XP – DuPont #352-654			
Tordon & Telar XP	Dye Used/Rate: <u>Highlight 3oz/10gal</u>		
	Adjuvant Used: Syl-tac 4oz/ac		
Transline – Dow AgroSciences #62719-259	_		
Tordon 22K – Dow AgroSciences #62719-6			
<b>Equipment Used:</b> $\boxtimes$ ATV GPA $\underline{24}$ $\boxtimes$ Ha	ndgun 🗌 Broadcast		
Backpack GPA	Mechanical		
<del></del>	mt. of Chemical Applied: <u>0.1</u> Acres Treated: <u>0.4</u>		
Vegetation Treated:			
Absinthe wormwood Dalmatian toadflax	Orange hawkweed Spotted knapweed		
	Oxeye daisy Sulfur cinquefoil		
Blueweed Hoary alyssum	Perennial pepperweed Tall buttercup		
Bull thistle Houndstongue	Poison hemlock Tansy ragwort		
Canada thistle Italian bugloss	Purple loosestrife Whitetop		
☐ Cheatgrass ☐ Leafy spurge	Russian knapweed Yellow toadflax		
☐ Common tansy ☐ Meadow hawkwee	d Russian olive Yellowflag iris		
Common teasel Musk thistle	Saltcedar Other:		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering			
Senescing Ser	nesced		
Location #1 (Site specific description):	COMMENTS:		
Along the west and north fences of the northern			
<del>-</del>	Plants were mostly in basal rosettes, there were some that		
most block	have bolted but not flowering.		
Location #2 (Site specific description):			
( <del> </del>			

Licenses Used:     Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
Date: 06/11/15Time (start/stop): 8:30am-12:15pm Location: (NWR or WPA) Kleinschmidt County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:  J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller		
Weather Conditions: Wind: 1 MPH, direction fr	om <u>N</u> Temp.: <u>65</u> °F Humidity: <u>70</u> %		
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28 Backpack GPA	P-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal Adjuvant Used: Syl-tac 4oz/ac  Mechanical  mt. of Chemical Applied: 0.09 Acres Treated: 0.04		
□ Baby's breathe □ Dame's rocket   □ Blueweed □ Hoary alyssum   □ Bull thistle □ Houndstongue   □ Canada thistle □ Italian bugloss   □ Cheatgrass □ Leafy spurge   □ Common tansy □ Meadow hawkwee   □ Common teasel □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Pre	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Sulfur cinquefoil Tall buttercup Whitetop Vellow toadflax Yellowflag iris Other:		
Location #1 (Site specific description): Finished historical points on east side of property  Location #2 (Site specific description):	COMMENTS:		

Licenses Used:		
<i>O&amp;</i> <b>Date:</b> <u>06/11/15</u> <b>Time (start/stop):</b> <u>9am – noon</u>	8000125 (EPA Certification in Indian Country) Applicators/Operator:  J. Zarate	
Location: (NWR or WPA) Kleinschmidt	$\Box$ J. Wilson $\boxtimes$ A. Crockett	
County: Powell	A. Kaiser D. Miller	
Weather Conditions: Wind: $\underline{1}$ MPH, direction fr	om <u>N</u> Temp.: <u>65</u> °F Humidity: <u>72</u> %	
All products are diluted with water. Trade Name	e-Manufacturer, EPA Registration #:	
Aquaneat – NuFarm #228-365	Tordon & Distinct – Tank Mix	
☐ Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150	
Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix	
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519	
Habitat – BASF #241-426		
Metcel VMF– Agsurf #352-439-8558	Escort XP & Milestone – Tank Mix	
Milestone – Dow AgroSciences #62719-519	DuPont #352-439 / Dow AgroSciences #62719-519	
Plateau – BASF #241-365	Other	
Telar XP – DuPont #352-654		
Tordon & Telar XP	Dye Used/Rate: <u>Highlight 3oz/10gal</u>	
Transline – Dow AgroSciences #62719-259	Adjuvant Used: <u>Syl-tac .1%v/v</u>	
Tordon 22K – Dow AgroSciences #62719-6		
Equipment Used: ATV GPA 78 Ha	ndgun Broadcast	
<u> </u>		
Backpack GPA		
Chem. Rate: <u>2.5oz/ac</u> Gallons Sprayed: <u>0.25 gal</u>	Amt. of Chemical Applied: 0.008 Acres Treated: 0.003	
Vegetation Treated:		
Absinthe wormwood Dalmatian toadflax	Orange hawkweed Spotted knapweed	
Baby's breathe Dame's rocket	Oxeye daisy Sulfur cinquefoil	
Blueweed Hoary alyssum	Perennial pepperweed Tall buttercup	
☐ Bull thistle ☐ Houndstongue	Poison hemlock Tansy ragwort	
☐ Canada thistle ☐ Italian bugloss	Purple loosestrife Whitetop	
Cheatgrass Leafy spurge	Russian knapweed Yellow toadflax	
Common tansy  Meadow hawkwee		
Common teasel Musk thistle	Saltcedar Other:	
Common teaser	Saittetiai Other.	
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre	-Flowering   Post-Flowering	
<u> </u>	nesced	
_		
Location #1 (Site specific description):	COMMENTS:	
Middle strip of wpa, worked from north to south.	Surveyed for both spotted knapweed and houndstongue,	
Started on west side of large pond	found only a few knapweed plants.	
<b>Location #2 (Site specific description):</b>		

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: <u>06/11/15</u> Time (start/stop): <u>9:00am - 12:00</u> Location: (NWR or <u>WPA</u> ) <u>Kleinschmidt</u> County: <u>Powell</u>		
Weather Conditions: Wind: $\underline{1}$ MPH, direction fr	om <u>N</u> Temp.: <u>65</u> °F Humidity: <u>70</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Teler XP – DuPont #352-654	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other	
<ul> <li>☐ Telar XP – DuPont #352-654</li> <li>☐ Tordon &amp; Telar XP</li> <li>☐ Transline – Dow AgroSciences #62719-259</li> <li>☐ Tordon 22K – Dow AgroSciences #62719-6</li> </ul>	<ul><li>Dye Used/Rate: <u>Highlight 3oz/10gal</u></li><li>Adjuvant Used: <u>Syl-tac .1%v/v</u></li></ul>	
<b>Equipment Used:</b> ATV GPA 24 Ha	ndgun Broadcast	
Backpack GPA	Mechanical	
<del></del> •	_ Amt. of Chemical Applied: 0.03 Acres Treated: 0.01	
Vegetation Treated:  Absinthe wormwood Dalmatian toadflated Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre	Orange hawkweed  Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other:	
Senescing Sen	nesced	
Location #1 (Site specific description): Ridgeline leading to center of fence on north edge, mid north fence, then along fence line to the east.	COMMENTS: Spotted knapweed – rosette, pre-flower Oxeye – pre-flowering, flowering	
Location #2 (Site specific description):		

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
Date: 06/11/15Time (start/stop): 9:00am – 12:00 Location: (NWR or WPA) Kleinschmidt County: Powell	B000125 (EPA Certification in Indian Country)  pm Applicators/Operator:   J. Wilson A. Crockett  A. Kaiser D. Miller	
Weather Conditions: Wind: 1 MPH, direction fr	om <u>N</u> Temp.: <u>62</u> °F Humidity: <u>72</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v	
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflar         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Pre	Mechanical   Spotted knapweed   Sulfur cinquefoil   Perennial pepperweed   Tall buttercup   Poison hemlock   Tansy ragwort   Purple loosestrife   Whitetop   Russian knapweed   Yellow toadflax   Mechanical   Mec	
Location #1 (Site specific description): North central area – historic points  Location #2 (Site specific description): Hills east of large seasonal drainage	COMMENTS: Houndstongue – basal rosette (loc. 2) Spotted knapweed – basal rosette (loc.1&2) Oxeye – pre flower, flower	

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: 06/11/15Time (start/stop): 9:15am - 12:00p Location: (NWR or WPA) Kleinschmidt County: Powell		
Weather Conditions: Wind: 1 MPH, direction from	om <u>N</u> Temp.: <u>62</u> °F Humidity: <u>75</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal	
☐ Tordon & Telar XP☐ Transline – Dow AgroSciences #62719-259☐ Tordon 22K – Dow AgroSciences #62719-6	Adjuvant Used: Syl-tac .1%v/v	
Equipment Used: ATV GPA 28 Har Backpack GPA  Chem. Rate: 2.5oz/ac Gallons Sprayed: 1 gal A	ndgun Broadcast  Mechanical  mt. of Chemical Applied: 0.09 Acres Treated: 0.09	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): Northwest corner area  Location #2 (Site specific description):	COMMENTS: Houndstongue was basal rosette, pre-flower and flower Spotted Knapweed was rosette and pre-flower Sulfur was basal rosette Found sulfur and knapweed that wasn't in historic locations.	

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: <u>06/15/15</u> Time (start/stop): <u>11:30am-3pm</u> Location: (NWR or <u>WPA</u> ) <u>Kleinschmidt</u> County: <u>Powell</u>		
Weather Conditions: Wind: 4 MPH, direction fr	rom NE Temp.: 62 °F Humidity: 43 %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v	
Equipment Used: ATV GPA Handgun Backpack GPA28  Chem. Rate: 2.5oz/ac Gallons Sprayed: 0.25 gal  Vegetation Treated: Absinthe wormwood Dalmatian toadflat Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweet Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax	
Location #1 (Site specific description): Remaining areas of west side  Location #2 (Site specific description):	COMMENTS: Nozzle of backpack sprayer was leaking. All plants basal rosette	

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: <u>06/15/15</u> Time (start/stop): <u>12:00pm - 3:30</u> Location: (NWR or <u>WPA</u> ) <u>Kleinschmidt</u> County: <u>Powell</u>		
Weather Conditions: Wind: 4 MPH, direction fr	rom NE Temp.: 62 °F Humidity: 43 %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519	
Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	<ul> <li>Other</li></ul>	
<b>Equipment Used:</b> $\boxtimes$ ATV GPA $\underline{24}$ $\boxtimes$ Ha	ndgun	
Backpack GPA		
Chem. Rate: 2.5oz/ac Gallons Sprayed: <0.25 A	amt. of Chemical Applied: <0.02 Acres Treated: <0.10	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): Middle third of middle northern fence, along fence line to the east.  Location #2 (Site specific description):	COMMENTS: Oxeye daisy was pre-flowering to flowering Spotted Knapweed was mostly basal rosette with some bolting.	

Licenses Used:		
O8  Date: 06/15/15Time (start/stop): 12:00pm – 3:15  Location: (NWR or WPA) Kleinschmidt  County: Powell	B000125 (EPA Certification in Indian Country)  pm Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller	
Weather Conditions: Wind: 4 MPH, direction from	om <u>NE</u> Temp.: <u>62</u> °F Humidity: <u>43</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28 Backpack GPA	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/ac	
Chem. Rate: <u>2.5oz/ac</u> Gallons Sprayed: <u>&lt;0.25</u> A	Amt. of Chemical Applied: <0.02 Acres Treated: <0.001	
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkwee Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Whitetop Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): Historical polys/points in central area of property  Location #2 (Site specific description):	COMMENTS: Sprayed 1 plant	
Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6  Equipment Used:	Metcel & Milestone – Tank Mix   Agsurf #352-439-8558 / Dow AgroSciences #62719-519   Escort XP & Milestone – Tank Mix   DuPont #352-439 / Dow AgroSciences #62719-519   Other	

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: <u>06/15/15</u> Time (start/stop): <u>11:30pm - 3:00</u> Location: (NWR or <u>WPA</u> ) <u>Kleinschmidt</u> County: <u>Powell</u>		
Weather Conditions: Wind: 4 MPH, direction fr	om <u>NE</u> Temp.: <u>62</u> °F Humidity: <u>43</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519	
<ul> <li>☐ Plateau – BASF #241-365</li> <li>☐ Telar XP – DuPont #352-654</li> <li>☐ Tordon &amp; Telar XP</li> <li>☐ Transline – Dow AgroSciences #62719-259</li> <li>☐ Tordon 22K – Dow AgroSciences #62719-6</li> </ul>	<ul> <li>Other</li></ul>	
<b>Equipment Used:</b> $\boxtimes$ ATV GPA $\underline{78}$ $\boxtimes$ Ha	ndgun 🗌 Broadcast	
Backpack GPA	Mechanical	
Chem. Rate: <u>2.5oz/ac</u> Gallons Sprayed: <u>0.25 gal</u>	Amt. of Chemical Applied: 0.008 Acres Treated: 0.003	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Sulfur cinquefoil Tall buttercup Whitetop Whitetop Yellow toadflax Yellowflag iris Other:	
Plant Phenology & Stage:   ☐ Basal Rosette ☐ Pre ☐ Senescing ☐ Sen	-Flowering Post-Flowering Pesced	
Location #1 (Site specific description): Worked along north boundary fence and few points away from fence on east side of wpa	COMMENTS: Knapweed was basal rosette Houndstongue was pre-flowering	
Location #2 (Site specific description):		

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: <u>06/15/15</u> Time (start/stop): <u>12:00pm - 3:30</u> Location: (NWR or <u>WPA</u> ) <u>Kleinschmidt</u> County: <u>Powell</u>	· · · · · · · · · · · · · · · · · · ·	
Weather Conditions: Wind: 4 MPH, direction fr	rom NE Temp.: 62 °F Humidity: 43 %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other	
<ul> <li>☐ Plateau – BASF #241-365</li> <li>☐ Telar XP – DuPont #352-654</li> <li>☐ Tordon &amp; Telar XP</li> <li>☐ Transline – Dow AgroSciences #62719-259</li> <li>☐ Tordon 22K – Dow AgroSciences #62719-6</li> </ul>	<ul> <li>☐ Other</li></ul>	
<b>Equipment Used:</b> $\boxtimes$ ATV GPA <u>36</u> $\boxtimes$ Ha	ndgun Broadcast	
☐ Backpack GPA		
Chem. Rate: <u>2.5oz/ac</u> Gallons Sprayed: <u>1 gal</u> A	mt. of Chemical Applied: 0.07 Acres Treated: 0.03	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:	
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre □ Senescing □ Sen	-Flowering Flowering Post-Flowering nesced	
Location #1 (Site specific description):  NE corner along north fence in wooded area  Location #2 (Site specific description):	COMMENTS: Spotted Knapweed seedlings and bolting Houndstongue rosette to full flower	

Licenses Used:		
08	8000125 (EPA Certification in Indian Country)	
Date: <u>06/15/15</u> Time (start/stop): <u>12:00pm - 3:30</u> Location: (NWR or <u>WPA</u> ) <u>Kleinschmidt</u> County: <u>Powell</u>		
Weather Conditions: Wind: 4 MPH, direction fr	rom NE Temp.: 62 °F Humidity: 43 %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal  Adjuvant Used: Syl-tac .1%v/v	
Tordon 22K – Dow AgroSciences #62719-6		
	ndgun Broadcast	
Backpack GPA Chem. Rate: 2.5oz/ac Gallons Sprayed: 0.25 gal	Mechanical  Amt. of Chemical Applied: 0.01 Acres Treated: 0.01	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): NE corner along north fence in wooded area  Location #2 (Site specific description):	COMMENTS: Spotted Knapweed seedlings and bolting Houndstongue rosette to full flower	

