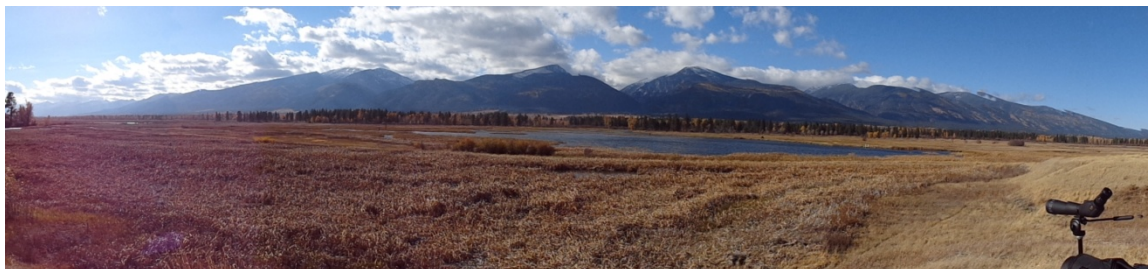


Lee Metcalf National Wildlife Refuge

Lee Metcalf ISST

Accomplishments

Weed Species	Total Survey Acres ¹	Survey Acres Infested ²	Acres Treated ³
Canada thistle	0	0.03	0.02
Cheatgrass	7.93	1.85	1.85
Common tansy	0	0.01	0.005
Dalmatian toadflax	13.85	0	0
Hoary alyssum	185.02	0.07	0.07
Houndstongue	9.32	1.27	1.33
Italian bugloss	88.61	0.52	0.52
Leafy spurge	194.65	1.90	1.90
Musk thistle	0	0.02	0.02
Oxeye daisy	126.24	0.18	0.18
Spotted knapweed	3.36	1.39	1.39
St. Johnswort	126.94	0.45	0.42
Sulfur cinquefoil	135.64	0.42	0.42
Yellow toadflax	205.78	3.79	3.79
Project Site Totals	772.52	11.88	11.90
¹ Area covered during the course of weed management activities regardless of presence or absence of target weed species as measured by perimeter in GIS. ² 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. ³ The area or subset of infested area that has received some form of treatment as measured by GPS feature.			



The Lee Metcalf National Wildlife Refuge offers spectacular views of wetlands, woodlands, mountains and ample wildlife viewing opportunities for visitors. Photo by Gina Mazza.

Highlights

Schedule

Dates	Project Type	Target Species	Size of Crew	Project Notes
29-May-2012 to 31-May-2012	Mechanical Treatment	Hoary alyssum, Houndstongue, Sulfur cinquefoil	4	Rainy weather throughout training week. Crew worked on systematic transecting, mechanical treatments and mapping in various locations.
	Inventory & Monitoring			

4-June-2012	EDRR Mechanical Treatment	Hoary alyssum	2	Field I-4 north of the maintenance area. Severe weather came in.
5-June-2012	Refuge Project Mechanical Treatment	Houndstongue	2	East of the golf course, started during training week. Worked in area known to historically support native Bitterroot flowers.
		Hoary alyssum	1	NE corner started during training week.
6-June-2012	Refuge Project Mechanical Treatment	Houndstongue	3	Continued work in the historic "Bitterroot" area.
18-June-2012 to 20-June-2012	EDRR Mechanical Treatment	Italian bugloss	3 to 4	Mechanically treated small infestations and isolated plants during poor weather and mapped large infestations that were treated with herbicide after weather improved.
	EDRR Inventory & Monitoring			
	EDRR Chemical Treatment			
2-July-2012 to 3-July-2012	Refuge Project Inventory and Monitoring	Oxeye daisy, St. Johnswort, Sulfur cinquefoil	3	Treated (when possible) and monitored target weeds in the Wildlife Viewing Area (WVA).
	Refuge Project Chemical Treatment			
30-July-2012 to 2-August-2012	Refuge Project Inventory and Monitoring	Oxeye daisy, St. Johnswort, Sulfur cinquefoil	1	Continued treatment in the WVA.
	Refuge Project Chemical Treatment			
4-Sept-2012 to 6-Sept-2012	Refuge Project Inventory and Monitoring	Yellow toadflax	3	Treated historical locations based on ISST data from 2009-2011.
	Refuge Project Chemical Treatment			
9-October-2012 to 11-October-2012	Refuge Project Inventory and Monitoring	Leafy spurge	2-3	Treated historical locations based on ISST data from 2009-2011.
	Refuge Project Chemical Treatment			
11-October-2012	Refuge Project	Restoration Plant Areas	2	Truck water tank used to watered as many restoration plant areas possible within an afternoon.
15-October-2012	Refuge Project Chemical Treatment	Cheatgrass	2	Used remaining <i>Plateau</i> in tanks from previous week on cheatgrass in areas requested by refuge manager.

Coordination and Cooperation

- ISST did not receive any treatment proposals from Lee Metcalf NWR for the 2012 field season. Therefore all projects completed were based on work done in previous years and through verbal coordination with Biological Sciences Technician, Deborah Goslin and Refuge Manager Tom Reed.
 - The Deborah Goslin was readily available for coordinating with ISST but often had to defer to the Manager for project priorities and approvals which at times created delays and left project priorities unclear. ISST and the refuge both could benefit from earlier, close coordination to outline seasonal projects.
- Through a cooperative agreement, the refuge also has a Ravalli County Weed District employee, Tim Peterson, working on the site throughout the summer. ISST also coordinated with him to prevent duplicate efforts and over-application of herbicides.

- ISST minimized use of ATV's for treatments on the refuge. The majority of work done this season was with backpack sprayers or mechanical treatment.
 - All off-road work completed with ATVs was approved by the Refuge Manager prior to use due to concerns of potential adverse effects to ground nesting birds, unavoidable ATV tracks when vehicles were used, and ongoing restoration. Additionally, ISST consulted with the manager to obtain preferred methods of treatment.
 - Impacts to the landscape were further reduced by ISST working to manage multiple species at the same time. But given the constraints of appropriate herbicide application and timing for effective treatment this could not always be done. Therefore some areas had to be covered more than once to effectively treat targeted species.

Prevention and Education

- As the ISST host station, the refuge received a wide variety of support from the Strike Team throughout the season. Including but not limited to the following:
 - ISST supplied free informative weed pamphlets, books, brochures, etc.;
 - Information on upcoming workshops, literature and available resources;
 - Plant identification, weed management and restoration information;
 - GIS and GPS support (limited due to availability); and
 - Updates on field observations such as wildlife sightings, native plants, public comments and use, etc.

Early Detection and Rapid Response

Dalmatian Toadflax

- No Dalmatian toadflax was found on site in 2012.
 - Surveys for this species were conducted in the far NE corner and in the three-way intersection located NW of Pond 10 in an effort to remove any developing seeds mid-summer and again later in fall for herbicide treatment.
 - Infestations mapped as Dalmatian toadflax in 2011 near the golf course, totaling approximately 0.36 acres, were not reported to the Crew Leader (as is protocol for new invaders) for verification and early treatment if applicable. Therefore this area was re-surveyed in 2012 to determine presence/absence of this species. ISST did not find any Dalmatian toadflax in this area and suspect the plants mapped in 2011 were actually yellow toadflax that was mapped as the wrong species.

Hoary Alyssum

- Hoary alyssum was targeted throughout the 2012 season and all plants found were treated.
 - All areas known to support this species with historical locations collected in 2010 and 2011 were thoroughly transected. The team remained on alert for this species at all times while working on the refuge.
 - The majority of the survey and treatment work was performed on foot, but ISST was given permission to use ATVs for follow-up surveys in the NE corner, along the roads, and the I-4 field.
 - Treatment methods included hand-pulling, removal with shovels, backpack sprayers and ATV handgun spraying.
 - Large fields in the north of I-4 are being disked as part of a weed treatment and restoration plan. So these areas were not included in this year's survey efforts.
 - Although the survey areas from year-to-year have minor differences, it appears that targeting this plant with an aggressive treatment plan over the past two years has been effective. Acres infested have



Hoary alyssum is easy to identify during flower, which has four petals that are distinctly divided in two.
Photo by Jessica Zarate.

decreased from nearly 3.5 acres in 2010 to 0.7 acres in 2012 and the reduction in density of plants is apparent.

- While this plant is easy to identify during flowering, it has several look-a-likes in its rosette stage such as the non-native gray stickseed (*Hackelia cinerea*) and native hairy goldenaster (*Heterotheca villosa*). Careful identification is necessary when mapping and treating this species pre-flowering. This is noteworthy because the best results of herbicide treatments are known to occur when applied at pre-flower to early bud stages in phenology.
- ISST recommends mechanical and chemical treatments continue until this species is eradicated. Monitoring of these areas for this species should remain in place to prevent reinvasion from seed sources.