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
Date: 06/16/15Time (start/stop): 10:30am-11:30a Location: (NWR or WPA) Kleinschmidt County: Powell	Applicators/Operator:	
Weather Conditions: Wind: 2 MPH, direction from	om <u>SE</u> Temp.: <u>57</u> °F Humidity: <u>58</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28 Hat	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/ac	
<del></del>	Amt. of Chemical Applied: 0.02 Acres Treated: 0.009	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax	
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre- □ Senescing □ Sen	-Flowering Post-Flowering Post-Flowering nesced	
Location #1 (Site specific description): Sprayed left side of road as you go to leave the north access parking area	COMMENTS:	
Location #2 (Site specific description):		

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
O8         Date: 06/16/15Time (start/stop): 8:00am - 10:30a         Location: (NWR or WPA) Kleinschmidt         County: Powell	Applicators/Operator:  J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller	
Weather Conditions: Wind: 2 MPH, direction fr	om <u>SE</u> Temp.: <u>57</u> °F Humidity: <u>58</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 36 Backpack GPA	P-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac .1%v/v	
□ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle    Plant Phenology & Stage: □ Basal Rosette □ Pre	Poison hemlock	
Location #1 (Site specific description): Historical points near north side of property on fence corner	COMMENTS:	
Location #2 (Site specific description):		

Licenses Used: Sessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
08	8000125 (EPA Certification in Indian Country)	
Date: 06/16/15Time (start/stop): 8:00am – 10:30a Location: (NWR or WPA) Kleinschmidt County: Powell		
Weather Conditions: Wind: 3 MPH, direction fr	om <u>SE</u> Temp.: <u>59</u> °F Humidity: <u>53</u> %	
All products are diluted with water. Trade Name	e-Manufacturer, EPA Registration #:	
<ul> <li>Aquaneat – NuFarm #228-365</li> <li>Chaparral – Dow #62719-597</li> <li>Curtail – Dow AgroSciences #62719-48</li> <li>EscortXP – DuPont #352-439</li> <li>Habitat – BASF #241-426</li> <li>Metcel VMF – Agsurf #352-439-8558</li> <li>Milestone – Dow AgroSciences #62719-519</li> <li>Plateau – BASF #241-365</li> </ul>	<ul> <li>□ Tordon &amp; Distinct – Tank Mix</li> <li>□ Dow AgroSciences #62719-6 / BASF #7969-150</li> <li>□ Metcel &amp; Milestone – Tank Mix</li> <li>Agsurf #352-439-8558 / Dow AgroSciences #62719-519</li> <li>□ Escort XP &amp; Milestone – Tank Mix</li> <li>□ DuPont #352-439 / Dow AgroSciences #62719-519</li> <li>□ Other</li> </ul>	
☐ Telar XP – DuPont #352-654 ☐ Tordon & Telar XP ☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6	<ul> <li>         ∑ Dye Used/Rate: <u>Highlight 3oz/10gal</u> </li> <li>         ∑ Adjuvant Used: <u>Syl-tac .1%v/v</u> </li> </ul>	
<b>Equipment Used:</b> ATV GPA 78 Ha	ndgun 🔲 Broadcast	
Backpack GPA	☐ Mechanical	
Chem. Rate: 2.5oz/ac Gallons Sprayed: 0.25 gal	Amt. of Chemical Applied: 0.008 Acres Treated: 0.003	
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflar         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:	
	nesced	
Location #1 (Site specific description): Along both sides of N access road to the cattle guard.	<b>COMMENTS:</b> Only found spotted knapweed, no hoary was found in the parking area.	
Location #2 (Site specific description):		

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 9/14/15 Time (start/stop): 1400 - Location: (NWR or WPA) Kleinschmidt County: Weather Conditions: Wind: 5 MPH, direction	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  from North  Temp.: 74 °F Humidity: 17 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other Tordon @ 32 02 /ac  Dye Used/Rate:  Adjuvant Used:  M50 @ /pt ac
Equipment Used: ATV GPA 3.1	Mechanical   Acres Treated:   Toy down = 1.2302   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Poison hemlock   Tansy ragwort   Purple loosestrife   Whitetop   Russian knapweed   Yellow toadflax   Saltcedar   Other   Other
Location #1 (Site specific description):  Point - to-point historical yellow toadflay areas, nitting any spotted knap weed along the way	COMMENTS:  M50 - 12.21 02  OD - 4.58 02  Torden - 24.42

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 9 H Time (start/stop): 2:08 - Location: (NWR or WPA) Kleinschmeth WPA County: Weather Conditions: Wind:MPH, direction	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 74 °F Humidity: 17 %		
All products are diluted with water. Trade Name			
Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix   Dow AgroSciences #62719-6 / BASF #7969-150   Metcel & Milestone – Tank Mix   Agsurf #352-439-8558 / Dow AgroSciences #62719-519   Escort XP & Milestone – Tank Mix   DuPont #352-439 / Dow AgroSciences #62719-519   Other   Tordon		
Equipment Used: ATV GPA <sub>10.08</sub> Ha	ndgyn 👿 Dwardoort		
	Mechanical		
App. Rate: 374/62 Gallons Sprayed: / An	nt. of Chemical Applied: 3. lo 2 Acres Treated:		
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflar Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed  Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced			
Location #1 (Site specific description):	COMMENTS:		
	MSO - 15.87 02		
	00 - 5.95 02		
	Tordon - 31.6 0 Z		

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Licenses Used: X Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: Time (start/stop): typo Location: (NWR or WPA) Kleinschmidt County:	Applicators/Operator: ☐ L. Morgan ☐ G. McClure ☑ K. Schuetz ☐ B. Sparklin		
Weather Conditions: Wind: 5 MPH, direction	n from north Temp.: 74 °F Humidity: 17 %		
All products are diluted with water. Trade Nam Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other Tordon ② 33 03/ac  Verdenive ② 002/ac  Dye Used/Rate:  Adjuvant Used:  M50 ② lpt /ac		
Equipment Used: ATV GPA 13.06 Ha	ndgun 🛛 Broadcast		
7-3200/A Backpack GPA	Mechanical		
App. Rate Gallons Sprayed: 4 An			
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced			
Location #1 (Site specific description):	COMMENTS:		
see em	M50 - 12.25 02 6D - 4.59 07		
	OD - 4.59 02 Tordon - 24.50 02		

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 1 22 15 Time (start/stop): 8:00 - 4:00  Location: (NWR or WPA) Kleinsch midt WPA  County: Over  Weather Conditions: Wind: MPH, direction from	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 50 °F Humidity: 45 %
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	facturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: #h-light  Adjuvant Used: 5YL-TAC @ 1.2802/10gal
Backpack GPA   Amt. of Classification   Backpack GPA   Amt. of Classification   Backpack GPA   Amt. of Classification   Cla	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other
	MENTS: 30 02 milestere/logal  M. GIM, KS each responsible for 1/3.

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406-544-2552

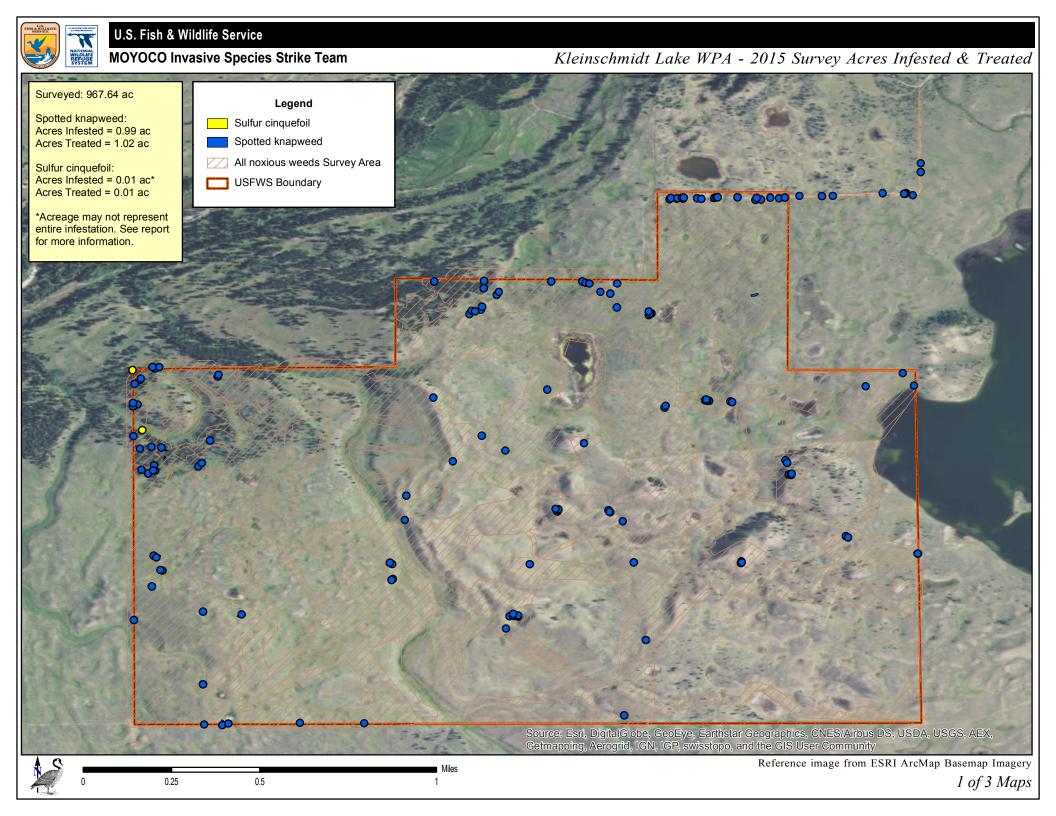
Licenses Used: X Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

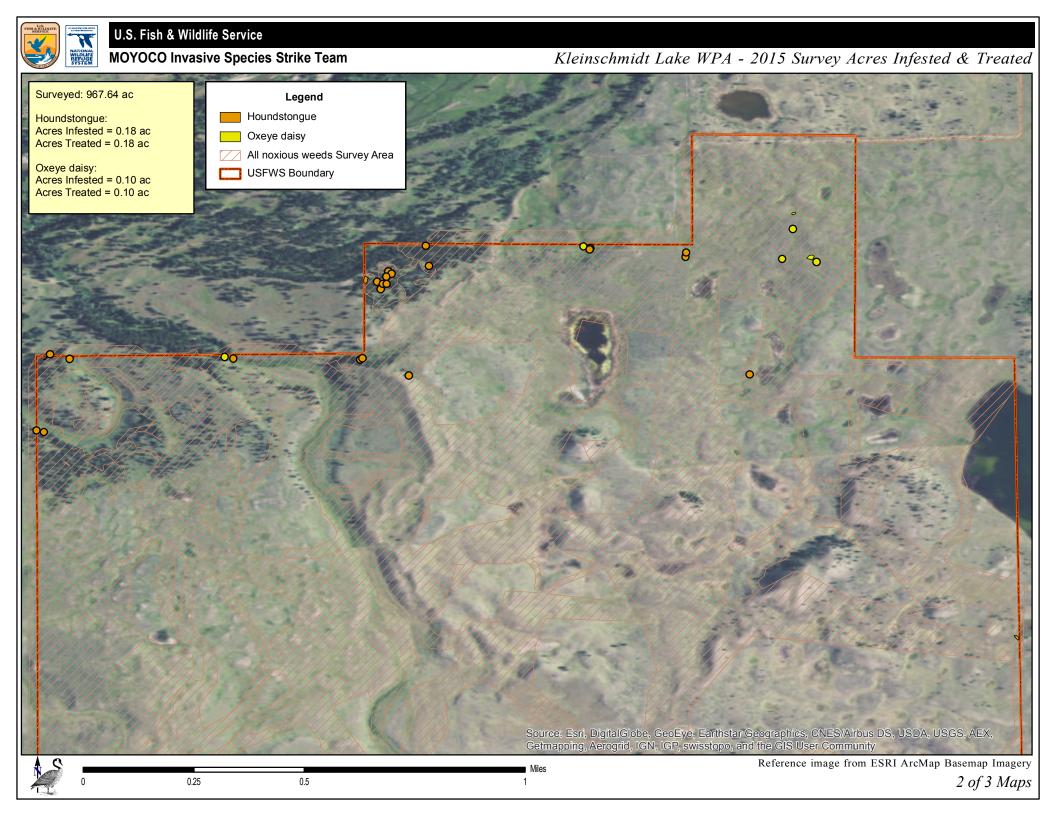
Date: 9-22-15 Time (start/stop): 8:00  Location: (NWR or WPA) Kleins Chmidt WPA  County: Weather Conditions: Wind: OMPH, direction from	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 58 °F Humidity: 45 %
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Ifacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: ## Light Adjuvant Used: ## Light
Equipment Used: ATV GPA  Handgun  Backpack GPA  App. Rate: Fook Gallons Sprayed:  Amt. of Cooker Ga	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other
Location #1 (Site specific description):  Eastern section from gate to lake point to point historical Spottled Knewweed and treaking MULL thouse resettes	MENTS:

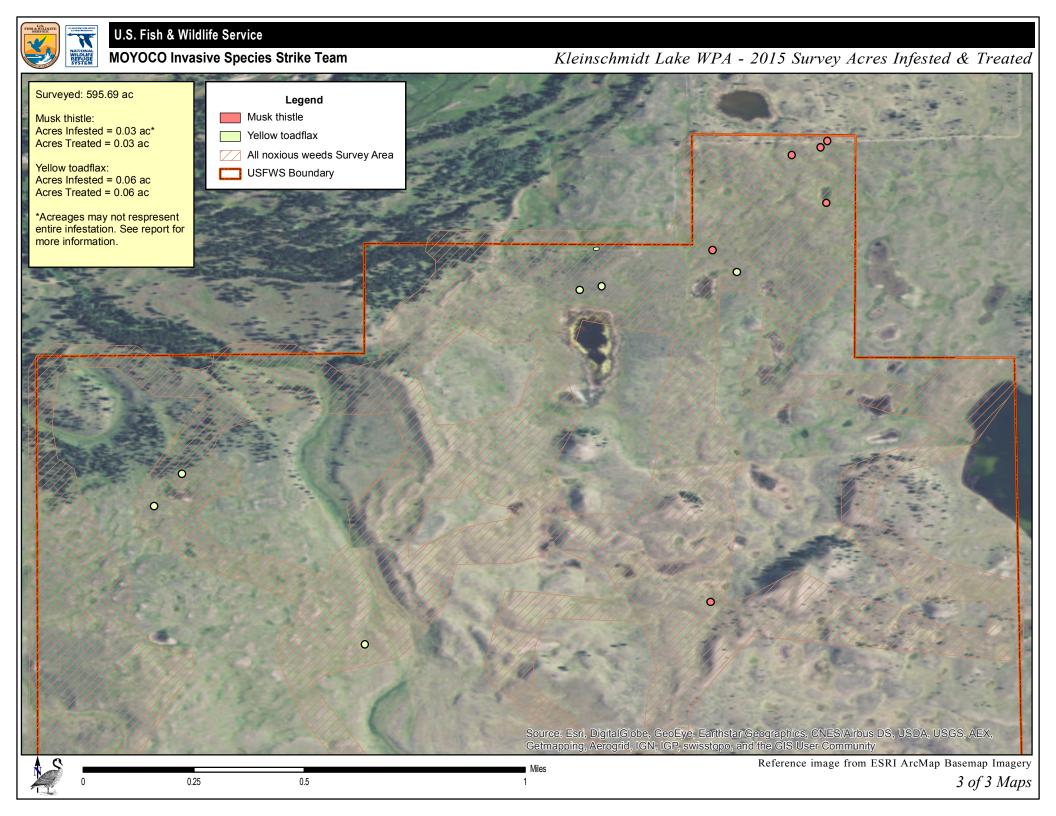
US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)