Italian Bugloss

- Surveys for Italian bugloss were conducted in the S-2 field and the East side of the I-3 field. The small field located south of the Visitor Center is being routinely disked as part of a weed treatment and restoration plan for this area. Therefore, only the margins of this field were surveyed and treated by ISST.
 - Areas covered were surveyed on-foot, and all bugloss plants found were mapped and treated.
 - Because the field south of the visitor center and the I-3 field are actively undergoing restoration, plants found were treated using mechanical methods only in these areas. The S-2 field was treated using both mechanical and chemical methods.
 - All historic map locations of this species were uploaded to GPS units to ensure areas where the plant had been previously found were thoroughly searched.
 - Italian bugloss was notably absent from the southern portions of the S-2 field but evidence of previous herbicide use was seen at each location treated in 2011.
- Italian bugloss requires multiple surveys and ongoing treatment within the same season for the most effective control due to multiple flushes.

Inventory and Monitoring

- Plants were inventoried and monitored on occasion this season but primarily projects were focused on treatment of noxious weeds.
 - Some plants were monitored as part of the initial GPS training which is conducted with crew members at the start of the field season.
 - Targeted weeds were mapped rather than treated during inclement weather so that they could be treated after weather improved. In addition priority weeds were mapped only without treatment if they occurred in areas that were not suitable for herbicide application and/or were not able to be effectively controlled mechanically due to the infestation size or growth habit. Yet, with mapping the total infested acres could still be calculated and be in the database for future treatment.
 - Plants were occasionally mapped for further identification purposes also, but weeds verified as noxious weeds were maintained in the geodatabases.
- During the last week of the field season, ISST had a few hundred gallons of water on hand that was to be emptied for winterizing. ISST coordinated with the refuge to get locations of restoration plants needing water and spent one afternoon watering as many of these areas as possible.
 - A two person team used ISST trucks, tanks, a pump and several hundred feet of linked garden hoses to reach and water plants.
 - Since ISST participated in this special project, the Crew Leader also digitized all restoration plant areas to assist the refuge in documenting efforts made toward their long-term habitat restoration goals.

Management

- The Crew Leader met with Refuge Manager prior to beginning work in the WVA to discuss target species, and herbicide application in areas open for public use. Although the need for a public notice had been requested in the past, the Refuge Manager determined it would not be necessary

- for projects proposed in the area. The Manager requested ISST a post sign at the trail head and the information kiosk to notify trail users that herbicide was being applied. The sign included the herbicide used and date of application and was removed one to two days following application.
- During hunting season, ISST met again with Refuge Manager to discuss areas proposed for work within the open hunting area, equipment use and necessary pre-cautions to ensure safety. The work being completed was along the river within an area open for bow hunting. Therefore, ISST was asked to park a truck at the top and bottom of the section they were working to signal to hunters they were in the area. All work was to be completed with backpack sprayers because ATV use during hunting season is prohibited.

Sulfur Cinquefoil

- Proposals from 2011 requested treatment of sulfur cinquefoil in the WVA which was unable to be completed that year due to significant flooding. Therefore, this year ISST targeted this plant as a priority species and worked to survey and treat all infestations found.
- Sulfur cinquefoil is historically known to be present in the WVA and the far NE corner of the refuge so these areas were the primary focus for treatment. However the crew was always on watch for this species even when targeting other species.
- The majority of sulfur cinquefoil found this season was within the northern portions of the WVA. Crews worked slowly and carefully to detect as many sulfur cinquefoil plants as possible but its growth habit, color and the thick surrounding riparian vegetation make detection difficult. Plants that are hard to detect not only take more time for inventory and treatment but also have a higher instance of plants that go undetected and therefore not treated.
- Sulfur cinquefoil was treated in 2011 in the NE corner and only a few isolated patches were detected this year suggesting successful treatment.
- In the SE corner, two small patches of sulfur cinquefoil plants were removed while the crew was surveying for hoary alyssum.
- With less than half an acre mapped this season, ISST recommends the refuge keep this species a priority for future management and a good chance of eradication for this area.

Oxeye Daisy and St. Johnswort

- Oxeye daisy and St. Johnswort infestations are scattered throughout the western half of the refuge. These plants were only targeted as priorities for treatment within the WVA.
- ISST surveyed and treated oxeye daisy, St. Johnswort, and sulfur cinquefoil simultaneously since all were actively growing and susceptible to *Milestone* herbicide.
- The crew searched for biocontrol beetles (*Chrysolina* sp.) but none were found in the WVA and to date have only been seen on the northern most infestations.
- Again, the riparian vegetation made finding all oxeye daisy and St. Johnswort plants challenging and infestations may be larger than what was mapped.
- ISST has worked on these species as priorities over the last few years and both occur in woodland habitats and sandy soils which make them difficult to treat because site limitations reduce herbicide options available. Oxeye daisy however appears to be somewhat more manageable with ongoing treatments since its distribution and abundance is less extensive than St. Johnswort.
- ISST recommends management efforts for these species continue specifically targeting smaller and satellite infestations first. An adaptive management plan should be prepared to evaluate the best management options available for controlling larger infestations.

Leafy Spurge

- Leafy spurge occurs on the west side of the refuge within the riparian corridor of the Bitterroot River. Much of the infestation is located close to water, on sandy soils and seasonally floods which limits the herbicide treatment options for this species.
 - Focused surveys were conducted and all plants found were treated.
 - In several of the historic locations, there was dead vegetation in areas treated last season and if there were leafy spurge plants remaining they often appeared less dense than previous years.
 - Many plants found this year during treatment were very dry and contained no milky sap, which is likely due to drought conditions this season. But ISST has had success on other

sites where plants were dry and took up the herbicide, effectively reducing and in some cases eradicating infestations treated.

- ISST recommends the refuge keep treatment of this species a priority. Leafy spurge is an aggressive invader and will not only exponentially expand and degrade the riparian habitat on the refuge but will also continue to be a seed source for new infestations downstream if left untreated. An adaptive management strategy should be devised for dealing with this species that includes reducing seed production, prevention of seed dispersal, as well as containment and reduction of existing populations.

Yellow toadflax

- Yellow toadflax is wide spread throughout the refuge with large infestations occurring within the understory of the riparian corridor. Due to limited time to work on this project, not all areas known to support this species could be surveyed and/or treated this season.

- ISST used historic data from 2009-2011 to determine priority areas for treatment. The team targeted smaller, satellite infestation first and then worked to treat all infestations in the WVA and as far North as time allowed.
- A single infestation occurs east of the maintenance area in the I-4 field. Other satellite populations had been previously mapped in the southeast region of the site but several more patches were found during surveys this year.
- All yellow toadflax plants found were treated. Some plants were very dry when found but were still sprayed.
- Control of yellow toadflax infestations on the refuge will be long-term and costly given the extensive size and distribution of patches present throughout the site. Yellow toadflax is an aggressive invader and difficult to control. ISST recommends the refuge consider evaluating the infestations known to occur and prioritize areas for treatment. An adaptive management plan should be prepared to guide treatment and monitoring efforts over time.



Gina Mazza spraying yellow toadflax at the Lee Metcalf NWR.
Photo by William Schlegel.

Houndstongue, Musk thistle, Canada thistle and Common tansy

- Houndstongue, musk thistle, Canada thistle and common tansy were treated and/or mapped this season under the following circumstances:
 - Houndstongue and musk thistle are targeted for mechanical treatment during periods of inclement weather since these species respond well to this method of control and these are refuge priority species for removal.
 - Immediately following ISST orientation, crews undergo a training week where ISST works together to get hands-on practice using ISST protocols for surveying, mapping and management.
 - Focused surveys for houndstongue removal were conducted in the area known to historically support native Bitterroot flowers. The crew worked to mechanically treat flowering plants and remove old seeds stalks. While some seedlings were removed, the infestation is far too large for all houndstongue to be removed by hand within the time available for this project. ISST also carefully searched for the Bitterroot flowers but none were found. Care was taken to carefully remove weeds in this area as to not create additional niches for weed invasion.
 - Canada thistle is widespread throughout the refuge and was often treated incidentally as it is frequently growing with other weeds that are being targeted.

- Houndstongue and Canada thistle were targeted a few hours one afternoon, east of Pond 3 in an effort to use a few gallons of *Escort XP* herbicide effectively while also quickly emptying a tank so it could be used for other priority treatments.
- Common tansy is also abundant and widespread on the refuge and as such this species is not a priority for ISST mapping or treatment. Plants mapped and treated were only incidental.



ISST works with care to enhance habitats that are being invaded by weeds for improved wildlife utilization. Photo by Eric Angle.

Spotted Knapweed

- Spotted knapweed is wide-spread and abundant on the refuge and therefore typically is not a priority species for treatment by ISST. However, ISST planned to work on this species as time was available and proposed to spray spotted knapweed along the private roadway that provides primary access to the northern portion of the refuge to staff. This area was selected for treatment because it is a road that sustains vehicle traffic somewhat regularly by staff and untreated it acts as a seed source and vector for dispersal of spotted knapweed.
 - At the end of the week, ISST began this project using a few gallons of *Milestone* herbicide that needed to be used up before changing herbicides for work on another project.
 - The portion of the road treated extends from the gated entrance at Wildfowl Lane to the second split (where it continues northward or West to the burn pile area). This section of roadway and roughly ten feet to either side of the roadway was sprayed using an ATV.
 - The team had intended to continue treatment of the entire roadway at a later date but was only able to complete a small section because other priorities took precedence.
- ISST recommends the refuge make treatment of noxious weeds on roadways and their right-of-way a priority to be done on a scheduled basis. Removing weeds from these areas can both help contain large infestations and prevent their spread to other parts of the refuge.

Cheatgrass

- Cheatgrass is found in many areas on the refuge, and while it is a refuge priority for removal, it is not typically mapped or treated by ISST. This is because long-standing, wide-spread infestation projects are refuge maintenance that must include implementing consistent management for containment or reduction if possible over many years.
- The last week of the season, ISST had a few gallons of *Plateau* in ATV sprayers from other treatments. Rather than continuing treatment of yellow toadflax, the Refuge Manager requested this herbicide be used to treat cheatgrass and specified several locations that could be targeted.
 - ISST sprayed as much as possible with the herbicide remaining in their tanks only and mapped all areas treated. More cheatgrass is present surrounding patches sprayed.

Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	E. Angle	W. Schlegel
Date	5/30/12	5/30/12
County	Ravalli	Ravalli
Time Start/Stop	10:00-12:00 / 12:30-17:00	10:00-12:00 / 12:30-17:00
Temperature	64°F	64°F
Relative Humidity	38%	38%
Wind Speed/Direction (from)	6mph NW	6mph NW
Pesticide Manufacturer	-	-
Trade Name	-	-
EPA Reg # or Formulation	-	-
Rate: Product/Diluent Per Acre	-	-
Amount of Chemical Applied	-	-
Equipment Used (atv,backpack,truck,saw)	-	-
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	Hand-pull/ Shovel	Hand-pull/ Shovel
Plant Phenology & Stage	Flowering	Flowering
Dominant Pest(s)	Houndstongue	Houndstongue
Equipment Used	Shovel	Shovel
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename		

Location #1 (Site specific description) F4 and South Half of F3 Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....)
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza, W. Schlegel	G. Mazza, W. Schlegel, E. Angle
Date	6/4/12	6/4/12
County	Ravalli	Ravalli
Time Start/Stop	8:00-12:30	15:00-17:00
Temperature	52°F	64°F
Relative Humidity	82%	73%
Wind Speed/Direction (from)	0-3 mph NNW	5 mph N
Pesticide Manufacturer	-	-
Trade Name	-	-
EPA Reg # or Formulation	-	-
Rate: Product/Diluent Per Acre	-	-
Amount of Chemical Applied	-	-
Equipment Used (atv,backpack,truck,saw)	-	-
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	Shovel	Shovel
Plant Phenology & Stage	Bolting	Bolting
Dominant Pest(s)	Hoary Alyssum	Hoary Alyssum
Equipment Used	Shovel	Shovel
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename		

Location #1 (Site specific description) North of Headquarters, Field I-4 Location #2 (Site specific description) NE corner of Refuge	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... First Application: <10 plants Second Application: ~150 plants
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	G. Mazza
Date	6/5/12	6/5/12
County	Ravalli	Ravalli
Time Start/Stop	11:30-12:30	11:30-12:30
Temperature	62°F	62°F
Relative Humidity	48%	48%
Wind Speed/Direction (from)	10 mph NW	10 mph NW
Pesticide Manufacturer	-	-
Trade Name	-	-
EPA Reg # or Formulation	-	-
Rate: Product/Diluent Per Acre	-	-
Amount of Chemical Applied	-	-
Equipment Used (atv,backpack,truck,saw)	-	-
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	Hand-pull/ Shovel	Hand-pull/ Shovel
Plant Phenology & Stage	Bolting / Flowering	Bolting / Flowering
Dominant Pest(s)	Houndstongue	Houndstongue
Equipment Used	Shovel	Shovel
Acres/Area Treated or # of plants	~25plants/ GPS Mapped	~25 plants/ GPS Mapped
GPS Filename		

Location #1 (Site specific description) Bitterroot Habitat SE corner "Triangle" of F7 Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	G. Mazza
Date	6/5/12	6/5/12
County	Ravalli	Ravalli
Time Start/Stop	15:30-17:30	15:30-17:30
Temperature	60°F	60°F
Relative Humidity	51%	51%
Wind Speed/Direction (from)	15 mph NW	15 mph NW
Pesticide Manufacturer	-	-
Trade Name	-	-
EPA Reg # or Formulation	-	-
Rate: Product/Diluent Per Acre	-	-
Amount of Chemical Applied	-	-
Equipment Used (atv,backpack,truck,saw)	-	-
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	Hand-pull/ Shovel	Hand-pull/ Shovel
Plant Phenology & Stage	Bolting / Flowering	Bolting / Flowering
Dominant Pest(s)	Houndstongue	Houndstongue
Equipment Used	Shovel	Shovel
Acres/Area Treated or # of plants	~80plants/ GPS Mapped	~70plants/ GPS Mapped
GPS Filename		

Location #1 (Site specific description) Bitterroot Habitat SE corner "Triangle" of F7 Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	E. Angle	
Date	6/5/12	
County	Ravalli	
Time Start/Stop	9:00-12:30/ 13:00-15:00	
Temperature	62°F	
Relative Humidity	48%	
Wind Speed/Direction (from)	10mph NW	
Pesticide Manufacturer	-	
Trade Name	-	
EPA Reg # or Formulation	-	
Rate: Product/Diluent Per Acre	-	
Amount of Chemical Applied	-	
Equipment Used (atv,backpack,truck,saw)	-	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	Hand-pull/ Shovel	
Plant Phenology & Stage	Pre-flowering	
Dominant Pest(s)	Sulfur Cinquefoil	
Equipment Used	Shovel	
Acres/Area Treated or # of plants	3 plants/ GPS Mapped	
GPS Filename		

Location #1 (Site specific description) West side of Eastside Hwy on F15 and F16 Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Rain and overcast all day
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MONTANA DEPARTMENT OF AGRICULTURE
AGRICULTURAL SCIENCES DIVISION
PO BOX 200201
HELENA, MT 59620-0201
Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	E. Angle
Date	6/6/12	6/6/12
County	Ravalli	Ravalli
Time Start/Stop	9:00-12:00/13:00-15:00	9:00-12:00/13:00-15:00
Temperature	48°F / 52 °F	48°F / 52 °F
Relative Humidity	65% / 45%	65% / 45%
Wind Speed/Direction (from)	8mph SW / 11mph SW	8mph SW / 11mph SW
Pesticide Manufacturer	-	-
Trade Name	-	-
EPA Reg # or Formulation	-	-
Rate: Product/Diluent Per Acre	-	-
Amount of Chemical Applied	-	-
Equipment Used (atv,backpack,truck,saw)	-	-
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	Hand-pull/ Shovel	Hand-pull/ Shovel
Plant Phenology & Stage	Flowering/ Rosette/ Bolting	Flowering/ Rosette/ Bolting
Dominant Pest(s)	Houndstongue	Houndstongue
Equipment Used	Shovel	Shovel
Acres/Area Treated or # of plants	~200/ GPS Mapped	~200/ GPS Mapped
GPS Filename		

Location #1 (Site specific description) SE corner of "triangle" in bitterroot habitat of F7 Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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MONTANA DEPARTMENT OF AGRICULTURE

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza	
Date	6/6/12	
County	Ravalli	
Time Start/Stop	9:00-12:00/13:00-15:00	
Temperature	48°F / 52 °F	
Relative Humidity	65% / 45%	
Wind Speed/Direction (from)	8mph SW / 11mph SW	
Pesticide Manufacturer	-	
Trade Name	-	
EPA Reg # or Formulation	-	
Rate: Product/Diluent Per Acre	-	
Amount of Chemical Applied	-	
Equipment Used (atv,backpack,truck,saw)	-	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	Hand-pull/ Shovel	
Plant Phenology & Stage	Flowering/ Rosette/ Bolting	
Dominant Pest(s)	Houndstongue	
Equipment Used	Shovel	
Acres/Area Treated or # of plants	~200/ GPS Mapped	
GPS Filename		

Location #1 (Site specific description) SE corner of "triangle" in bitterroot habitat of F7 Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza, E. Angle	
Date	6/18/12	
County	Ravalli	
Time Start/Stop	11:00-12:30 / 13:00-17:00	
Temperature	64oF	
Relative Humidity	36%	
Wind Speed/Direction (from)	2-15mph SW	
Pesticide Manufacturer	-	
Trade Name	-	
EPA Reg # or Formulation	-	
Rate: Product/Diluent Per Acre	-	
Amount of Chemical Applied	-	
Equipment Used (atv,backpack,truck,saw)	-	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	Hand-Pull	
Plant Phenology & Stage	Flowering	
Dominant Pest(s)	Italian Bugloss	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) S2 at LMC, North section of Field Location #2 (Site specific description) South of office around tilled area	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	E. Angle, G. Mazza	
Date	6/19/12	
County	Ravalli	
Time Start/Stop	13:00-17:00	
Temperature	55°F	
Relative Humidity	44%	
Wind Speed/Direction (from)	5mph NW	
Pesticide Manufacturer	DuPont	
Trade Name	Escort XP	
EPA Reg # or Formulation	352-439	
Rate: Product/Diluent Per Acre	1oz/acre	
Amount of Chemical Applied	.093oz (2.5 gallons)	
Equipment Used (atv,backpack,truck,saw)	Backpack (GPA: 27)	
Bio-Control (genus species)		
# released / acre		
Mechanical (mow,hand-pull)		
Plant Phenology & Stage	Flowering	
Dominant Pest(s)	Italian Bugloss	
Equipment Used		
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename		