Date: 9-77 Time (start/stop):  Location: (NWR or WPA)	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 56 °F Humidity: 4/5 %
All products are diluted with water. Trade Name-Man  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	
Backpack GPA  App. Rate: Mat. of C  Vegetation Treated:  Absinthe wormwood Dalmatian toadflax  Baby's breathe Dame's rocket  Blueweed Hoary alyssum  Bull thistle Houndstongue  Canada thistle Italian bugloss  Cheatgrass Leafy spurge  Common tansy Meadow hawkweed  Common teasel Musk thistle	□ Orange hawkweed       □ Spotted knapweed         □ Oxeye daisy       □ Sulfur cinquefoil         □ Perennial pepperweed       □ Tall buttercup         □ Poison hemlock       □ Tansy ragwort         □ Purple loosestrife       □ Whitetop         □ Russian knapweed       □ Yellow toadflax         □ Russian olive       □ Yellowflag iris         □ Saltcedar       □ Other_
Plant Phenology & Stage: Basal Rosette Pre-Flower Senescing Senesced	
Location #1 (Site specific description):  Point 2 Point survey of strapped  S.1. Raused on west 18 of WPA.	IMENTS:







## Benton Lake Wetland Management District

### Savik WPA

Benton Lake ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Surveyed Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Houndstongue	63.11	0.06	0.06
Musk thistle	63.11	1.08	1.08
Canada thistle	63.11	0.19	0.19
Project Site Totals	63.11	1.33	1.33

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
	Refuge Management Project	Houndstongue	2	Point to point chemical treatment of known infested areas
June 9, 2015	Refuge Management Project	Canada thistle	2	Point to point chemical treatment of known infested areas
	Refuge Management Project	Musk thistle	2	Point to point chemical treatment of known infested areas

### Coordination and Cooperation

- > ISST proposal for treatment and other management scheduling needs were coordinated with WMD Manager, Jim Lange.
- Treating musk thistle in the Eastern portion of the WPA is highest priority because stalks are visible from the highway.

#### Prevention and Education

- ➤ Multiple species were targeted on this site to prevent further spread to surrounding areas.
- > Surrounding roadways will continue to be a potential vector for further invasion on this site.

### Early Detection and Rapid Response

Early detection and rapid response was not the focus for this project. The goal of targeting

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

houndstongue and musk thistle on this site was for the purposes of containment and reducing the size and abundance of the current infestation.

### Inventory and Monitoring

- ➤ During one visit to Savik WPA, ISST surveyed a total of 63.11 acres looking for all invasive species, treating houndstongue, musk thistle, and Canada thistle.
- ➤ Other weed species noted by crew members, but not targeted included field bindweed and field pennycress.

### Management

- > Two ISST members mechanically treated houndstongue during one day.
  - o 0.06 acres of houndstongue were treated.
  - O Senesced seed heads were bagged and disposed of in a dumpster.
  - O Many historical locations did not have houndstongue, however satellite basal rosettes were found nearby during 50 meter buffered searches illustrating importance of consistent effort throughout the WPA. Otherwise, continued seed dispersal in other areas will continue to maintain the invasion.
  - Control efforts were only at historical locations of houndstongue.
  - O All houndstongue encountered was treated.
- > Over the course of one day two ISST members chemically treated musk thistle.
  - o 1.08 acres of musk thistle were treated in 2015.
  - O Noticeable decrease in musk thistle compared to previous year treatment.
  - O Locations treated were primarily in the northern section of the unit.
- > Two ISST members chemically treated Canada thistle during one day.
  - o In 2015, ISST treated 0.19 acres of Canada thistle.
  - O Most Canada thistle was located in the same areas as musk thistle; however, it was quite sparse.
  - O All ISST activities in the Benton Lakes WMD were conducted point-to-point around historic observations of known weed populations at the request of the WMD Manager. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established on the rest of the WPA. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff now to determine or answer these types of questions.



Looking West at Savik WPA. Photo by Levi Morgan

### Herbicide Applied

> ISST applied 1.58 ounces of *Milestone* to musk and Canada thistle at Savik WPA in 2015.

### Recommendations

- ➤ All treatments being made on Savik WPA are proving effective. Similar efforts and timing should be continued in 2016.
- > For musk thistle, mowing the plant during flowering can greatly reduce seed production. Not all plants bloom simultaneously so this may require repeated visits at weekly intervals over the 4 to 7 week blooming period.
- For Canada thistle, mowing reduces the nutrient storage in the roots and suppresses flower formation. For mowing to be most effective, it should be repeated every 3 to 4 weeks. Repeated mowing coupled with chemical treatments is the optimal control method for Canada thistle on the refuge.

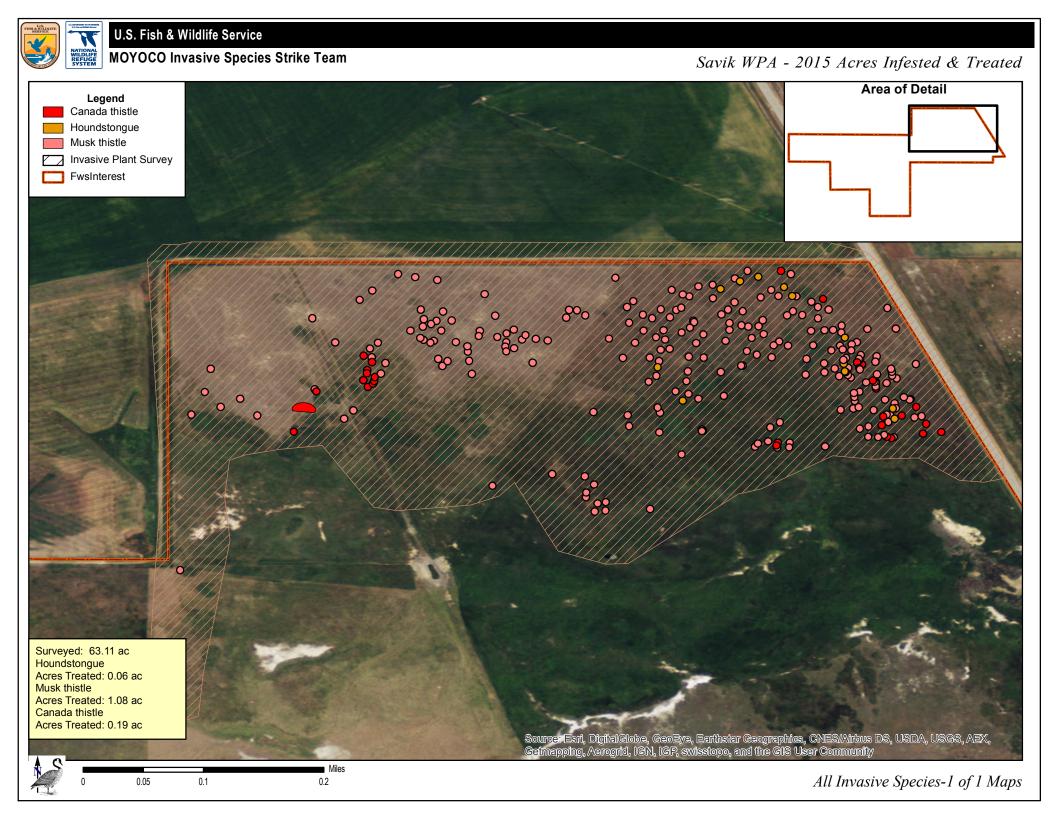
Page 3 of 3

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date: Grant Time (start/stop): Time (NWR or WPA)  County: Telegy  Weather Conditions: Wind: All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF – Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP	G. McClure K. Schuetz B. Sparklin Temp.: 64 °F Humidity: 58 %
☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ☐ ATV GPA	Broadcast
App. Rate: 102/62 Gallons Sprayed: 6 Amt. of C	☐ Mechanical
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed Spotted knapweed Oxeye daisy Sulfur cinquefoil Perennial pepperweed Tall buttercup Poison hemlock Tansy ragwort Purple loosestrife Whitetop Russian knapweed Yellow toadflax Russian olive Yellowflag iris Saltcedar Other
Plant Phenology & Stage: Basal Rosette Pre-Flower  Senescing Senesced	ring Flowering Post-Flowering
Location #1 (Site specific description):  South Must thistle, very little grow back  Them lost theorement on New portion.  Tredeal some consola T. on west end of unit. Dug some blowering  hourdstongue as time permitted.	MENTS:  Word Igal  add logal  -5  Ggal total

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date:	B. Sparklin
All products are diluted with water. Trade Name-M Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: ☐ Adjuvant Used:
Equipment Used: ATV GPA Hands Backpack GPA App. Rate: Gallons Sprayed: Amt. Gallons Spra	Mechanical   Spotted knapweed   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Tall buttercup   Tansy ragwort   Purple loosestrife   Whitetop   Mechanical   Mechan
Location #1 (Site specific description):  - Mechanical Musk on County Road  - Mechanical Henrids longue  See GM	OMMENTS:  5 Tart 69 0.43 07  Add 109 0.71 02  Total 169 1.1402



## Benton Lake Wetland Management District

### Schrammeck Lake WPA

Benton Lake ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Surveyed Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Whitetop/Hoary cress	187.22	4.46	4.46
Project Site Totals	187.22	4.46	4.46

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

#### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
May 21, 2015	Refuge Management Project	Whitetop/Hoary cress	4	Point to point chemical treatment of historic populations within the WPA.
June 4, 2015	Refuge Management Project	Whitetop/Hoary cress	3	Point to point chemical treatment of historic populations within the WPA.

#### Coordination and Cooperation

Scheduling and treatment priorities were developed from proposals and discussions with WMD Manager, Jim Lange.

#### Early Detection and Rapid Response

Early detection and rapid response treatment of weeds is critical to keep large tracts of land free of invasive and noxious species that degrade wildlife habitat.

### Inventory and Monitoring

- ➤ ISST surveyed 187.22 acres in 2015.
  - O As requested by Jim Lange, point to point treatments were made as opposed to making treatments while transecting the entire WPA.
  - O ISST members did a 50 meter buffered search around historical populations of all species treated at the WPA.
- > ISST found a total of 4.46 acres to be infested with whitetop.
  - O Herbicide treatments from 2011-2014 appear to be quite effective. Most populations sprayed in these years have shown a tremendous reduction in size and/or density.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature.

➤ Other weed species noted by surveyors, but not targeted include: Canada thistle and field pennycress.

#### Management

- ➤ ISST treated 4.46 acres of whitetop during two visits in 2015.
  - All chemical applications made to whitetop at Schrammeck Lake WPA were conducted by ATV broadcast spraying to ensure full coverage of the area.
  - O Lower water levels in Schrammeck Lake in 2015, allowed ISST crew members to access more infested areas which are typically inaccessible in higher water years.

All ISST activities in the Benton Lakes WMD were conducted point-to-point around historic observations of known weed populations at the request of the WMD Manager. Although this minimizes disturbance to the site, it reduces the ability of the ISST to detect new populations before they become established on the rest of the WPA. It also dramatically limits the scope of weed mapping data for tracking invasive species population size over time and prevents the use of these data for rigorously determining effectiveness or supporting adaptive management strategies. Additional resources and methodologies will be required by refuge staff to now to determine or answer these types of questions.

### Herbicide Applied

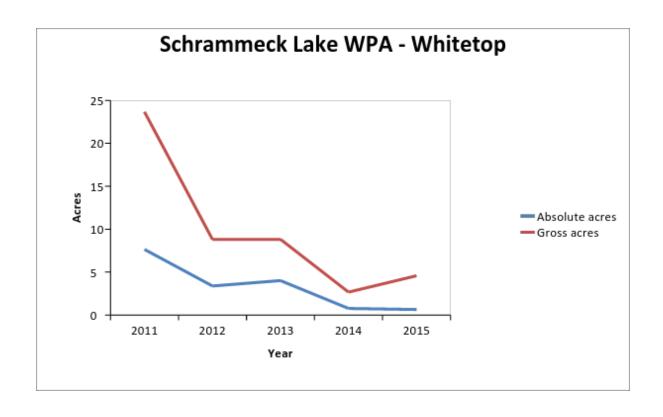
➤ ISST applied 12.84 ounces of *Escort XP* on the WPA for treatments of whitetop.

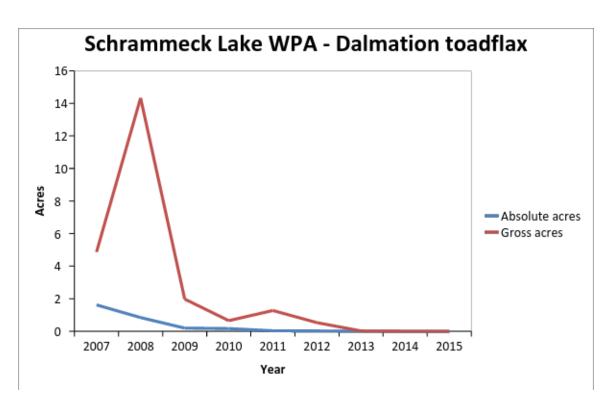
#### Recommendations

- > Repeated chemical treatment and timing in 2016 will be most effective for further reducing the houndstongue infestation.
- > Continued whitetop treatments should be made to eradicate the infestation. For best effectiveness, treatments should be made post-emergence from pre-bloom to bloom stages of the plants.



Looking at the Big Belt Mountains from Schrammeck Lake WPA. Photo by: Levi Morgan





Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE DAILY PESTICIDE APPLICATION RECORD

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

BUSINESS	LICENSE#
U.S. Fish and Wildlife Service	104765-15
NAME	ADDRESS (Refuge or WPA)
Benton Lake NWR Invasive Species Strike Team	Shraineek INDA
CITY, STATE, ZIP	PHONE
Great Falls, MT 59404	406-727-7400 Ext. 213

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Greg Mc Clore	Bill Sparklin
Date	5/20/15	5/20/15
County	(Asca De	Cascade
Time Start/Stop	8:30 /12:50 IM	8:30/12:00/0
Temperature	7-3	73
Relative Humidity	32	32
Wind Speed/Direction (from)	2.5 SW	2.5 54)
Pesticide Manufacturer		
Trade Name	ESCOLL	ESCOCT
EPA Reg # or Formulation		
Rate: Product/Diluent Per Acre	lor acce	102 14664
Amount of Chemical Applied	0.15 62 1.162	0.45 02
Equipment Used (atv,backpack,truck,saw)	ATU BOOM	ATU BOOM
Bio-Control (genus species)		
# released / acre		
Mechanical (mow,hand-pull)		
Plant Phenology & Stage		
Dominant Pest(s)	White top	White TOP
Equipment Used		0
Acres/Area Treated or # of plants	Spot treatment, gps mapped	Spot treatment, gps mapped
GPS Filename		, or FF

Location #1 (Site specific description)
Location #2 (Site specific description)
Schrammeck W/A
Historic Locations
Greg 10 galors
Bill 5 gallons
Sprayed cot

COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc...)

Shield IVM @ 2 oz / 10 gal

Start	End	Total
190	THE	1200
10	5	-5

Location: (NWR or WPA) Schrammeck County: Cascade	1:30a Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 2 MPH, direction	from <u>SW</u> Temp: <u>75</u> °F Humidity: <u>45</u> %
All products are diluted with water. Trade Name— Aquaneat — NuFarm #228-365 Chaparral — Dow #62719-597 Curtail — Dow AgroSciences #62719-48 EscortXP — DuPont #352-439 Habitat — BASF #241-426 Metcel VMF— Agsurf #352-439-8558 Milestone — Dow AgroSciences #62719-519 Plateau — BASF #241-365 Telar XP — DuPont #352-654 Tordon & Telar XP Transline — Dow AgroSciences #62719-259 Tordon 22K — Dow AgroSciences #62719-6	Manufacturer, EPA Registration #:  ☐ Tordon & Distinct — Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone — Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone — Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Hi-light 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/acre
Equipment Used: ATV GPA Hand Backpack GPA  Chem. Rate: loz/acre. Gallons Sprayed: 10 gal. Ar	dgun Broadcast  Mechanical  mt. of Chemical Applied: 1.37 oz Acres Treated: 1.37 ac
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre-I	□ Orange hawkweed       □ Spotted knapweed         □ Oxeye daisy       □ Sulfur cinquefoil         □ Perennial pepperweed       □ Tall buttercup         □ Poison hemlock       □ Tansy ragwort         □ Purple loosestrife       ⋈ Whitetop         □ Russian knapweed       □ Yellow toadflax
East side of WPA, large historic polygon (north end)	COMMENTS:  More plants in historic area than shown on 2014 historic data map  Sprayer broke down; monitored around treated area

Location: (NWR or WPA) Schrammeck County: Cascade	Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
Weather Conditions: Wind: <u>2.5</u> MPH, direction from	om <u>SW</u> Temp: <u>75</u> °F Humidity: <u>45</u> %	
All products are diluted with water. Trade Name-Ma Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Inufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Hi-light 3oz/10gal  Adjuvant Used: Syl-tac 4oz/acre	
Equipment Used: ATV GPA 11 Handgu	n 🛛 Broadcast	
Backpack GPA	Mechanical	
Chem. Rate: 10z/acre Gallons Sprayed: 10 gal Amt.	of Chemical Applied: 0.90 oz Acres Treated: 0.90 ac	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweed Musk thistle	□ Orange hawkweed       □ Spotted knapweed         □ Oxeye daisy       □ Sulfur cinquefoil         □ Perennial pepperweed       □ Tall buttercup         □ Poison hemlock       □ Tansy ragwort         □ Purple loosestrife       ⋈ Whitetop         □ Russian knapweed       □ Yellow toadflax         □ Russian olive       □ Yellowflag iris         □ Saltcedar       □ Other	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): SE corner of property	MMENTS:	
Location #2 (Site specific description): Started the polygon on the east side of property		

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

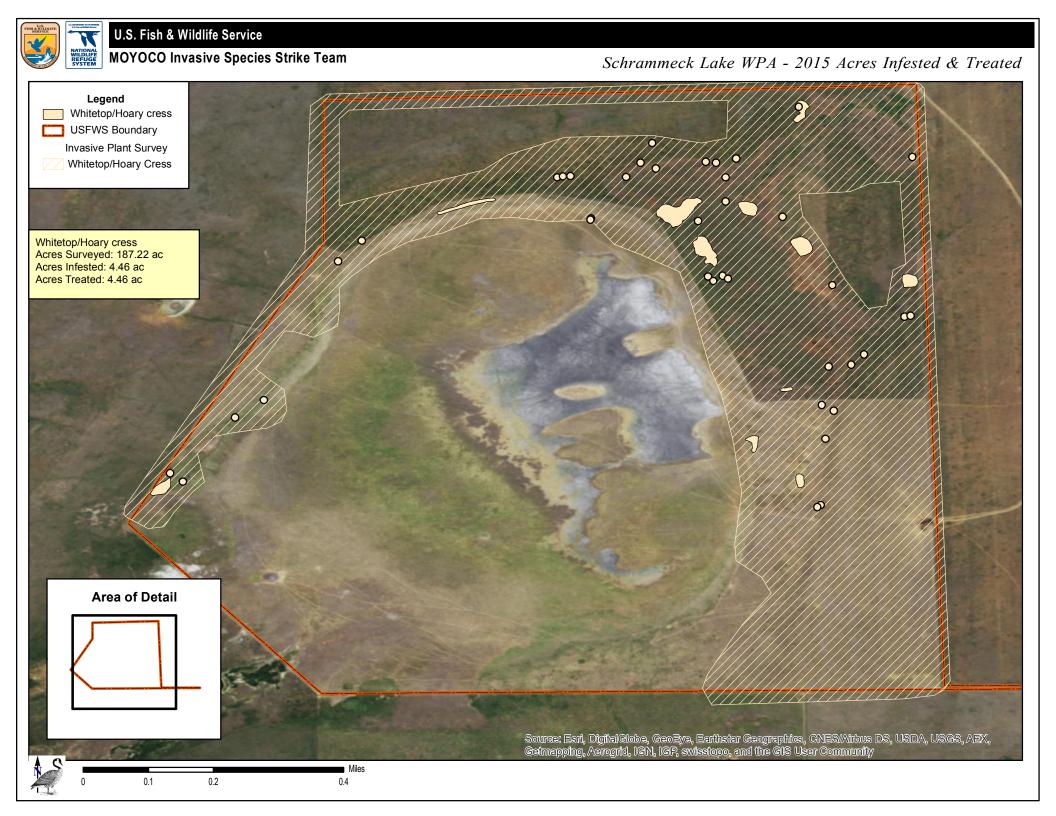
Date: 6415 Time (start/stop): 11:00 - Location: (NWR or WPA) Schrammerk lake w	Applicators/Operator: L. Morgan  G. McClure K. Schuetz
County: Coscade	B. Sparklin
Weather Conditions: Wind: MPH, direction	from Temp.: 43,5 °F Humidity: 64 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:
Equipment Used: ATV GPA	Mechanical   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Tansy ragwort   Mechanical   Mechanical   Mechanical   Mechanical   Mechanical   Mechanical   Mechanical   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Tansy ragwort   Mechanical   Me
	nesced
Location #1 (Site specific description): Started in the NW corner of WPA visiting all historric points + polygons (point-to-paint).  AM started in NE corner. LM worked East toward Film and when we met, we worked south toward parking area to meet US who was working North-	COMMENTS: Levi Start   End  10 +  10 +  10   3  Total 23 gal

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date: 6-9 Time (start/stop):	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: 65°F Humidity: 64 %
All products are diluted with water. Trade Name-Mar Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:   Adjuvant Used:
App. Rate: Backpack GPA	Mechanical   Chemical Applied: ○.916 Acres Treated:     Orange hawkweed   Spotted knapweed   Oxeye daisy   Sulfur cinquefoil   Tall buttercup   Tall buttercup   Tansy ragwort   Purple loosestrife   Whitetop   Yellow toadflax   Russian knapweed   Yellow toadflax   Russian olive   Yellowflag iris   Saltcedar   Other   Other   Post-Flowering   Post-Flowering
Location #1 (Site specific description):  CON  WANGER - SEE LEV. M.  ##1	MENTS: 12 gallons 5 pringed 3+ .083 + 12 = 0.99602

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date:	from B. Sparklin  from Temp.: 65 °F Humidity: 64 %
Equipment Used: ATV GPA	Mechanical   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Tall buttercup   Tansy ragwort   Mechanical   Mecha
Location #1 (Site specific description):  See L M	Start and 7.3  15 0 1.3  10 1 0.49  Total 24 gal 3.88



# Benton Lake Wetland Management District

Upsata Lake WPA

Benton Lake and Lee Metcalf ISST

### Accomplishments

Weed Species	Total Survey Acres <sup>1</sup>	Survey Acres Infested <sup>2</sup>	Acres Treated <sup>3</sup>
Black henbane	0	0.05	0.05
Canada thistle	121.73*	2.08	2.08
Hoary alyssum	210.38*	0.66	0.67
Houndstongue	210.38*	0.27	0.27
Leafy spurge	121.73*	0.04	0.04
Musk thistle	121.73*	1.42	1.42
Oxeye daisy	88.65*	0	0
Spotted knapweed	210.38*	20.65	21.87
Sulfur cinquefoil	0	0.02	0.01
Yellow toadflax	121.73*	2.44	2.48
			•
Project Site Totals	210.38	27.63	28.89

<sup>&</sup>lt;sup>1</sup> Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS.

### Highlights

### Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
3-June-2015 to 4-June-2015	EDRR Chemical Treatment Refuge Project Chemical	Hoary alyssum, Oxeye daisy, Sulfur cinquefoil Spotted knapweed	5-6	Systematic transecting of entire site for treatment.
	Treatment	Spotted knapweed		
4-June-2015	Refuge Project Chemical Treatment	Black henbane, Houndstongue	5-6	Found to be more abundant than in previous years, so we were requested by manager to treat it as time permitted.
8-June-2015	EDRR Chemical Treatment	Hoary alyssum, Oxeye daisy, Sulfur cinquefoil	5	Continued treatments to complete priority projects.

<sup>&</sup>lt;sup>2</sup> Area occupied by weed species within the survey area that does not contain the space between individuals or populations (i.e. net infestation size) as measured by GPS feature for monitoring and treatment combined, but areas in common not additive.

<sup>&</sup>lt;sup>3</sup> The area or subset of infested area that has received some form of treatment as measured by GPS feature

<sup>\*</sup> One survey area was searched for multiple species but this survey acreage was only counted once.

	Refuge Project	Spotted knapweed,		
	Chemical	Black henbane,		
	Treatment	houndstongue		
	EDRR			Treated a known and a new
	Chemical	Leafy spurge	1	patch of leafy spurge.
	Treatment			
14-Sept-2015	Refuge Project			Point-to-point treatment
to	Chemical	Yellow toadflax	3	using historic data.
17-Sept-2015	Treatment			
	Refuge Project	Spotted knapweed		Re-treated all spotted
	Chemical	and other noxious	3	knapweed detected as well
	Treatment	weeds		as other noxious weeds.

#### Coordination and Cooperation

- Crew leaders Jessica Zarate and Levi Morgan coordinated with site manager Kevin Ertl using the "Strike Team Expectation and Accomplishment Checklist" (Appendix A) and all details of work to be completed were further discussed in person each week as the crews arrived.
- ➤ On September 14<sup>th</sup>, Kevin notified the crew leaders that many spotted knapweed plants sprayed in early June appeared untreated or if treated were not dying. There was also concern that obvious weeds such as the musk thistle plants growing along the roadway near the buildings had not been treated.
- ➤ Kevin requested ISST broadcast spray rather than spot spray whenever possible to avoid missing plants and requested this site be retreated to the extent possible. Crew leaders discussed these concerns with ISST supervisors and Bill Sparklin contacted Kevin to follow-up and further address concerns.
- ➤ In addition to other priorities, Kevin also requested the team treat weeds on the private property to the north and along the roadway coming into and bordering the site.

#### Prevention and Education

- > Targeting new invaders and small infestations and preventing the spread of weeds into adjacent natural areas is a priority.
- Preventing invasion has a greater cost benefit than repeatedly treating long-standing infestations.

#### Early Detection and Rapid Response

#### Hoary alyssum

- ➤ Hoary alyssum was targeted for treatment throughout the 2015 field season and both historic and new locations were managed.
- ➤ If plants were in late flower and/or seeding they were pulled and bagged for disposal. Seedlings, rosettes, bolting, and early flower plants were all treated chemically.



Wide varieties of native wildflowers are present on the Upsata Lake WPA and controlling the invasive weed populations is critical protecting these native species. Photo by Jessica Zarate.

- ➤ A total of 0.23 acres of hoary alyssum were treated in June with the majority of plants found to the west and southwest of the office. A couple of patches were also treated near the north property boundary and near the roadway at the south end of the east access road.
- ➤ In September, several new infestations of hoary alyssum were detected and managed throughout the site. During this survey period the team treated an additional 0.17 acres on the WPA and 0.26 acres on private property to the north.
- ➤ Hoary alyssum has multiple flushes of new seedlings throughout the growing season. Repeated treatments throughout the growing season are the most effective control strategy. However this type of intense effort and monitoring with multiple visits would not be able to be met by the Strike Team alone.
- Because there are multiple flushes in a single growing season, more hoary alyssum could be

present than mapped and treated since surveys were not conducted in July or August when additional flushes may have occurred.

#### Leafy spurge

- A new patch was found and treated near the buildings in addition to the known patch of leafy spurge located near the west entrance.
- > Plants were post-flower but not yet dried out and sparsely distributed within the patch.
- > Given the limited distribution and density of this infestation eradication with continued management is likely. ISST recommends this species remain a priority for future monitoring and treatment efforts.

#### Sulfur cinquefoil

- > Very few sulfur cinquefoil plants had been historically mapped on this site, so this species was targeted in June for chemical treatment. Three patches (0.01 ac) of sulfur cinquefoil were detected and treated.
- > Sulfur cinquefoil can spread quickly under suitable conditions if left untreated. ISST recommends this species is a top priority for control and future monitoring.

#### Inventory and Monitoring

#### Oxeve daisy

- All historic locations of oxeye daisy were visited and all ISST members kept watch for this species during each visit throughout the field season. No oxeye daisy plants were found on site in 2015.
- This species should remain a priority for monitoring and treatment to ensure it has been eradicated from the site.