Location #1 (Site specific description) Top of S2on LMC Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza, E. Angle, W. Schlegel	
Date	6/20/12	
County	Ravalli	
Time Start/Stop	8:15-10:30	
Temperature	45°F	
Relative Humidity	76%	
Wind Speed/Direction (from)	6mph S	
Pesticide Manufacturer	-	
Trade Name	-	
EPA Reg # or Formulation	-	
Rate: Product/Diluent Per Acre	-	
Amount of Chemical Applied	-	
Equipment Used (atv,backpack,truck,saw)	-	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	Hand-Pull	
Plant Phenology & Stage	Flowering	
Dominant Pest(s)	Italian Bugloss	
Equipment Used	Hands	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) Middle area of field "S2" Location #2 (Site specific description) Area around entrance sign	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc....
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	E. Angle	
Date	7/2/12	
County	Ravalli	
Time Start/Stop	13:00-14:00	
Temperature	80°F	
Relative Humidity	38%	
Wind Speed/Direction (from)	3mph	
Pesticide Manufacturer	Dupont	
Trade Name	Escort	
EPA Reg # or Formulation	352-439	
Rate: Product/Diluent Per Acre	1 oz/ac	
Amount of Chemical Applied	.05 oz (2gal mix)	
Equipment Used (atv,backpack,truck,saw)	ATV Hand Gun (96 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Flowering/ Seedling	
Dominant Pest(s)	Houndstongue	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) Ditch by Bunk House Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO Dye: Highlight Sprayed along ditch by bunk house to empty tank of Escort
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	
Date	7/2/12	
County	Ravalli	
Time Start/Stop	15:00-17:00	
Temperature	80°F	
Relative Humidity	38%	
Wind Speed/Direction (from)	3.5-5.1 mph	
Pesticide Manufacturer	Dupont	
Trade Name	Escort	
EPA Reg # or Formulation	352-439	
Rate: Product/Diluent Per Acre	1 oz/ac	
Amount of Chemical Applied	.0018oz (2 gal mix)	
Equipment Used (atv,backpack,truck,saw)	ATV Hand Gun (104 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Rosettes and Flowering	
Dominant Pest(s)	Hoary Alyssum	
Equipment Used	-	
Acres/Area Treated or # of plants	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....
North end of Refuge	
Location #2 (Site specific description)	

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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	E. Angle, G. Mazza, W. Schlegel	E. Angle, G. Mazza, W. Schlegel
Date	7/3/12	7/3/12
County	Ravalli	Ravalli
Time Start/Stop	8:00-11:30	13:00-14:30
Temperature	68°F	73°F
Relative Humidity	58%	38%
Wind Speed/Direction (from)	3mph	3mph
Pesticide Manufacturer	DowAgro Sciences	DowAgro Sciences
Trade Name	Milestone	Milestone
EPA Reg # or Formulation	62719-519	62719-519
Rate: Product/Diluent Per Acre	6 oz/acre	6 oz/acre
Amount of Chemical Applied	.302oz (3 gal) total	
Equipment Used (atv,backpack,truck,saw)	Backpack	Backpack
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Flowering/pre-flowering	Flowering/pre-flowering
Dominant Pest(s)	Oxeye Daisy, St. John's Wort, Sulfur Cinqufoil	Oxeye Daisy, St. John's Wort, Sulfur Cinqufoil
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) Wildlife Viewing Area, NE behind restroom Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... We used 2 backpacks and 1 GPS We used 1 gallon of one backpack and 2 gallons of the other S-90 Surfactant Highlight Dye
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza	G. Mazza
Date	7/30/12	7/30/12
County	Ravalli	Ravalli
Time Start/Stop	10:00-12:00	12:45-16:15
Temperature	75°F	90°F
Relative Humidity	45%	30%
Wind Speed/Direction (from)	1 mph N	7 mph N
Pesticide Manufacturer	DowAgroSciences	DowAgroSciences
Trade Name	Milestone	Milestone
EPA Reg # or Formulation	62719-519	62719-519
Rate: Product/Diluent Per Acre	6oz/ac	6oz/ac
Amount of Chemical Applied	0.11 oz (0.25 gal mix)	0.33 oz (1.50 gal mix)
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	Backpack (27 GPA)
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Pre-Flowering/Flowering, Post Flower, Post Flower	Pre-Flowering/Flowering, Post Flower, Post Flower
Dominant Pest(s)	Sulfur Cinquefoil, Oxeye Daisy, St. Johnswort	Sulfur Cinquefoil, Oxeye Daisy, St. Johnswort
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) LMNWR Wildlife Viewing Area inside “.9 Mile Trail” Location #2 (Site specific description) Continued LMNWR Wildlife Viewing Area inside “.9 Mile Trail”	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Spreader 90 at 1qt / 100 gal Highlight 1oz /4 ga
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HELENA, MT 59620-0201
Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza	G. Mazza
Date	7/31/12	7/31/12
County	Ravalli	Ravalli
Time Start/Stop	8:00-11:00	12:00-16:45
Temperature	65°F	92°F
Relative Humidity	50%	25%
Wind Speed/Direction (from)	0 mph	1 mph S
Pesticide Manufacturer	DowAgroSciences	DowAgroSciences
Trade Name	Milestone	Milestone
EPA Reg # or Formulation	62719-519	62719-519
Rate: Product/Diluent Per Acre	6oz/ac	6oz/ac
Amount of Chemical Applied	0.111 oz (0.5 gal mix)	0.333 oz (1.50 gal mix)
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	Backpack (27 GPA)
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Pre-Flowering/Flowering, Post Flower, Post Flower	Pre-Flowering/Flowering, Post Flower, Post Flower
Dominant Pest(s)	Sulfur Cinquefoil, Oxeye Daisy, St. Johnswort	Sulfur Cinquefoil, Oxeye Daisy, St. Johnswort
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) LMNWR Wildlife Viewing Area South Sections Location #2 (Site specific description) Continued LMNWR Wildlife Viewing Area	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Spreader 90 at 1qt / 100 gal Highlight 1oz /4 ga
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AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza	
Date	8/1/12	
County	Ravalli	
Time Start/Stop	1:30 P.M. to 5:15 P.M.	
Temperature	85°F	
Relative Humidity	20%	
Wind Speed/Direction (from)	0 mph	
Pesticide Manufacturer	DowAgroSciences	
Trade Name	Milestone	
EPA Reg # or Formulation	62719-519	
Rate: Product/Diluent Per Acre	6oz/ac	
Amount of Chemical Applied	0.05 oz (0.25 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Flowering, Post Flowering	
Dominant Pest(s)	Oxeye Daisy, St. Johnswort	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) LMNWR Wildlife Viewing Area -South triangles and NW triangle Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Spreader 90 at 1qt / 100 gal Highlight 1oz /4 gal
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza	
Date	8/2/12	
County	Ravalli	
Time Start/Stop	10:00 A.M.- 1:30 P.M. & 4:00 P.M. to 5:30 P.M.	
Temperature	75 - 80°F	
Relative Humidity	30/20%	
Wind Speed/Direction (from)	7 / 14 mph	
Pesticide Manufacturer	DowAgroSciences	
Trade Name	Milestone	
EPA Reg # or Formulation	62719-519	
Rate: Product/Diluent Per Acre	6oz/ac	
Amount of Chemical Applied	0.44 oz (2 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Flowering, Post Flowering, Preflowering	
Dominant Pest(s)	Oxeye Daisy, St. Johnswort, Sulfur Cinquefoil	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) Top triangle of wildlife viewing area Location #2 (Site specific description) Continued top NW triangle	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Spreader 90 at 1qt / 100 gal Highlight 1oz /4 gal
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Jessica Zarate	Jessica Zarate
Date	8/17/12	8/17/12
County	Ravalli	Ravalli
Time Start/Stop	12:30 – 13:30	13:30 – 14:00
Temperature	83°F	83°F
Relative Humidity	40%	40%
Wind Speed/Direction (from)	0 mph	0 mph
Pesticide Manufacturer	DuPont	DuPont
Trade Name	Escort XP	Escort XP
EPA Reg # or Formulation	352-439	352-439
Rate: Product/Diluent Per Acre	1 oz / acre	1 oz / acre
Amount of Chemical Applied	0.67 oz (10 gal mix)	0.83 oz (10 gal mix)
Equipment Used (atv,backpack,truck,saw)	ATV Boom (15 GPA)	ATV Boom (12 GPA)
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Rosettes / Flowering	Rosettes / Flowering
Dominant Pest(s)	Houndstongue / Canada Thistle	Houndstongue / Canada Thistle
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) Near Pond 3 south of Waley Homestead Location #2 (Site specific description) Within old "Predator" field	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: Spreader 90 used at rate of 1 pt / 100 gal Dye: Highlight used at rate of 2 oz / 10 gal Application #2- Area looks to have been treated previously this season but there were lots of rosettes and seedlings alive and growing that were treated today. -More houndstongue and Canada thistle present surrounding area sprayed. These areas were used to empty tanks prior to going to another site.
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Jessica Zarate	
Date	8/17/12	
County	Ravalli	
Time Start/Stop	14:00 – 14:30	
Temperature	83°F	
Relative Humidity	40%	
Wind Speed/Direction (from)	0 mph	
Pesticide Manufacturer	DuPont	
Trade Name	Escort XP	
EPA Reg # or Formulation	352-439	
Rate: Product/Diluent Per Acre	1 oz / acre	
Amount of Chemical Applied	1.09 oz (12 gal mix)	
Equipment Used (atv,backpack,truck,saw)	ATV Boom (11 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Flowering	
Dominant Pest(s)	Spotted Knapweed	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) Sprayed along “Residence Road” from gate to dike. Heading West toward the burn pile. Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: Spreader 90 surfactant used at 1 pt/100 gal Dye: Highlight used at 2 oz / 10 gal More present if you continue along roadway. Used area to empty tank prior to going to another site.
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Eric Angle	Eric Angle
Date	9/4/2012	9/4/2012
County	Ravalli	Ravalli
Time Start/Stop	12:30-17:00	12:30-17:00
Temperature	68° F	68° F
Relative Humidity	31%	31%
Wind Speed/Direction (from)	1mph	1mph
Pesticide Manufacturer	BASF	BASF
Trade Name	Plateau	Plateau
EPA Reg # or Formulation	241-365	241-365
Rate: Product/Diluent Per Acre	12 oz/acre	12 oz/acre
Amount of Chemical Applied	12 oz (14 gal mix)	13.10 oz (12 gal mix)
Equipment Used (atv,backpack,truck,saw)	ATV Boom (14 GPA)	ATV Handgun (11 GPA)
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Flowering / Leaf on	Flowering / Leaf on
Dominant Pest(s)	Yellow Toadflax	Yellow Toadflax
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) SW corner of refuge (bottom right of map) Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Dye: Highlight Surfactant: MSO
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Compliments of the

MONTANA DEPARTMENT OF AGRICULTURE

AGRICULTURAL SCIENCES DIVISION

PO BOX 200201

HELENA, MT 59620-0201

Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Gina Mazza	
Date	9/4/2012	
County	Ravalli	
Time Start/Stop	12:30-17:00	
Temperature	70° F	
Relative Humidity	25%	
Wind Speed/Direction (from)	2-6 mph W	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz/acre	
Amount of Chemical Applied	2.22 oz (5 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Flowering / Leaf on	
Dominant Pest(s)	Yellow Toadflax	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) South end of Wildlife Viewing Area Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Dye: highlight 8 oz / 10 gal left over from Medicine Lake Surfactant: MSO @ 1% / volume
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AGRICULTURAL SCIENCES DIVISION
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HELENA, MT 59620-0201
Phone 406-444-3730

DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Eric Angle	
Date	9/5/2012	
County	Ravalli	
Time Start/Stop	8:00-12:30 / 13:30 – 17:00	
Temperature	58° F / 76° F	
Relative Humidity	50% / 31%	
Wind Speed/Direction (from)	1mph / 1 mph	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz / acre	
Amount of Chemical Applied	6 oz (13.5 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Leaf On / Flowering	
Dominant Pest(s)	Yellow Toadflax	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) WVA yellow toadflax points Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Dye: Highlight @ 2 oz/10 gal Surfactant: MSO @ 1% by volume
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Eric Angle	
Date	9/6/2012	
County	Ravalli	
Time Start/Stop	8:30-12:30 / 13:00 – 14:30	
Temperature	48° / 64°	
Relative Humidity	71% / 42%	
Wind Speed/Direction (from)	1 mph / 6 mph NE	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz / acre	
Amount of Chemical Applied	16.36 oz (15 gal mix)	
Equipment Used (atv,backpack,truck,saw)	ATV Hand Gun (11 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Flowering / Leaf On	
Dominant Pest(s)	Yellow Toadflax	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) SE corner of Refuge map above the triangle Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Dye: Highlight @ 2 oz/ 10 gal Surfactant: MSO @ 1% by volume Weather: windy, slight drizzle
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MONTANA DEPARTMENT OF AGRICULTURE **DAILY PESTICIDE APPLICATION RECORD**
 AGRICULTURAL SCIENCES DIVISION
 PO BOX 200201
 HELENA, MT 59620-0201
 Phone 406-444-3730

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	Gina Mazza	
Date	9/6/2012	
County	Ravalli	
Time Start/Stop	9:00-11:30 / 12:30-15:00	
Temperature	48° / 64°	
Relative Humidity	71% / 42%	
Wind Speed/Direction (from)	7 mph / 6 mph NNE	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz / acre	
Amount of Chemical Applied	2.44 oz (5.5 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Leaf On	
Dominant Pest(s)	Yellow Toadflax	
Equipment Used	-	
Acres/Area Treated or # of plants	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.... Dye: Highlight @ 1 oz / 4 gal Surfactant: MSO @ 1% by volume Variable wind
West side of Wildlife viewing area (N points)	
Location #2 (Site specific description)	

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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	
Date	10/9/12	
County	Ravalli	
Time Start/Stop	10:00-16:45	
Temperature	38°F - 54°F	
Relative Humidity	64%	
Wind Speed/Direction (from)	0.5 mph variable	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz/ac	
Amount of Chemical Applied	1.33 oz (3 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Post Flowering	
Dominant Pest(s)	Leafy Spurge	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) From the burn pile north in the riparian zone and south behind the golf course Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO @ 1% by volume Dye: Highlight @ 2oz/4 gal Weather very good for spraying. Very little wind.
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf Invasive Species Strike Team	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE 406-544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	J. Zarate	
Date	10/9/12	
County	Ravalli	
Time Start/Stop	8:30-11:30 / 13:30-16:00	
Temperature	38°F	
Relative Humidity	64%	
Wind Speed/Direction (from)	0.5 mph S	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz/ac	
Amount of Chemical Applied	1.85 oz (4 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (26 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Senesced	
Dominant Pest(s)	Leafy Spurge	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) North of the burn pile, west of dike, east of river. Worked from "wooden foot bridge" southward until met with other spray crew Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO @1% by volume Dye: Highlight @ 2oz/4gal Lots and lots of yellow toadflax seen, would need boom sprayer for best coverage
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE (406) 544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	
Date	10/10/12	
County	Ravalli	
Time Start/Stop	9:00-17:00	
Temperature	32°F-66°F	
Relative Humidity	92%-30%	
Wind Speed/Direction (from)	0.5mph-0.7mph	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz/acre	
Amount of Chemical Applied	0.89 oz (2 gal mix)	
Equipment Used (atv,backpack,truck,saw)	Backpack (27 GPA)	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Post Flowering / Senesced	
Dominant Pest(s)	Leafy Spurge	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) Northwest corner of LMC NWR Location #2 (Site specific description) Wildlife Viewing Area	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO @1% by volume Dye: Highlight @ 2 oz/3 gallons (so could see clearly under conditions) Weather good Extra dry season caused early senesce in target weeds Working visibility very poor
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE (406) 544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	W. Schlegel	W. Schlegel
Date	10/11/12	10/11/12
County	Ravalli	Ravalli
Time Start/Stop	8:00-10:00	14:00-17:15
Temperature	28°F	66°F
Relative Humidity	61%	36%
Wind Speed/Direction (from)	3 mph SSE	3 mph N
Pesticide Manufacturer	BASF	BASF
Trade Name	Plateau	Plateau
EPA Reg # or Formulation	241-365	241-365
Rate: Product/Diluent Per Acre	12 oz/acre	12 oz/acre
Amount of Chemical Applied	0.12 oz (0.25 gal mix)	1.0 oz (2.25 gal mix) / 0.69 (1.5 gal mix)
Equipment Used (atv,backpack,truck,saw)	Backpack 26 GPA	Backpack 27 GPA / 26 GPA
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Post Flowering	Post Flowering
Dominant Pest(s)	Leafy Spurge	Yellow Toadflax
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) Wildlife Viewing Area most northerly known leafy spurge patch from past years Location #2 (Site specific description) North end of Wildlife Viewing Area behind golf course to where river/water blocks any further northward travel	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO @1% by volume Dye: Highlight @ 2 oz/4 gallons Weather conditions excellent Nozzle clogged in morning due to frost
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BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE (406) 544-2552

	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	E. Angle	E. Angle
Date	10/15/12	10/15/12
County	Ravalli	Ravalli
Time Start/Stop	10:00-11:00	15:00-16:15
Temperature	51°F	54°F
Relative Humidity	46%	36%
Wind Speed/Direction (from)	1 mph S	1 mph
Pesticide Manufacturer	BASF	BASF
Trade Name	Plateau	Plateau
EPA Reg # or Formulation	241-365	241-365
Rate: Product/Diluent Per Acre	12 oz/acre	12 oz/acre
Amount of Chemical Applied	6.55 oz (6 gal mix)	5.6 oz (7 gal mix)
Equipment Used (atv,backpack,truck,saw)	ATV Boom 11 GPA	ATV Boom 15 GPA
Bio-Control (genus species)	-	-
# released / acre	-	-
Mechanical (mow,hand-pull)	-	-
Plant Phenology & Stage	Senescing	Senescing
Dominant Pest(s)	Cheatgrass	Cheatgrass
Equipment Used	-	-
Acres/Area Treated or # of plants	GPS Mapped	GPS Mapped
GPS Filename	-	-