#### Management

#### Spotted knapweed

- > Spotted knapweed is widely distributed throughout this site, sometimes occurring in large dense patches. The entire site was surveyed and all spotted knapweed found was treated.
- > During the June trip, plants were very small and most were in rosette form.
- ➤ Only 1.51 acres of spotted knapweed was found during the June trip. As noted in the exit checklist, it is possible the team was too early in the season for optimal detection and treatment of this species.
- The team returned to the site in September and resurveyed the site for treatment. The team mapped and treated 19.30 acres onsite and an additional 1.04 acres north of the site and 0.01 acres along the roadway near the west entrance, for a total of 20.35 acres.
- ➤ All spotted knapweed found was treated and some treatment areas were that same as those covered in June. Differences in mapping (points verse polygons) accounts for some of the acreage differences between the treatments.
- late that

In June, the crew had to stop often and search areas on foot to find small spotted knapweed plants to spray. Photo by Anna Crockett.

- for some of the acreage differences between the treatments where areas were covered more than once.
- > Since this site supports a high diversity of native plants including a Howell's gumweed (*Grindellia howellia*), a rare plant in Montana, management for the containment and removal of spotted knapweed is highly recommended.
- > Because spotted knapweed produces multiple flushes in a single growing season, managers would receive better control with multiple treatments in a growing season.
- Managers may want to consider multiple strategies for managing the infestation in addition to herbicide applications, such as the introduction of biological control agents that could help suppress vigor and seeding.

#### Yellow toadflax

- The team used historic data to manage yellow toadflax and found that some patches appear to have grown in size. The team also detected and treated several new infestations.
- At some historic locations, no yellow toadflax was found and it appears to have been suppressed or killed during 2014 treatments.
- > The team mapped and treated 2.32 acres onsite and an additional 0.16 acres north of the site for a total of 2.48 acres treated. Treated acres are slightly larger than infested acres due to overlap of mapping data during treatment efforts.
- > ISST used a tank mix of *Tordon* and *Overdrive* to treat dry upland areas and *Plateau* to treat low land infestations that are closer to the lake.
  - O The *Tordon* tank mix may not be suitable for all areas of this site, due to its ability to readily leach through the soil and potentially contaminate shallow ground water.
  - Although *Plateau* is not ideal for control of yellow toadflax, it is known to primarily aid in the suppression of infestation, stunt grown and potentially inhibit seed production. *Plateau* may be the best option in some areas because there are not herbicides currently available that are well suited for good control and have low risk to the environment when site conditions have a shallow water table, highly permeable soils and seasonal flooding.
  - O Unfortunately, *Plateau* can also pose a risk in some situations for water contamination through leaching as well. Therefore, ISST recommends a thorough review of site conditions and current infestation prior to future management.
- > Control of yellow toadflax infestations on the WPA will be long-term and costly given the size and distribution of patches present throughout the site. Yellow toadflax is an aggressive invader and difficult to control.

#### Other noxious weeds - Black henbane, Canada thistle, Houndstongue, Musk thistle

- ➤ Black henbane, Canada thistle, houndstongue, and musk thistle were not priority species for treatment but were sprayed per the request of the refuge manager as time permitted.
- > Black henbane was included for treatment during June surveys because it appeared to be more prevalent this season than in previous years. Since this site is not currently being grazed, removal with herbicide is a viable option.
- ➤ Houndstongue was treated in both June and September and all plants found were treated. Flowering heads, developing seeds and old seed stalks were removed prior to spraying.
- > Canada thistle and musk thistle were not sprayed in June as they were not requested to be treated by the site manager. These species were later added to the request for treatment of "all noxious weeds" during the September visit.

#### Herbicide Applied

- ➤ 1.02oz of *Chaparral* was used for treatment of black henbane, hoary alyssum, houndstongue, Russian knapweed, spotted knapweed and sulfur cinquefoil.
- > 102.98oz of *Milestone* was used for treatment of Canada thistle, musk thistle and spotted knapweed.
- > 1.14oz of *Plateau* was used for treatment of leafy spurge and yellow toadflax.
- > 90.99oz of *Tordon 22K* mixed with 17.02oz of *Overdrive* was used for treatment of hoary alyssum, houndstongue, musk thistle, spotted knapweed, and yellow toadflax.

#### Proposed 2016 Schedule

- ➤ Hoary alyssum should continue to be treated throughout the growing season with the initial treatment beginning in late May to early June.
- > Oxeye daisy should be monitored for and treated in late June or early July depending upon the environmental conditions.
- ➤ Leafy spurge should remain high priority for treatment. Clipping of developing flowers and seeds could be done during the summer followed by chemical treatment in September.
- > Spotted knapweed should be treated more than once if it's a priority for management. The introduction of biological control agents may also be helpful given the extent of infestations on

and surrounding the site. The seed bank on this site is well established and wide-spread, so an aggressive approach will likely be required to control spotted knapweed on this WPA.

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### Strike Team Expectation and Accomplishment Checklist

Arrival Interview		
Station: Upsata WPA_	<del>-</del>	Date of Visit: 06/3/15-06/4/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Spotted knapweed		Prioritize areas based on discussion with Kevin	No	Spray & map	Milestone or Chaparral – ISST or Refuge
Hoary alyssum	Upsata	Entire site	Yes, if not treated	No	Excort XP or Chaparral - ISST
Sulfur cinquefoil		Historic location	No	Spray & map	Milestone or Chaparral –
Oxeye daisy		Historic location	No	Spray & map	ISST or Refuge

#### **Notes:**

The team was originally scheduled to work this site June 1-4 but severe thunderstorms were forecast for June 1 and 2, so team was asked by Bill Sparklin not to begin work on this site until June 3<sup>rd</sup>. Bill will join our team to work on Wed and Thurs this week.

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc:		
None.		
Station or Site Manager (or Acting):	Date:	
(back has Exit Interview)		

#### Exit Interview

Species	Unit	Section of	Inventory/Monit	Treat	Completed
		Unit	or		(yes or no
					with
					explanation)
Hoary alyssum					
Spotted		Entire Site	Monitored during		
knapweed			rain events but	Vac aproved	
Sulfur	Upsata		most everything	Yes, sprayed with	See notes
cinquefoil	Opsata	Not priority	that was mapped	Chaparral.	below.
Oxeye daisy		but treated	was managed this	Спаранат.	
Houndstongue		when feasible	week.		
Black henbane					

#### **Notes:**

Systematically transected entire site searching for hoary alyssum and spotted knapweed. Historic data from the past 5 years were used to do survey for priority plants that had been mapped in the past. We covered all areas except for around the lodge and hills east of there; and the area between the two access roads. I would expect with good weather, we should be able to finish the site on Monday of next week before moving to another site.

Black henbane and houndstongue were observed to be more abundant than in previous years so after meeting with Kevin the evening of June 3, we treated these species opportunistically as they were found.

Sulfur cinquefoil and oxeye daisy are EDRR species on this site. Oxeye was found and treated in 2013, none found in 2014 and none found again this year. In previous years sulfur cinquefoil was detected along the east side of the site. Historic data was not used to treat this species but when sulfur was found with confident identification it was treated also.

High diversity of wildflowers observed.

#### **Concerns with Project:**

Rain occurred from 2:05pm-2:20pm and then it cleared up. It sprinkled lightly again from 3:50pm-4:00pm.

Station or Site Manager (or		
Acting):	Date:	
		_

### Appendix B

### Strike Team Expectation and Accomplishment Checklist

Arrival Interview

Station: Upsata & Blackfoot & Kleinschmidt WPA \_ \_ \_ Date of Visit: 06/8/15-06/11/15

Objectives and Priority Areas defined:

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Chemical (ref or isst)
Spotted knapweed		Prioritize areas based on discussion with Kevin	No	Spray & map	Milestone or Chaparral – ISST or Refuge
Hoary alyssum	Upsata	Entire site	Yes, if not treated	No	Excort XP or Chaparral - ISST
Sulfur cinquefoil		Historic location	No	Spray & map	Milestone or Chaparral –
Oxeye daisy		Historic location	No	Spray & map	ISST or Refuge
Hoary alyssum		Point-to-point	No		
Oxeye daisy		historic locations plus 30M buffer around these and new patches	No		Chaparral-ISS T; Will switch
Spotted knapweed	Blackfoot	Prioritize areas based on discussion with Kevin	No	Spray & map	to Milestone if exclusively spraying
Common tansy & Sulfur cinquefoil	Sulfur	Point-to-point historic locations plus 30M buffer around these and new patches	No		spotted knapweed

**Notes:** Work on completing Upsata before moving to the Blackfoot. Gear will be powerwashed at Kevin's between sites.

Met with Kevin after completing Upsata and he would prefer for us to only treat oxeye and hoary at Blackfoot (2 people) and the rest of the crew start priorities on Kleinschmidt. Sent text to Lindy and Bill to get ok to make this change and it was approved. See Exit notes for details of projects worked on Kleinschmidt.

ATV Use: (define whether allowed, if partial allowance any restricted areas or travel directions, including only along fence line or not, only along two-track or if can systematically traverse project site, or if point-to-point treatment)

ATV use is permitted throughout the site.

Other access issues, conflicts, etc: None.		
Station or Site Manager (or Acting):	Date:	
(back has Exit Interview)		

## Exit Interview

Species	Unit	Section of Unit	Inventory/ Monitor	Treat	Completed (yes or no with explanation)
Spotted knapweed		Point-to-point historic locations plus 30M buffer around these and new patches	No	Yes	Yes, all historic areas were treated.
Hoary alyssum	Upsata	Entire site	No.	Yes	Yes, all historic areas were treated but we may have been a little early, not a lot was found.
Sulfur cinquefoil		Historic location	No	Some treated.	Not priority species but some sulfur cinquefoil was found and treated. Historic patches of oxeye were surveyed for but none was found.
Oxeye daisy			No	None found.	
Hoary alyssum	Point-to-point historic locations plus 30M buffer around these and new patches  Blackfoot  Newly detected	historic locations plus 30M buffer	No	Yes	Yes, all historic patches were searched and all found was treated, however may have been early, not much was found.
Oxeye daisy				Yes, historic areas were surveyed and all found was treated.	
Meadow hawkweed		Newly detected	Yes	No	One patch found and mapped, needs to be verified and will treat if invasive species.
Spotted knapweed Houndstongue Oxeye daisy St. Johnswort Hoary alyssum	Kleinschmi dt	Point-to-point historic locations plus 30M buffer around these and new patches  Monitor if	No Yes	Yes	Several areas completed, had some problems with historic data display but will continue working on this project next week.  No new patches

	incidentally		found.
Dalmatian	found and not		
toadflax	previously		
	mapped		

#### **Notes:**

Upsata worked and completed this week on June 8<sup>th</sup>. Blackfoot worked by 2 people and the hoary alyssum and oxeye daisy projects were completed on June 9<sup>th</sup>. Kleinschmidt was started by 3 people June 9<sup>th</sup> and then a 5 person crew worked this site on June 10 and 11. We will return to this site on Monday June 15<sup>th</sup>.

### **Concerns with Project:**

There was heavy rain during the night of June 9<sup>th</sup>. Wet and foggy conditions on June 10<sup>th</sup> resulted in delays to start up the morning of June 10<sup>th</sup>. The team completed administrative tasks in the early morning before heading out.

Station or Site Manager (or	
Acting):	Date:

## Appendix C

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
08	8000125 (EPA Certification in Indian Country)	
<b>Date:</b> <u>06/3/15</u> <b>Time (start/stop):</b> <u>1:30 – 4 pm</u>	Applicators/Operator:   J. Zarate	
<b>Location:</b> (NWR or <u>WPA</u> ) <u>Upsata</u>	J. Wilson A. Crockett	
County: Powell	A. Kaiser D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{4}$ MPH, direction fr	rom <u>NW</u> Temp.: <u>70</u> °F Humidity: <u>45</u> %	
All products are diluted with water. Trade Name	e-Manufacturer, EPA Registration #:	
Aquaneat – NuFarm #228-365	☐ Tordon & Distinct – Tank Mix	
☐ Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150	
Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix	
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519	
Habitat – BASF #241-426	Escort XP & Milestone – Tank Mix	
Metcel VMF– Agsurf #352-439-8558	DuPont #352-439 / Dow AgroSciences #62719-519	
Milestone – Dow AgroSciences #62719-519	_	
Plateau – BASF #241-365	Other	
Telar XP – DuPont #352-654	Dye Used/Rate: Highlight 3oz/10gal	
Tordon & Telar XP	Adjuvant Used: Syltac 0.1% v/v	
Transline – Dow AgroSciences #62719-259	<u></u>	
Tordon 22K – Dow AgroSciences #62719-6		
<b>Equipment Used:</b> $\boxtimes$ ATV GPA 104 $\boxtimes$ Ha	ndgun Broadcast	
☐ Backpack GPA	Mechanical	
Chem. Rate: $\underline{2.5oz/ac}$ Gallons Sprayed: $\underline{<0.25g}$	Amt. of Chemical Applied: <0.006 Acres Treated: 0.002	
Vegetation Treated:		
Absinthe wormwood Dalmatian toadflar		
Baby's breathe Dame's rocket	Oxeye daisy Sulfur cinquefoil	
Blueweed Hoary alyssum	Perennial pepperweed Tall buttercup	
Bull thistle Houndstongue	Poison hemlock Tansy ragwort	
Canada thistle Italian bugloss	Purple loosestrife Whitetop	
Cheatgrass Leafy spurge	Russian knapweed Yellow toadflax	
Common tansy Meadow hawkwee		
Common teasel Musk thistle	Saltcedar Other	
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre □ Senescing □ Sen	e-Flowering Post-Flowering Post-Flowering	
Location #1 (Site specific description):	COMMENTS:	
North boundary on the east side of access road	Rained $\sim 15 \text{ min.} (2:06 \text{ pm} - 2:20 \text{ pm})$	
	Sprinkled lightly 3:50 pm – 4 pm)	
T		
Location #2 (Site specific description):		

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
08000125 (EPA Certification in Indian Country)			
<b>Date:</b> <u>06/3/15</u> <b>Time (start/stop):</b> <u>2:06pm – 4:00 p</u>	Applicators/Operator: J. Zarate		
<b>Location:</b> (NWR or <u>WPA</u> ) <u>Upsata</u>	J. Wilson \( \subseteq \) A. Crockett		
County: Powell	☐ A. Kaiser ☐ D. Miller		
Weather Conditions: Wind: 4 MPH, direction fr	rom <u>NW</u> Temp.: <u>70</u> °F Humidity: <u>45</u> %		
All products are diluted with water. Trade Name	e-Manufacturer, EPA Registration #:		
Aquaneat – NuFarm #228-365	Tordon & Distinct – Tank Mix		
Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150		
Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix		
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519		
☐ Habitat – BASF #241-426			
Metcel VMF– Agsurf #352-439-8558	Escort XP & Milestone – Tank Mix		
☐ Milestone – Dow AgroSciences #62719-519	DuPont #352-439 / Dow AgroSciences #62719-519		
Plateau – BASF #241-365	Other		
Telar XP – DuPont #352-654	Dye Used/Rate: Highlight 3oz/10gal		
Tordon & Telar XP	Adjuvant Used: Syltac 0.1% v/v		
Transline – Dow AgroSciences #62719-259	Adjuvani Osed. <u>Syriac 0.170 V/V</u>		
Tordon 22K – Dow AgroSciences #62719-6			
<b>Equipment Used:</b> ATV GPA <u>78</u> Ha	ndgun		
Backpack GPA	Mechanical		
<del></del>	nt. of Chemical Applied: 0.008 Acres Treated: 0.003		
Vegetation Treated:	·· —		
Absinthe wormwood Dalmatian toadfla:	x Orange hawkweed Spotted knapweed		
Baby's breathe Dame's rocket	Oxeye daisy  Sulfur cinquefoil		
Blueweed Hoary alyssum	Perennial pepperweed Tall buttercup		
Bull thistle Houndstongue	Poison hemlock Tansy ragwort		
Canada thistle Italian bugloss	Purple loosestrife Whitetop		
Cheatgrass Leafy spurge	Russian knapweed Yellow toadflax		
Common tansy Meadow hawkwee			
Common teasel Musk thistle	Saltcedar Other		
Plant Phenology & Stage: ⊠Basal Rosette □Pre-Flowering □ Flowering □Post-Flowering □Senescing □Senesced			
Location #1 (Site specific description):	COMMENTS:		
North boundary, East of access road	Rained ~ 15 min. (2:06 pm – 2:20 pm)		
	Sprinkled lightly 3:50 pm – 4 pm)		
	Pump was leaking on bike #7 in morning, fixed leak in		
Location #2 (Site specific description):	afternoon.		