Location #1 (Site specific description) West of the homestead on Lee Metcalf National Wildlife Refuge Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO @1% by volume Dye: Highlight @ 2 oz/ 10 gallons Weather raining Winterizing: boomed extra Plateau on cheatgrass
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DAILY PESTICIDE APPLICATION RECORD

BUSINESS U.S. Fish and Wildlife Service	LICENSE# 101891-15
NAME Lee Metcalf National Wildlife Refuge	ADDRESS (Refuge or WPA) Lee Metcalf National Wildlife Refuge
CITY, STATE, ZIP Stevensville, MT, 59870	PHONE (406) 544-2552

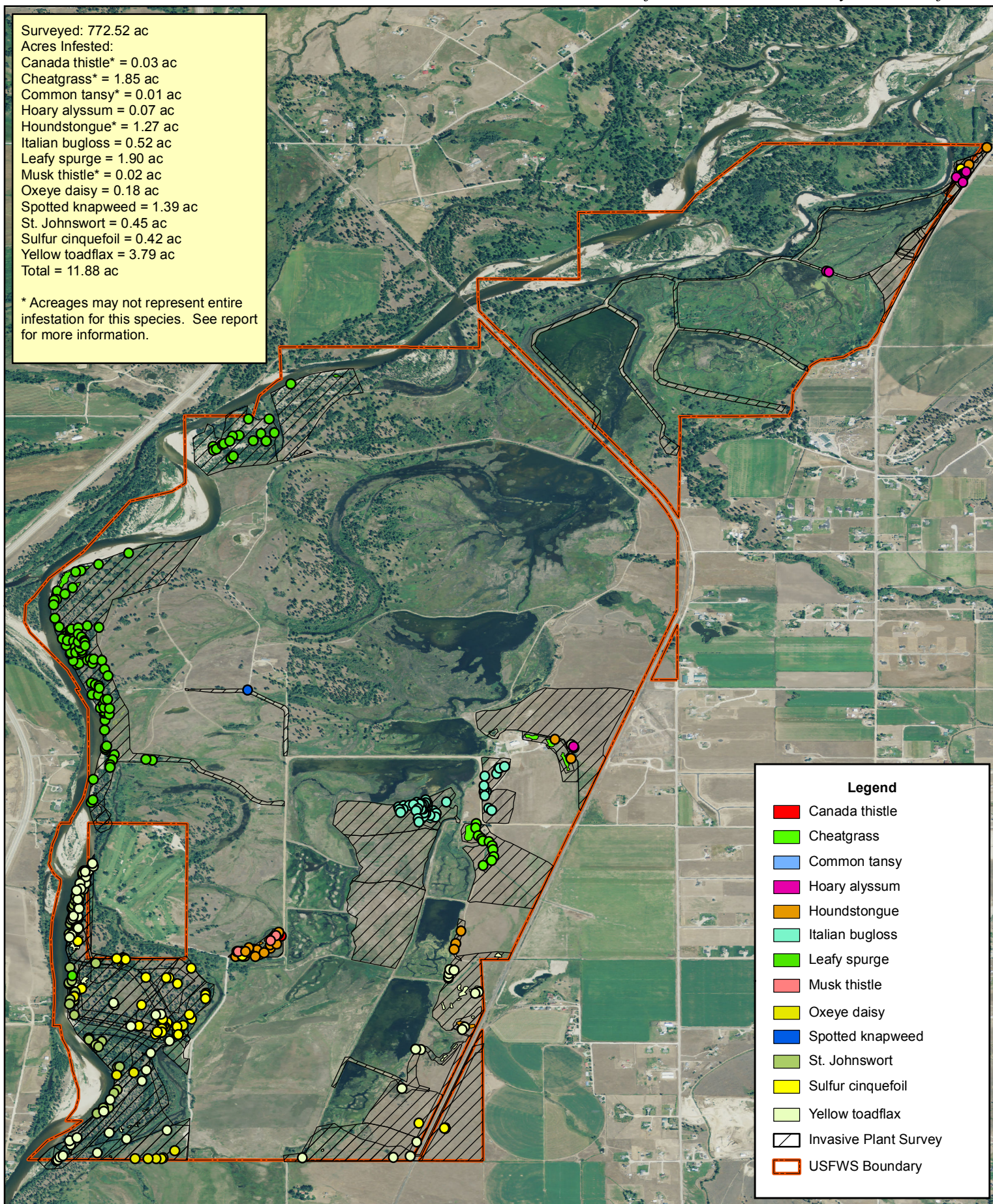
	APPLICATION #1	APPLICATION #2
Applicator/Operator Name (s)	G. Mazza	
Date	10/15/12	
County	Ravalli	
Time Start/Stop	10:30-11:30	
Temperature	67°F	
Relative Humidity	60%	
Wind Speed/Direction (from)	2 mph S	
Pesticide Manufacturer	BASF	
Trade Name	Plateau	
EPA Reg # or Formulation	241-365	
Rate: Product/Diluent Per Acre	12 oz/acre	
Amount of Chemical Applied	10 oz (10 gal mix)	
Equipment Used (atv,backpack,truck,saw)	ATV Boom 12 GPA	
Bio-Control (genus species)	-	
# released / acre	-	
Mechanical (mow,hand-pull)	-	
Plant Phenology & Stage	Senesced	
Dominant Pest(s)	Cheatgrass	
Equipment Used	-	
Acres/Area Treated or # of plants	GPS Mapped	
GPS Filename	-	

Location #1 (Site specific description) Behind shop area and around bunkhouse. Winterizing: needed to boom out Plateau in tank Location #2 (Site specific description)	COMMENTS/MAP: (any surfactant or dye used, PUP number, concerns with weather prior or post treatment, DETAILS, etc.... Surfactant: MSO @1% by volume Dye: Highlight @ 4 oz/ 10 gallons Winterizing Drizzling
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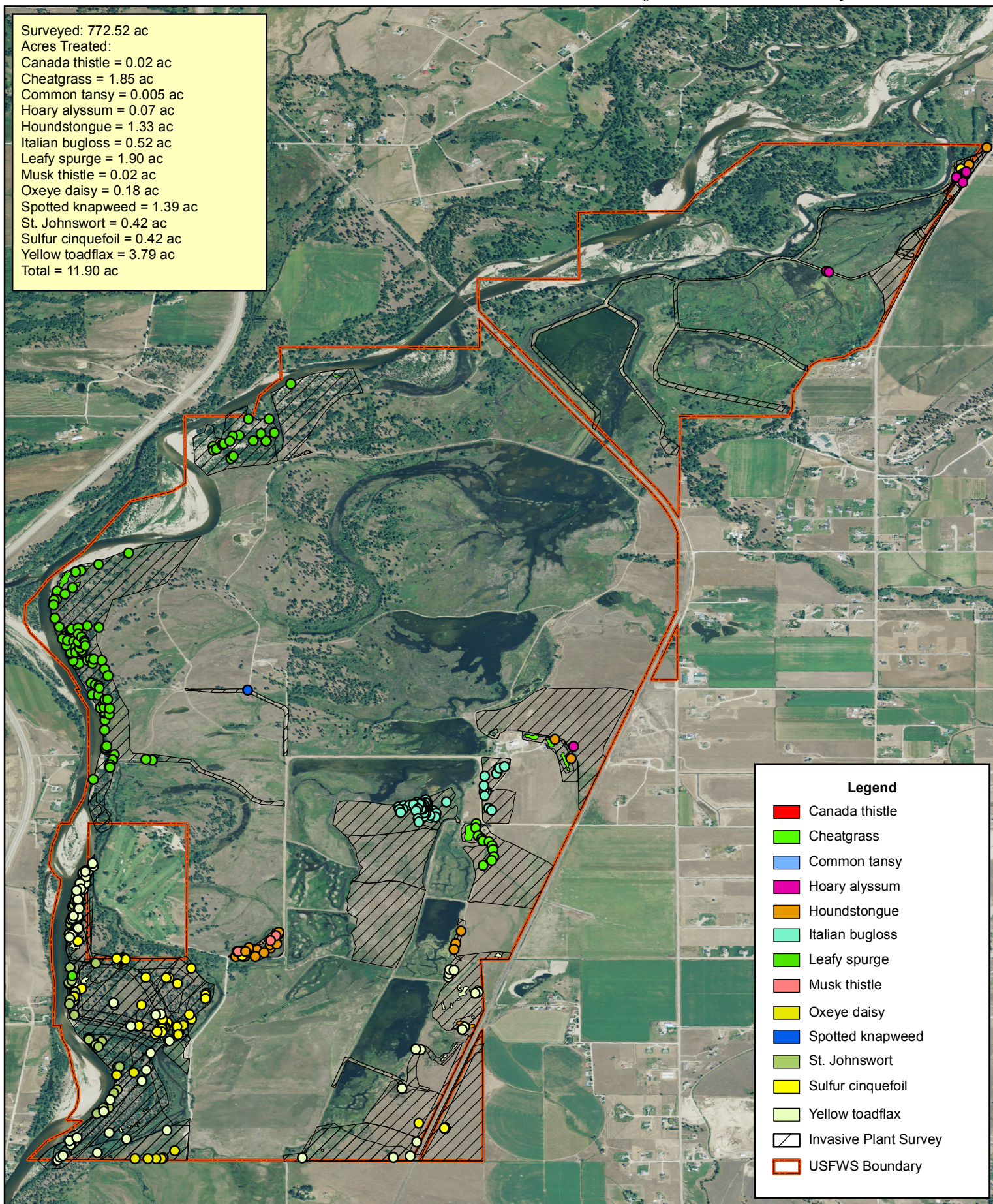
Surveyed: 772.52 ac
Acres Infested:
Canada thistle* = 0.03 ac
Cheatgrass* = 1.85 ac
Common tansy* = 0.01 ac
Hoary alyssum = 0.07 ac
Houndstongue* = 1.27 ac
Italian bugloss = 0.52 ac
Leafy spurge = 1.90 ac
Musk thistle* = 0.02 ac
Oxeye daisy = 0.18 ac
Spotted knapweed = 1.39 ac
St. Johnswort = 0.45 ac
Sulfur cinquefoil = 0.42 ac
Yellow toadflax = 3.79 ac
Total = 11.88 ac

* Acreages may not represent entire infestation for this species. See report for more information.