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
Date: 06/3/15 Time (start/stop): 9am-4pm Location: (NWR or WPA) Upsata County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
<b>Weather Conditions:</b> Wind: 4 MPH, direction fr	rom NW Temp.: 70 °F Humidity: 45 %	
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519	
Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	<ul> <li>Other</li></ul>	
	ındgun 🔲 Broadcast	
	Mechanical  nt. of Chemical Applied: 0.01 Acres Treated: 0.02	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadfla Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Whitetop Yellow toadflax	
Plant Phenology & Stage: ⊠Basal Rosette □ Pre-Flowering □ Flowering □ Post-Flowering □ Senescing □ Senesced		
Location #1 (Site specific description): SE corner of wpa, lots of grass and some wetlands, lots of flowering natives. Some hills and ground squirrel holes.	<b>COMMENTS:</b> Found patches of spotted knapweed and 1 or 2 small points of cinquefoil.	
Location #2 (Site specific description):		

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
08000125 (EPA Certification in Indian Country)		
<b>Date:</b> <u>06/3/15</u> <b>Time (start/stop):</b> <u>9am-4pm</u>		
<b>Location:</b> (NWR or <u>WPA</u> ) <u>Upsata</u>	J. Wilson	
County: Powell	A. Kaiser D. Miller	
Weather Conditions: Wind: $\underline{4}$ MPH, direction fr	rom <u>NW</u> Temp.: <u>70</u> °F Humidity: <u>45</u> %	
All products are diluted with water. Trade Name	e-Manufacturer, EPA Registration #:	
Aquaneat – NuFarm #228-365	☐ Tordon & Distinct – Tank Mix	
☐ Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150	
☐ Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix	
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519	
Habitat – BASF #241-426	Escort XP & Milestone – Tank Mix	
Metcel VMF– Agsurf #352-439-8558	DuPont #352-439 / Dow AgroSciences #62719-519	
Milestone – Dow AgroSciences #62719-519	_	
Plateau – BASF #241-365	Other	
Telar XP – DuPont #352-654	Dye Used/Rate: Highlight 3oz/10gal	
Tordon & Telar XP	Adjuvant Used: Syltac 0.1% v/v	
Transline – Dow AgroSciences #62719-259	Za riajavani eseai <u>syriae 6.176 777</u>	
Tordon 22K – Dow AgroSciences #62719-6		
<b>Equipment Used:</b> $\boxtimes$ ATV GPA $\overline{74}$ $\boxtimes$ Ha	ndgun	
Backpack GPA	Mechanical	
Chem. Rate: 2.5oz/ac Gallons Sprayed: 1 gal Am	nt. of Chemical Applied: 0.03 Acres Treated: 0.01	
Vegetation Treated:	_	
Absinthe wormwood Dalmatian toadflar		
Baby's breathe Dame's rocket	Oxeye daisy Sulfur cinquefoil	
Blueweed Hoary alyssum	Perennial pepperweed Tall buttercup	
Bull thistle Houndstongue	Poison hemlock Tansy ragwort	
Canada thistle Italian bugloss	Purple loosestrife Whitetop	
Cheatgrass Leafy spurge	Russian knapweed Yellow toadflax	
Common tansy Meadow hawkwee		
Common teasel Musk thistle	Saltcedar Other	
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering		
Senescing Senescing	nesced	
Location #1 (Site specific description):	COMMENTS:	
SE corner between boundary and middle road.	Monitored a point of sulfur cinquefoil.	
·	Dulaney's unit was full by end of day. Abra switched to	
	bike 6 in beginning.	
<b>Location #2 (Site specific description):</b>		

Licenses Used:			
Date: 06/3/15 Time (start/stop): 9am- 4pm Location: (NWR or WPA) Upsata County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Wilson A. Crockett  A. Kaiser D. Miller		
Weather Conditions: Wind: $\underline{4}$ MPH, direction fr	rom <u>NW</u> Temp.: <u>70</u> °F Humidity: <u>45</u> %		
Backpack GPA Chem. Rate: 2.5oz/ac Gallons Sprayed:4 gal Am Vegetation Treated: Absinthe wormwood Dalmatian toadflat Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge	□ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 □ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 □ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 □ Other □ Other □ Dye Used/Rate: Highlight 3oz/10gal □ Adjuvant Used: Syltac 0.1% v/v  andgun □ Broadcast □ Mechanical □ Mechanical □ Mechanical □ Spotted knapweed □ Oxeye daisy □ Sulfur cinquefoil □ Perennial pepperweed □ Poison hemlock □ Purple loosestrife □ Russian knapweed □ Yellow toadflax		
Common tansy Meadow hawkwee	ed Russian olive Yellowflag iris		
☐ Common teasel       ☐ Musk thistle       ☐ Saltcedar       ☐ Other			
Location #1 (Site specific description): North side of access road all the way to the northern most boundary of property	COMMENTS:		
Location #2 (Site specific description):			

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# DAILY PESTICIDE APPLICATION RECORD

US Fish and Wildlife Service – Invasive Species Strike Team 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)			
William Spallin 104342-15			
Date: (9) 15 Time (start/stop): 12.3°  Location: (NWR or WPA) (NWR or	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin from Temp.: F Humidity: 46 %		
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF – Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA	-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Ht - \( \frac{1}{2} \) LLT  Adjuvant Used: \( \frac{1}{2} \) +1c \( \frac{2}{2} \) Old \( \frac{2}{2} \)		
Backpack GPA	Mechanical		
	at. of Chemical Applied: <u>0 33 Acres Treated: 2.35</u>		
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflay Dame's rocket Hoary alyssum Houndstongue Ltalian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax		
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced			
Location #1 (Site specific description):  Along II Corner.  SE	COMMENTS:  VISISIO reduction in  SPKN dansity. Sprayed  w/ Doloner & Abra.  Black hendere is increasing  onsite.		

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

## Licenses Used: Levi Morgan 104765-15 (Ag Plant Pest, Aquatic and Regulatory Weed)  אינונים ביינולים ניץ זין		
Date: 64 2015 Time (start/stop): 7',30 Location: (NWR or WPA) UPSATA County: Powell	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin	
	from Temp.: 50 °F Humidity: 43 %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Other ☐ Dye Used/Rate: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Backpack GPA		
Location #1 (Site specific description):  Started spraying by gate on  west side.  Then worked with Anny  on to a 11:30. NE of old  Cabins	COMMENTS: May have double -sprayed dreg by the Gate. No dre visible on any plants I sprayed.	

Licenses Used:     Jessica Zarate 10	01891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)
O&Date: 06/4/15 Time (start/stop): 8:30am-2pm Location: (NWR or WPA) Upsata County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:  J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: $\underline{0}$ MPH, direction fr	om Temp.: <u>54</u> °F Humidity: <u>70</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 28  Habitat – NuFarm #228-365	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal Adjuvant Used: Syltac 0.1% v/v
Backpack GPA	Mechanical
Chem. Rate: 2.5oz/ac Gallons Sprayed: 1 gal Am	t. of Chemical Applied: 0.09 Acres Treated: 0.04
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflar Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Plant Phenology & Stage: ⊠Basal Rosette ⊠Pre □ Senescing □ Sen	-Flowering Post-Flowering nesced
Location #1 (Site specific description): West side of access road at the northern most boundary of property near private residence	COMMENTS:
Location #2 (Site specific description): South side of access road from the entrance past house and office buildings/garage.	

Licenses Used:		
	8000125 (EPA Certification in Indian Country)	
<b>Date:</b> <u>06/4/15</u> <b>Time (start/stop):</b> <u>8:30am-2:10pm</u>		
Location: (NWR or <u>WPA</u> ) <u>Upsata</u> County: <u>Powell</u>	J. Wilson	
Weather Conditions: Wind: 0 MPH, direction fr		
All products are diluted with water. Trade Nam	— · · —	
Aquaneat – NuFarm #228-365	Tordon & Distinct – Tank Mix	
☐ Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150	
Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix	
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519	
Habitat – BASF #241-426	Escort XP & Milestone – Tank Mix	
Metcel VMF– Agsurf #352-439-8558	DuPont #352-439 / Dow AgroSciences #62719-519	
Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365	Other	
Telar XP – DuPont #352-654		
Tordon & Telar XP	Dye Used/Rate: Highlight 3oz/10gal	
Transline – Dow AgroSciences #62719-259	Adjuvant Used: Syltac 0.1% v/v	
☐ Tordon 22K – Dow AgroSciences #62719-6		
<b>Equipment Used:</b> ATV GPA 74 Handgun Broadcast		
Backpack GPA	Mechanical	
<del></del>	nt. of Chemical Applied: 0.034 Acres Treated: 0.01	
Vegetation Treated:		
Absinthe wormwood Dalmatian toadfla	x Orange hawkweed Spotted knapweed	
Baby's breathe Dame's rocket	Oxeye daisy Sulfur cinquefoil	
Blueweed Hoary alyssum	Perennial pepperweed Tall buttercup	
Bull thistle Houndstongue	Poison hemlock Tansy ragwort	
Charters Italian bugloss	☐ Purple loosestrife ☐ Whitetop ☐ Russian knapweed ☐ Yellow toadflax	
☐ Cheatgrass ☐ Leafy spurge ☐ Common tansy ☐ Meadow hawkwee	= 1 = 1	
Common teasel Musk thistle	Saltcedar Other:	
Plant Phenology & Stage: Basal Rosette Pre	<del>-</del> <del>-</del> -	
Senescing Senescing	nesced	
Location #1 (Site specific description):	COMMENTS:	
Mapped on jess's map	Need to keep spraying at my stopping point.	
South to north along east boundary to road	Covered hills by walking	
	Bagged hounds tongue skeletons	
Location #2 (Site specific description):		
Hillside by south side gate		

Licenses Used:		
O&           Date: 06/4/15 Time (start/stop): 8:30am-2:30pm           Location: (NWR or WPA) Upsata           County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:  J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
Weather Conditions: Wind: 0 MPH, direction fr	com Temp.: <u>54</u> °F Humidity: <u>71</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA 42  Backpack GPA	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Highlight 3oz/10gal Adjuvant Used: Syltac 0.1% v/v	
□ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkwee         □ Common teasel       □ Musk thistle         Plant Phenology & Stage:       □ Basal Rosette       □ Pre         □ Senescing       □ Senescing	Saltcedar Other:	
Location #1 (Site specific description): Northern half of SW corner, open grassland and some ponds/wetlands.	COMMENTS: Started treating houndstongue. Found some plants in seasonal drainage of SW corner where it hadn't been before.	
Location #2 (Site specific description): Northwest slope surrounding lodge building, steep, mostly grass, few trees.		

Licenses Used: Sessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
O8  Date: 06/4/15 Time (start/stop): 8:30am-2:15pm  Location: (NWR or WPA) Upsata  County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{0}$ MPH, direction fr	om Temp.: <u>54</u> °F Humidity: <u>70</u> %	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	E-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syltac 0.1% v/v	
<b>Equipment Used:</b> ATV GPA 78 Ha	ndgun Broadcast	
☐ Backpack GPA	Mechanical Hand pull Loc. 2	
Chem. Rate: 2.5oz/ac Gallons Sprayed: 0.5 gal Amt. of Chemical Applied: 0.02 Acres Treated: 0.006		
Vegetation Treated:  Absinthe wormwood Dalmatian toadflated: Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description):  N of boundary, east of access road. Finished up southside of my transect area above small pond, tied in with others  Location #2 (Site specific description):  Hillside behind and around lodge and cabin.  South of access road  Location #3 Along dead end road	COMMENTS: Juno #5 gave error message of chem. Usage table not found, allowed me to still fill out table.	

Licenses Used:		
Date: 06/4/15 Time (start/stop): 8:15am-11:30pm Location: (NWR or WPA) Upsata County: Powell Weather Conditions: Wind: 0 MPH, direction fr All products are diluted with water. Trade Name	J. Wilson A. Crockett A. Kaiser D. Miller  Tom Temp.: 54 °F Humidity: 71 %	
Aquaneat − NuFarm #228-365  Chaparral − Dow #62719-597  Curtail − Dow AgroSciences #62719-48  EscortXP − DuPont #352-439  Habitat − BASF #241-426  Metcel VMF− Agsurf #352-439-8558  Milestone − Dow AgroSciences #62719-519  Plateau − BASF #241-365  Telar XP − DuPont #352-654  Tordon & Telar XP  Transline − Dow AgroSciences #62719-259  Tordon 22K − Dow AgroSciences #62719-6	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Oye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syltac 0.1% v/v	
Backpack GPA  Chem. Rate: 2.5oz/ac Gallons Sprayed:1 gal Am  Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkwee Common teasel Musk thistle  Plant Phenology & Stage: ∑Basal Rosette ∑Pre	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Saltcedar  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Other:	
Location #1 (Site specific description): East side of site, central area around seasonal drainage.  Location #2 (Site specific description): Central area between access road and north end.	COMMENTS: Hoary- pre flowering HT- basal rosette to flowering Spotted- pre flowering Much less knapweed found than in previous years.	

Licenses Used:		
<b>Date:</b> <u>06/8/15</u> <b>Time (start/stop):</b> <u>1pm-3pm</u>	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Zarate	
Location: (NWR or WPA) Upsata	J. Wilson A. Crockett	
County: Powell	A. Kaiser D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{4}$ MPH, direction fr	rom S Temp.: 88°F Humidity: 32%	
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal	
☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6	Adjuvant Used: Syltac 0.1% v/v	
<b>Equipment Used:</b> ATV GPA 104	ndgun Broadcast  Mechanical on hillsides	
Chem. Rate: 2.5oz/ac Gallons Sprayed: 4 gal Am	nt. of Chemical Applied: 0.1 Acres Treated: 0.04	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkwee	Orange hawkweed  Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Spotted knapweed  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): North end of central area between access roads.  Location #2 (Site specific description):	COMMENTS: Stopped spraying due to leak in handgun. Did repairs the remainder of the day.	

Licenses Used:   Jessica Zarate 101891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)		
	8000125 (EPA Certification in Indian Country)	
<b>Date:</b> <u>06/8/15</u> <b>Time (start/stop):</b> <u>1pm-3:30pm</u>	Applicators/Operator: J. Zarate	
Location: (NWR or WPA) Upsata	J. Wilson A. Crockett	
County: Powell	A. Kaiser D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{5}$ MPH, direction fr	— · · · — · · · · · · · · · · · · · · ·	
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365	e-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix	
Chaparral – Dow #62719-597	Dow AgroSciences #62719-6 / BASF #7969-150	
Curtail – Dow AgroSciences #62719-48	Metcel & Milestone – Tank Mix	
EscortXP – DuPont #352-439	Agsurf #352-439-8558 / Dow AgroSciences #62719-519	
☐ Habitat – BASF #241-426	Escort XP & Milestone – Tank Mix	
☐ Metcel VMF– Agsurf #352-439-8558		
☐ Milestone – Dow AgroSciences #62719-519	DuPont #352-439 / Dow AgroSciences #62719-519	
Plateau – BASF #241-365	Other	
Telar XP – DuPont #352-654	Dye Used/Rate:	
Tordon & Telar XP	Adjuvant Used:	
Transline – Dow AgroSciences #62719-259		
Tordon 22K – Dow AgroSciences #62719-6		
Equipment Used: ATV GPA_ Handgun Broadcast		
Backpack GPA	Mechanical hand/shovel	
Chem. Rate: Gallons Sprayed: Amt. of Chemical Applied: Acres Treated: 0.005		
Vegetation Treated:		
Absinthe wormwood Dalmatian toadfla	x Orange hawkweed Spotted knapweed	
Baby's breathe Dame's rocket	Oxeye daisy Sulfur cinquefoil	
☐ Blueweed ☐ Hoary alyssum	Perennial pepperweed Tall buttercup	
☐ Bull thistle ☐ Houndstongue	☐ Poison hemlock ☐ Tansy ragwort	
☐ Canada thistle ☐ Italian bugloss	Purple loosestrife Whitetop	
Cheatgrass Leafy spurge	Russian knapweed Yellow toadflax	
Common tansy Meadow hawkwee		
Common teasel Musk thistle	Saltcedar Other:	
Plant Phenology & Stage: ∑Basal Rosette ∑Pre-Flowering ☐ Flowering ☐ Post-Flowering		
Senescing Se	nesced	
Location #1 (Cita angelific Jessellation)	COMMENTS:	
Location #1 (Site specific description): Hill area near lodge and east of lodge. Between	Finished up site that Abra and I started 6/4	
north access road and east of road leading to	Spotted knapweed – rosette and some pre flower	
lodge from the west.	Worked on hills and in trees where atvs couldn't go	
loage from the west.	morked on mins and in trees where are scouldn't go	
Location #2 (Site specific description):		
-		

Licenses Used:		
Date: 06/8/15 Time (start/stop): 1- 3:45pm Location: (NWR or WPA) Upsata County: Powell	8000125 (EPA Certification in Indian Country)  Applicators/Operator:   J. Zarate  J. Wilson  A. Crockett  A. Kaiser  D. Miller	
<b>Weather Conditions:</b> Wind: $\underline{5}$ MPH, direction fr	rom <u>S</u> Temp.: <u>88</u> °F Humidity: <u>34</u> %	
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	e-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Dye Used/Rate: ☐ Adjuvant Used: Click here to enter text.	
Equipment Used: ATV GPA Handgun Broadcast  Backpack GPA Mechanical hand/shovel		
Chem. Rate: Gallons Sprayed: Amt. of C	Chemical Applied: Acres Treated: 0.005	
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflat Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Whitetop Yellow toadflax	
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced		
Location #1 (Site specific description): East side of buildings, NE side of access road in trees and on steep terrain not accessible by atv	COMMENTS:	
Location #2 (Site specific description):		

	01891-15 (Ag Plant Pest, Aquatic and Regulatory Weed)
O8           Date: 06/8/15 Time (start/stop): 1 - 4pm           Location: (NWR or WPA) Upsata           County: Powell	Applicators/Operator:
<b>Weather Conditions:</b> Wind: $\underline{4}$ MPH, direction fr	om <u>SW</u> Temp.: <u>88</u> °F Humidity: <u>34</u> %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259	P-Manufacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other  ☐ Other  ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/ac
☐ Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ☐ ATV GPA 28 ☐ Ha ☐ Backpack GPA ☐  Chem. Rate: 2.5oz/ac Gallons Sprayed: 2 gal	ndgun Broadcast  Mechanical Click here to enter text.  Amt. of Chemical Applied: .17 Acres Treated: 0.07
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Dalmatian toadflast Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweet Musk thistle	Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax
Plant Phenology & Stage: ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senescing ☐ Senesced	
Location #1 (Site specific description): Middle section of property between both access roads.	COMMENTS:
Location #2 (Site specific description):	

Licenses Used:	
08	8000125 (EPA Certification in Indian Country)
<b>Date:</b> <u>06/8/15</u> <b>Time</b> (start/stop): <u>1:00pm - 3:30 p</u> <b>Location:</b> (NWR or <u>WPA</u> ) <u>Upsata</u> <b>County:</b> <u>Powell</u>	Applicators/Operator:   J. Zarate  J. Wilson A. Crockett  A. Kaiser D. Miller
Weather Conditions: Wind: 4 MPH, direction fr	rom <u>S</u> Temp.: <u>88</u> °F Humidity: <u>35</u> %
All products are diluted with water. Trade Nam  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix
Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other ☐ Dye Used/Rate: Highlight 3oz/10gal ☐ Adjuvant Used: Syl-tac 4oz/ac
<b>Equipment Used:</b> ATV GPA 74	ndgun Broadcast
Backpack GPA	Mechanical Click here to enter text.
<del></del>	Amt. of Chemical Applied: <u>.068</u> Acres Treated: <u>0.03</u>
Vegetation Treated:       □ Absinthe wormwood       □ Dalmatian toadflat         □ Baby's breathe       □ Dame's rocket         □ Blueweed       □ Hoary alyssum         □ Bull thistle       □ Houndstongue         □ Canada thistle       □ Italian bugloss         □ Cheatgrass       □ Leafy spurge         □ Common tansy       □ Meadow hawkweet         □ Common teasel       □ Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other:
	e-Flowering
Location #1 (Site specific description): The hill between the two roads by the south gate. Diverse wildflowers.	COMMENTS: Houndstongue was flowering Spotted knapweed was rosette
Location #2 (Site specific description):	

US Fish and Wildlife Service – *Invasive Species Strike Team*922 Bootlegger Trail Great Falls, MT 59404
406-544-2552

Date: 4116 Time (start/stop): 7:00 - 4:30	Applicators/Operator: \( \subseteq \text{L. Morgan} \)
Location: (NWR or WPA) Upsata WPA	G. McClure K. Schuetz
County: Powell	☐ B. Sparklin
Weather Conditions: Wind: _5_MPH, direction from _	West Temp.: 62 F Humidity: 71 %
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519
☐ Plateau – BASF #241-365 ☐ Telar XP – DuPont #352-654 ☐ Tordon & Telar XP ☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6	Other Tordon 3202/ac  Overdrive @ levelac  Dye Used/Rate: Hi-light  Adjuvant Used: MSO @ 1602/ac
Equipment Used: ATV GPA 13.01 Handgun Backpack GPA App. Rate: Gallons Sprayed: 20 Amt. of Cl	Broadcast  Mechanical  Mechanical  Memical Applied:  Acres Treated:  49.19 02 Tordon  9.22 02 Avendarive
Vegetation Treated:  Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Orange hawkweed       ✓ Spotted knapweed         Oxeye daisy       ✓ Sulfur cinquefoil         Perennial pepperweed       Tall buttercup         Poison hemlock       Tansy ragwort         Purple loosestrife       Whitetop         Russian knapweed       ✓ Yellow toadflax         Russian olive       Yellowflag iris         Saltcedar       Other
Plant Phenology & Stage: Basal Rosette Pre-Flower Senescing Senesced	ring Rowering Post-Flowering
Att-ISST visited and treated all  historic V. toadflax locations.  Some areas were larger than historical  data showed.  Found quite a few newl never before  right	WENTS:  Was asked to treat all invasive species the mighbors property (cabin in the Northcom applicable, most of the infested areas be broadcast sprayed.  ments will be made around all buildings up to the edge of houses, ladge, + office dings.

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9/14/15 Time (start/stop): 700-4  Location: (NWR or WPA) 5 6  County: 6 6 6 1  Weather Conditions: Wind: 5 MPH, direction	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  from West Temp.: Ly of Humidity: 71 %
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP	P-Manufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Adjuvant Used:
☐ Transline – Dow AgroSciences #62719-259 ☐ Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ☐ ATV GPA 13.01 ☐ Ha ☐ Backpack GPA	Syl-Tac @ 1-28 02/10gal
App. Rate: 102/04 Gallons Sprayed: 40 An Vegetation Treated:  Absinthe wormwood Dalmatian toadflar Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle  Plant Phenology & Stage: Basal Rosette Pre Senescing Ser	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Other
Location #1 (Site specific description):	COMMENTS:
Started at WPA entrance and Sprayed all the knapweed found between lodge + entrance, Road and lakeshore.	
Cayenana	

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9-16 Time (start/stop): Location: (NWR or WPA) & County: Weather Conditions: Wind: MPH, direction	G. McClure K. Schuetz B. Sparklin
All products are diluted with water. Trade Name Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA/O. A  Backpack GPA  App. Rate: 1946 Gallons Sprayed: Sc. Am	☐ Tordon & Distinct – Tank Mix Dow AgroSciences #62719-6 / BASF #7969-150 ☐ Metcel & Milestone – Tank Mix Agsurf #352-439-8558 / Dow AgroSciences #62719-519 ☐ Escort XP & Milestone – Tank Mix DuPont #352-439 / Dow AgroSciences #62719-519 ☐ Other ☐ Other ☐ Dye Used/Rate: // / / / / / / / / / / / / / / / / /
Vegetation Treated:  Absinthe wormwood Baby's breathe Blueweed Bull thistle Canada thistle Cheatgrass Common tansy Common teasel  Plant Phenology & Stage:  Basal Rosette Pre- Senescing Senescing  Dalmatian toadflax Dame's rocket Hoary alyssum Houndstongue Italian bugloss Leafy spurge Meadow hawkweed Musk thistle	Oxeye daisy  Perennial pepperweed  Poison hemlock  Purple loosestrife  Russian knapweed  Russian olive  Sulfur cinquefoil  Tall buttercup  Tansy ragwort  Whitetop  Yellow toadflax  Yellowflag iris  Saltcedar  Other
Location #1 (Site specific description):	COMMENTS:

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9.16 Time (start/stop): Location: (NWR or WPA) S./a County: Weather Conditions: Wind:MPH, direction fi	Applicators/Operator: L. Morgan G. McClure K. Schuetz B. Sparklin Temp.: °F Humidity:%
All products are diluted with water. Trade Name-I Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6  Equipment Used: ATV GPA Backpack GPA App. Rate: //o CGallons Sprayed: 9.25 Amt.  Vegetation Treated: Absinthe wormwood Dalmatian toadflax Baby's breathe Dame's rocket Blueweed Hoary alyssum Bull thistle Houndstongue Canada thistle Italian bugloss Cheatgrass Leafy spurge Common tansy Meadow hawkweed Common teasel Musk thistle	Tordon & Distinct – Tank Mix   Dow AgroSciences #62719-6 / BASF #7969-150   Metcel & Milestone – Tank Mix   Agsurf #352-439-8558 / Dow AgroSciences #62719-519   Escort XP & Milestone – Tank Mix   DuPont #352-439 / Dow AgroSciences #62719-519   Other
Plant Phenology & Stage: Basal Rosette Pre-F Senescing Sene	
Location #1 (Site specific description):	COMMENTS:

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9-16-15 Time (start/stop): 7, 15-4,60  Location: (NWR or WPA)	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 62 °F Humidity: 7/ %	
All products are diluted with water. Trade Name-Man Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate:  Adjuvant Used:	
Equipment Used: ATV GPA   3.06	Chemical Applied: Acres Treated:  Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other	
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing		
	MMENTS:  Oct Start  Oct End  Tutel	

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9-15 Time (start/stop): 7, 15-4, or Location: (NWR or WPA) Was Charles Wind: 5 MPH, direction from the start of the	G. McClure K. Schuetz  B. Sparklin	
All products are diluted with water. Trade Name-M.  Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Innufacturer, EPA Registration #:  Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Overdire & Goz / Mc  Adjuvant Used: MSO   De / Mc	
Equipment Used: ATV GPA 3.0 Hands  App. Rate: Gallons Sprayed: Amt. Gallons Sprayed: Amt	Broadcast   Mechanical   Acres Treated:   Orange hawkweed   Spotted knapweed   Sulfur cinquefoil   Tall buttercup   Tansy ragwort   Whitetop   Russian knapweed   Whitetop   Yellow toadflax   Yellowflag iris   Saltcedar   Other   Other	
Plant Phenology & Stage: Basal Rosette Pre-Flowering Flowering Post-Flowering Senescing Senesced		
	OMMENTS: Start 7g + 10g Excl 0g Total 17g	

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9   17   5   Time (start/stop): 8:30 - 11:  Location: (NWR or WPA)   WPSATA   WPA    County:     Weather Conditions: Wind: MPH, direction    All products are diluted with water. Trade Name   Aquaneat - NuFarm #228-365    Chaparral - Dow #62719-597    Curtail - Dow AgroSciences #62719-48    EscortXP - DuPont #352-439    Habitat - BASF #241-426    Metcel VMF - Agsurf #352-439-8558    Milestone - Dow AgroSciences #62719-519    Plateau - BASF #241-365    Telar XP - DuPont #352-654	G. McClure K. Schuetz B. Sparklin  from Temp.: \( \frac{1}{2} \) F Humidity: \( \frac{1}{0} \) %	
Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	<ul><li>Dye Used/Rate: Hi-light</li><li>Adjuvant Used: 57L-Tac</li></ul>	
Equipment Used: ATV GPA 13.01	Mechanical   Me	
Plant Phenology & Stage:   ☐ Basal Rosette ☐ Pre-Flowering ☐ Flowering ☐ Post-Flowering ☐ Senesced		
Location #1 (Site specific description): Sprayed all lenapseed around neighbors carbins up to WPA property. Started transecting in SE corner of WPA treating entire infested area.	5.36 5.36 (0.72	