Surveyed: 772.52 ac
Acres Treated:
Canada thistle = 0.02 ac
Cheatgrass = 1.85 ac
Common tansy = 0.005 ac
Hoary alyssum = 0.07 ac
Houndstongue = 1.33 ac
Italian bugloss = 0.52 ac
Leafy spurge = 1.90 ac
Musk thistle = 0.02 ac
Oxeye daisy = 0.18 ac
Spotted knapweed = 1.39 ac
St. Johnswort = 0.42 ac
Sulfur cinquefoil = 0.42 ac
Yellow toadflax = 3.79 ac
Total = 11.90 ac



Legend

- Canada thistle
- Cheatgrass
- Common tansy
- Hoary alyssum
- Houndstongue
- Italian bugloss
- Leafy spurge
- Musk thistle
- Oxeye daisy
- Spotted knapweed
- St. Johnswort
- Sulfur cinquefoil
- Yellow toadflax
- Invasive Plant Survey
- USFWS Boundary

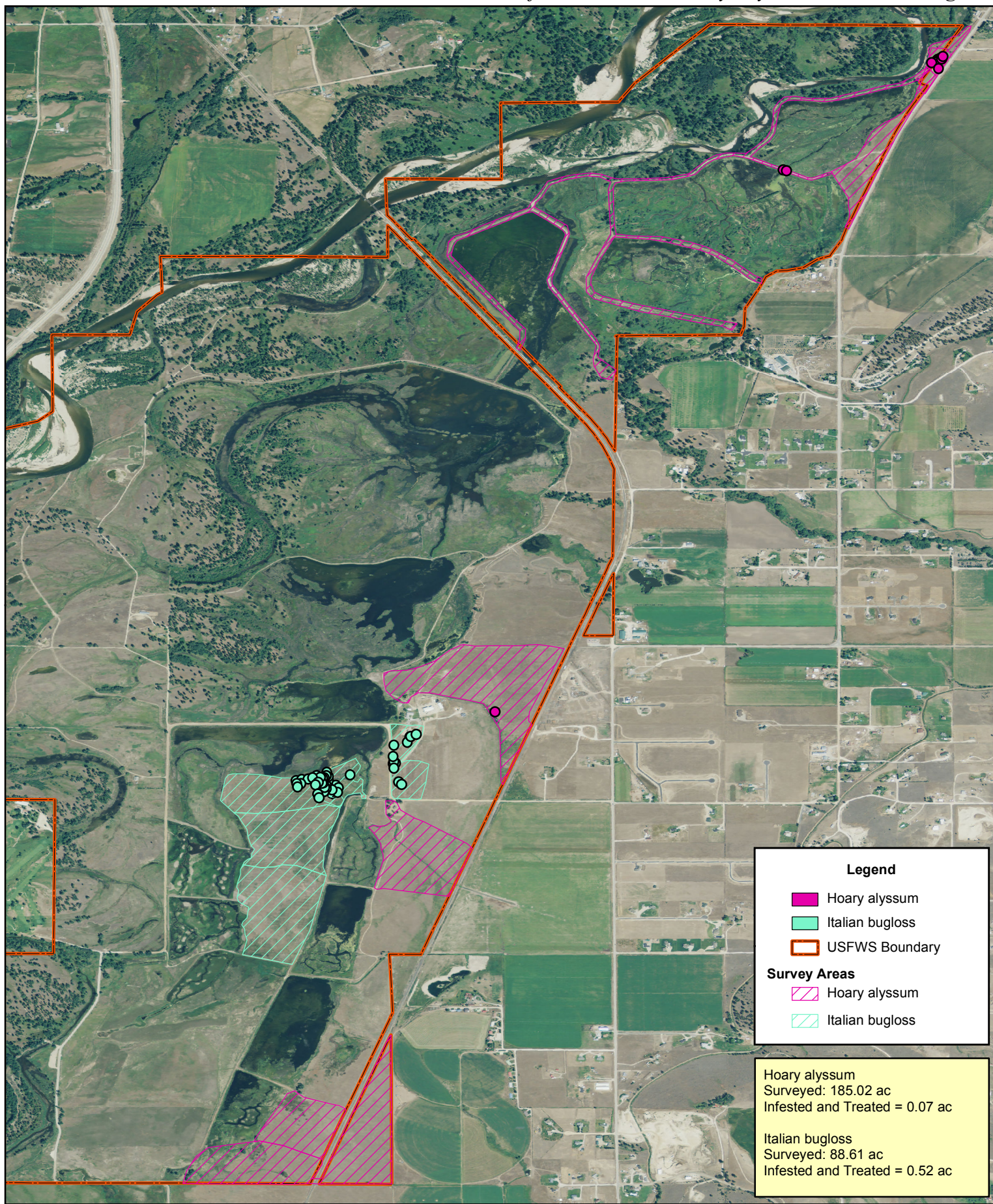


0 0.25 0.5 1 Miles



U.S. Fish & Wildlife Service

MOYOCO Invasive Species Strike Team *Lee Metcalf NWR - 2012 Hoary Alyssum & Italian Bugloss*



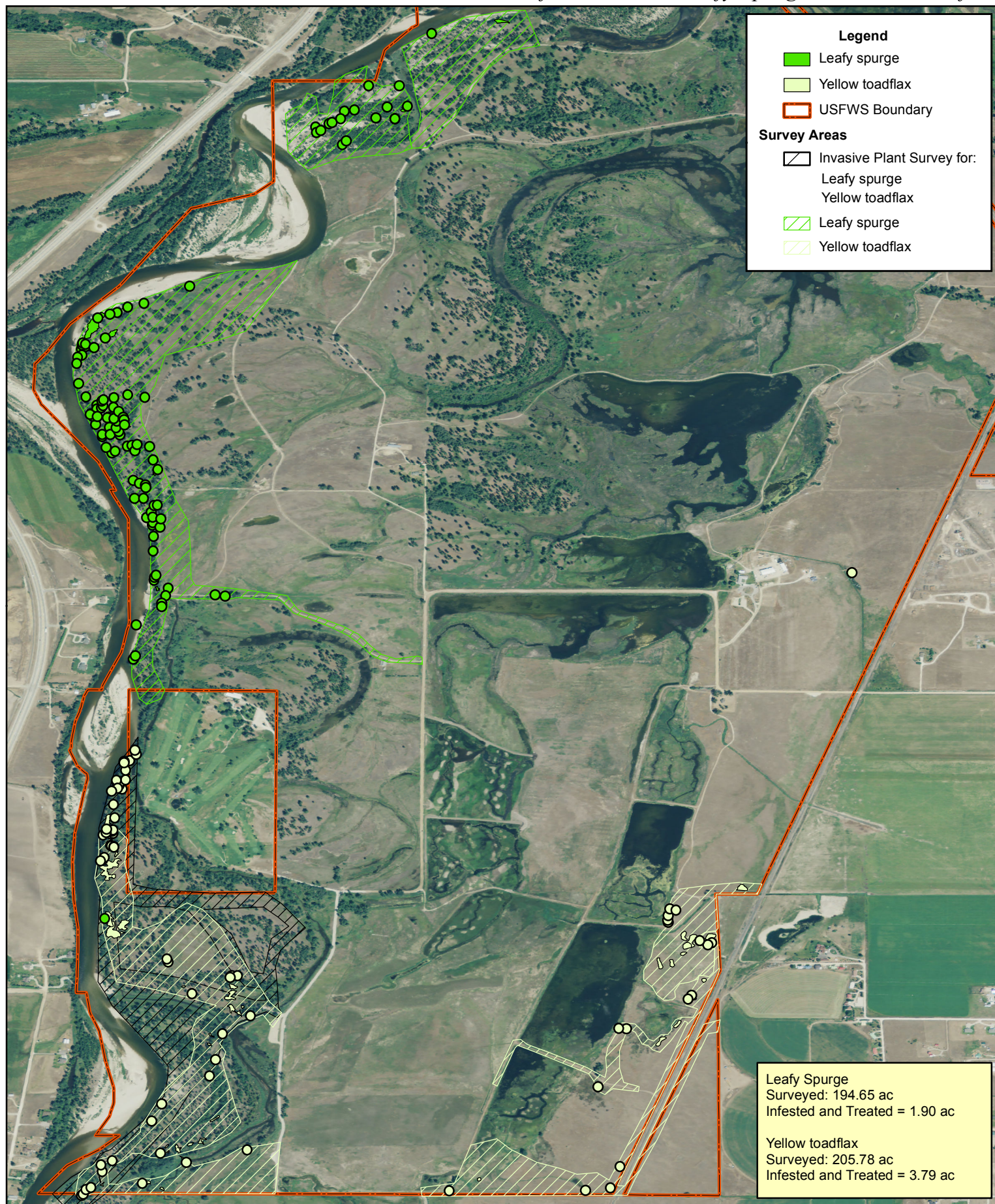
Reference image from 2009 Montana NAIP Imagery