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

Date: 9-17-15 Time (start/stop): Location: (NWR or WPA)	Applicators/Operator: L. Morgan G. McClure K. Schuetz
County: Powoll	B. Sparklin
Weather Conditions: Wind: MPH, direction from	Temp.: 46 °F Humidity: 64 %
All products are diluted with water. Trade Name-Ma Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	
App. Rate: Part GPA GPA App. Rate: Pre-Flow Senescing GPA Handgu App. Rate: Pre-Flow Senescing GPA App. Rate: Pre-Flow Senescing GPA Amt. of Wegetation Treated: Absinthe wormwood Dalmatian toadflax Dame's rocket Dame's rocket Hoary alyssum Houndstongue Leafy spurge Meadow hawkweed Musk thistle Grand Handgu Amt. of Wegetation Treated: Houndstand Handgu Amt. of Wegetation Treated: Houndstand Handgu Amt. of Wegetation Treated: Houndstand Handgu Amt. of Wegetation Treated: Handgu Amt. of Wegetation Treate	☐ Mechanical   Chemical Applied: Para Acres Treated:   ☐ Orange hawkweed ☐ Spotted knapweed   ☐ Oxeye daisy ☐ Sulfur cinquefoil   ☐ Perennial pepperweed ☐ Tall buttercup   ☐ Poison hemlock ☐ Tansy ragwort   ☐ Purple loosestrife ☐ Whitetop   ☐ Russian knapweed ☐ Yellow toadflax   ☐ Russian olive ☐ Yellowflag iris   ☐ Saltcedar ☐ Other    Wering ☐ Flowering ☐ Post-Flowering
	MMENTS:  ord  ord  ord  ord  ord  ord  ord  or

US Fish and Wildlife Service – *Invasive Species Strike Team* 922 Bootlegger Trail Great Falls, MT 59404 406-544-2552

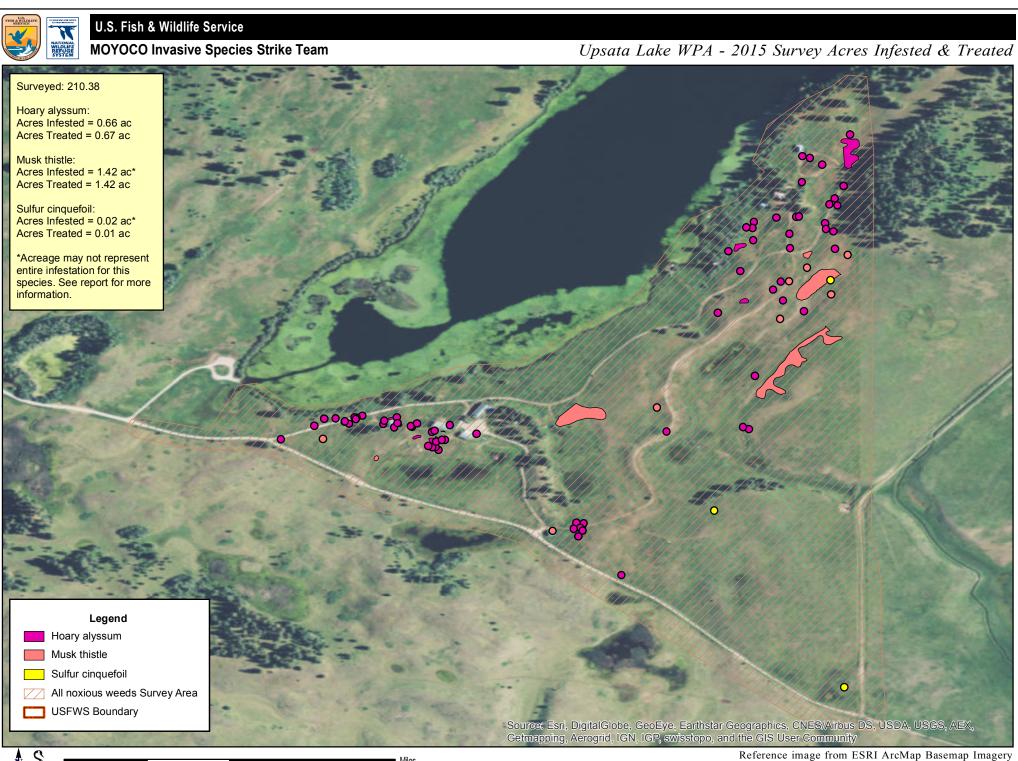
Date: 9-17-15 Time (start/stop): 8.35-12.00  Location: (NWR or WPA)	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 46 °F Humidity: 49 %
All products are diluted with water. Trade Name-Manual Aquaneat – NuFarm #228-365  Chaparral – Dow #62719-597  Curtail – Dow AgroSciences #62719-48  EscortXP – DuPont #352-439  Habitat – BASF #241-426  Metcel VMF– Agsurf #352-439-8558  Milestone – Dow AgroSciences #62719-519  Plateau – BASF #241-365  Telar XP – DuPont #352-654  Tordon & Telar XP  Transline – Dow AgroSciences #62719-259  Tordon 22K – Dow AgroSciences #62719-6	Infacturer, EPA Registration #:  ☐ Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  ☐ Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  ☐ Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  ☐ Other
Equipment Used: ATV GPA 13.06  Handgun    Backpack GPA   Amt. of Component Used: Backpack GPA	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Saltcedar Spotted knapweed Sulfur cinquefoil Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Other
Location #1 (Site specific description):  NE Section of boundary  From Cabins at property  Line South transecting  Spraying Knapweed! musk rosetter	MENTS: $5.36$ $10,9$

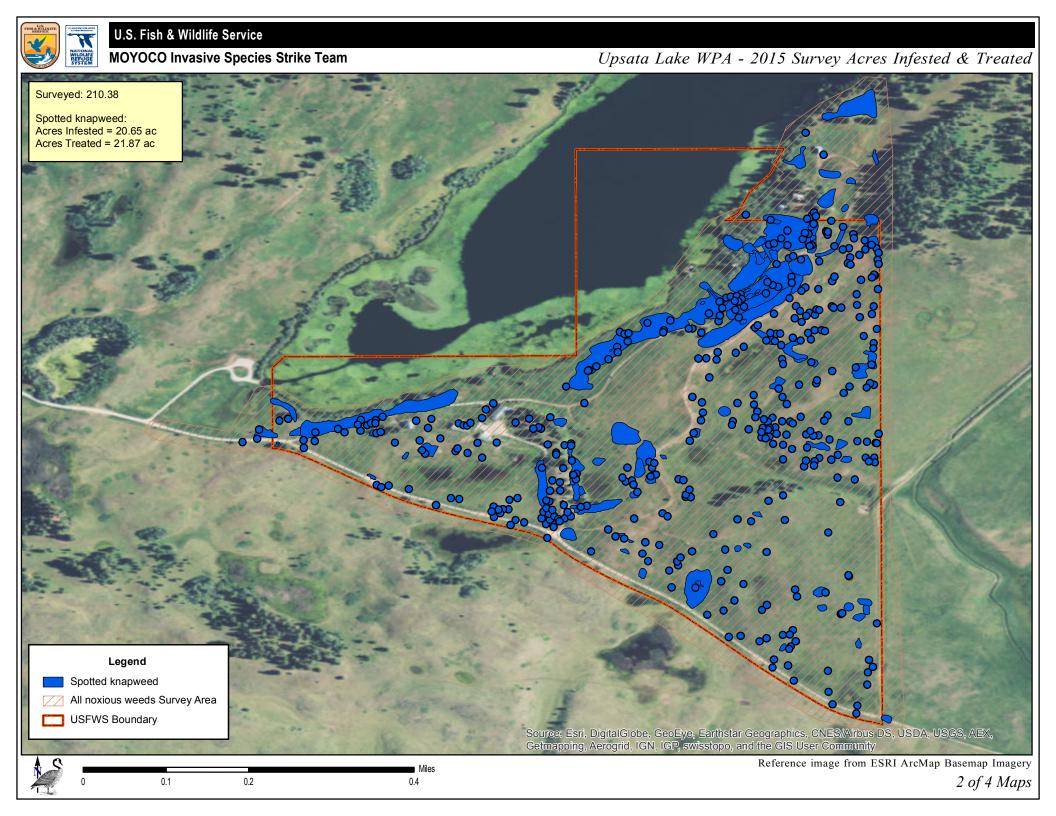
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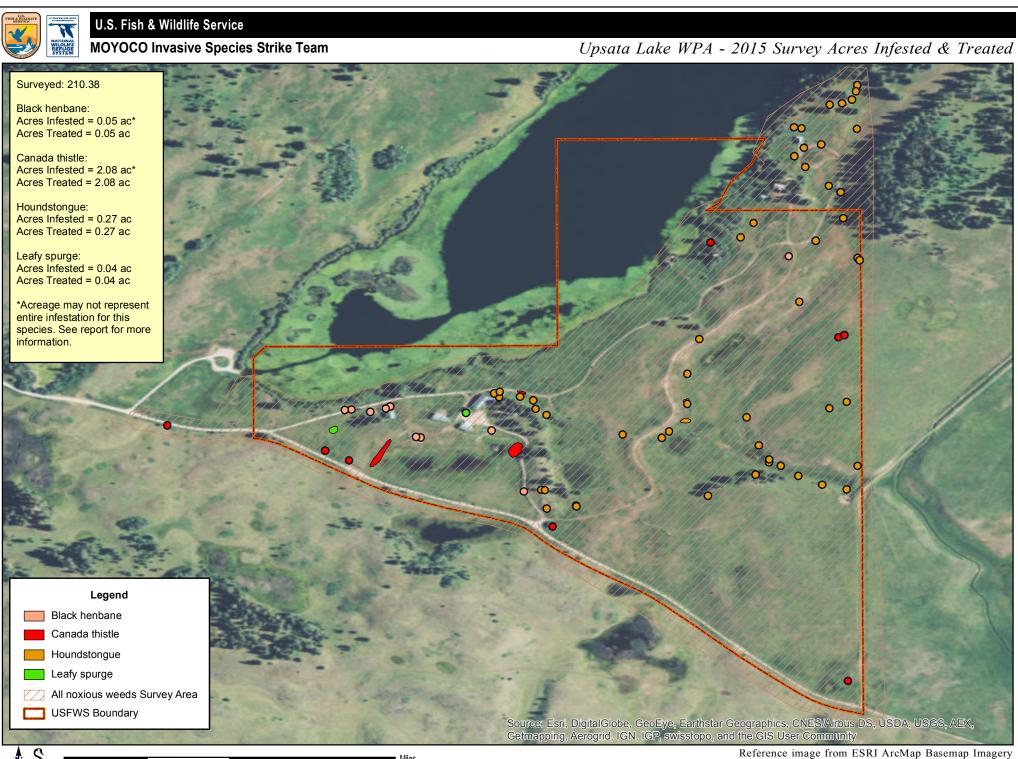
	•
Date: 9-21-15 Time (start/stop): Location: (NWR or WPA) Location: (NWR or WPA) Weather Conditions: Wind: MPH, direction from	Applicators/Operator: L. Morgan  G. McClure K. Schuetz  B. Sparklin  Temp.: 79 %
All products are diluted with water. Trade Name-Manu	facturer FPA Registration #
Aquaneat − NuFarm #228-365  Chaparral − Dow #62719-597  Curtail − Dow AgroSciences #62719-48  EscortXP − DuPont #352-439  Habitat − BASF #241-426  Metcel VMF− Agsurf #352-439-8558  Milestone − Dow AgroSciences #62719-519  Plateau − BASF #241-365  Telar XP − DuPont #352-654  Tordon & Telar XP  Transline − Dow AgroSciences #62719-259  Tordon 22K − Dow AgroSciences #62719-6	Tordon & Distinct – Tank Mix  Dow AgroSciences #62719-6 / BASF #7969-150  Metcel & Milestone – Tank Mix  Agsurf #352-439-8558 / Dow AgroSciences #62719-519  Escort XP & Milestone – Tank Mix  DuPont #352-439 / Dow AgroSciences #62719-519  Other  Dye Used/Rate: Hill  Adjuvant Used: Silver
Equipment Used: ATV GPA Handgun	☐ Broadcast
Backpack GPA   Gallons Sprayed:   Amt. of Classification Treated:   Dalmatian toadflax   Dame's rocket   Blueweed   Hoary alyssum   Bull thistle   Houndstongue   Canada thistle   Italian bugloss   Cheatgrass   Leafy spurge   Common tansy   Meadow hawkweed   Musk thistle   Pre-Flower   Senescing   Senesced   Senesced	Mechanical   Acres Treated:   Acres Treated:   Spotted knapweed   Sulfur cinquefoil   Perennial pepperweed   Tall buttercup   Tansy ragwort   Purple loosestrife   Whitetop   Yellow toadflax   Russian knapweed   Yellowflag iris   Saltcedar   Other   Other   Post-Flowering   Po
Fireshed striver and sprang of Shapmand & Ther	MENTS:  Tool  U  B  10  U  B  17  U  B  18  B  18  U  B

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Date: 9-2/-/5 Time (start/stop): 10, 30-4 ( Location: (NWR or WPA) (1/50-4)  County: Powell  Weather Conditions: Wind: 8 MPH, direction from 2	G. McClure K. Schuetz B. Sparklin
All products are diluted with water. Trade Name-Manu Aquaneat – NuFarm #228-365 Chaparral – Dow #62719-597 Curtail – Dow AgroSciences #62719-48 EscortXP – DuPont #352-439 Habitat – BASF #241-426 Metcel VMF– Agsurf #352-439-8558 Milestone – Dow AgroSciences #62719-519 Plateau – BASF #241-365 Telar XP – DuPont #352-654 Tordon & Telar XP Transline – Dow AgroSciences #62719-259 Tordon 22K – Dow AgroSciences #62719-6	
Equipment Used: ATV GPA Handgun  Backpack GPA  App. Rate: Gallons Sprayed: Amt. of Clause of Cla	Orange hawkweed Oxeye daisy Perennial pepperweed Poison hemlock Purple loosestrife Russian knapweed Russian olive Spotted knapweed Tall buttercup Tansy ragwort Whitetop Yellow toadflax Yellowflag iris Saltcedar Other
Location #1 (Site specific description):  Confinned Frem NE Section Stephen Stephen Stephen Fence like the two to upper road moving sund To meet are many north	MENTS:  At 105  109  1,76  Al 209







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