U.S. Fish & Wildlife Service

MOYOCO Invasive Species Strike Team

Lee Metcalf NWR - 2012 Leafy Spurge & Yellow Toadflax



0 0.25 0.5 1 Miles

Reference image from 2009 Montana NAIP Imagery

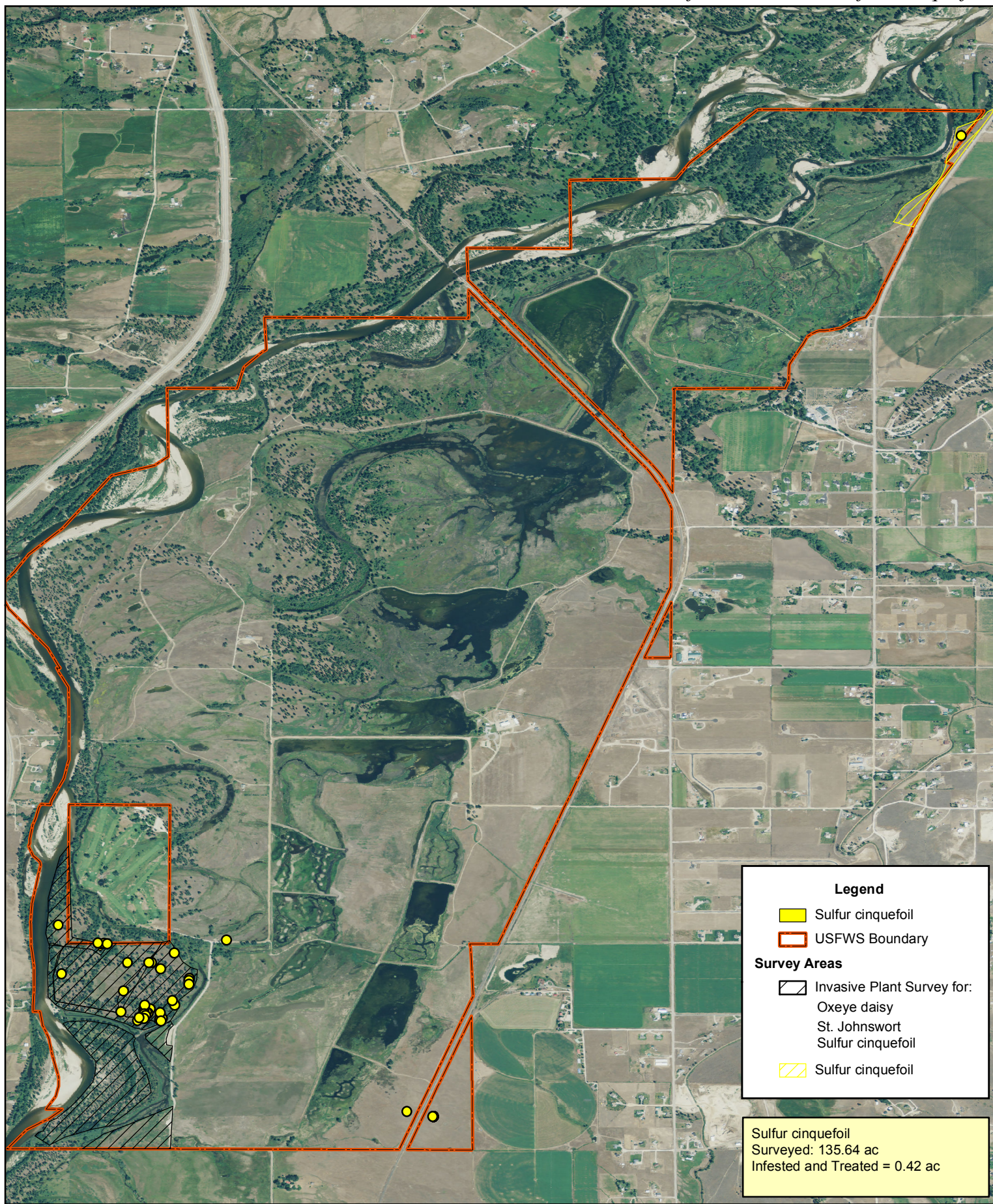
4 of 7 Maps



U.S. Fish & Wildlife Service

MOYOCO Invasive Species Strike Team

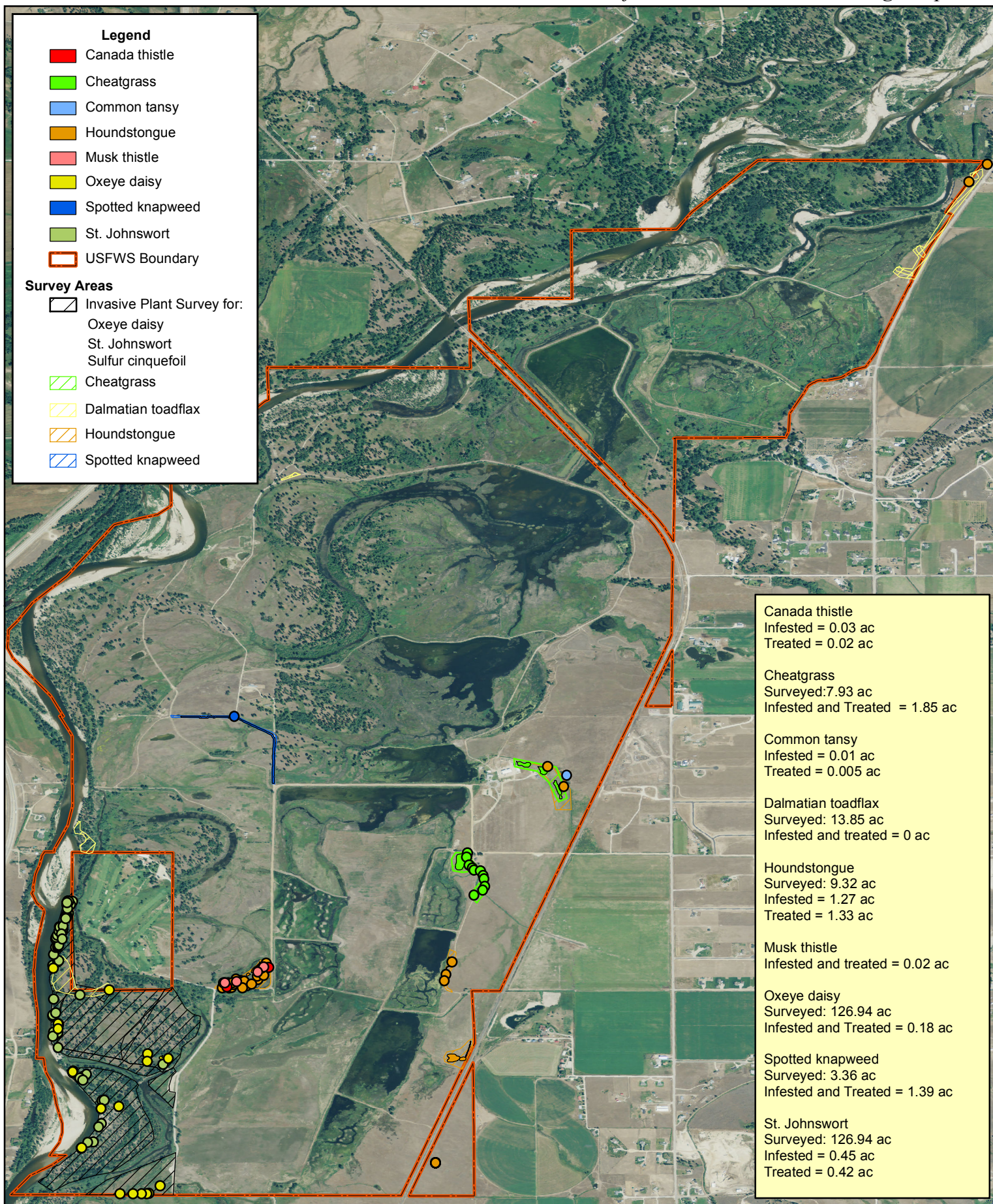
Lee Metcalf NWR - 2012 Sulfur Cinquefoil



0 0.25 0.5 1 Miles

Reference image from 2009 Montana NAIP Imagery

5 of 7 Maps



0 0.25 0.5 1 Miles

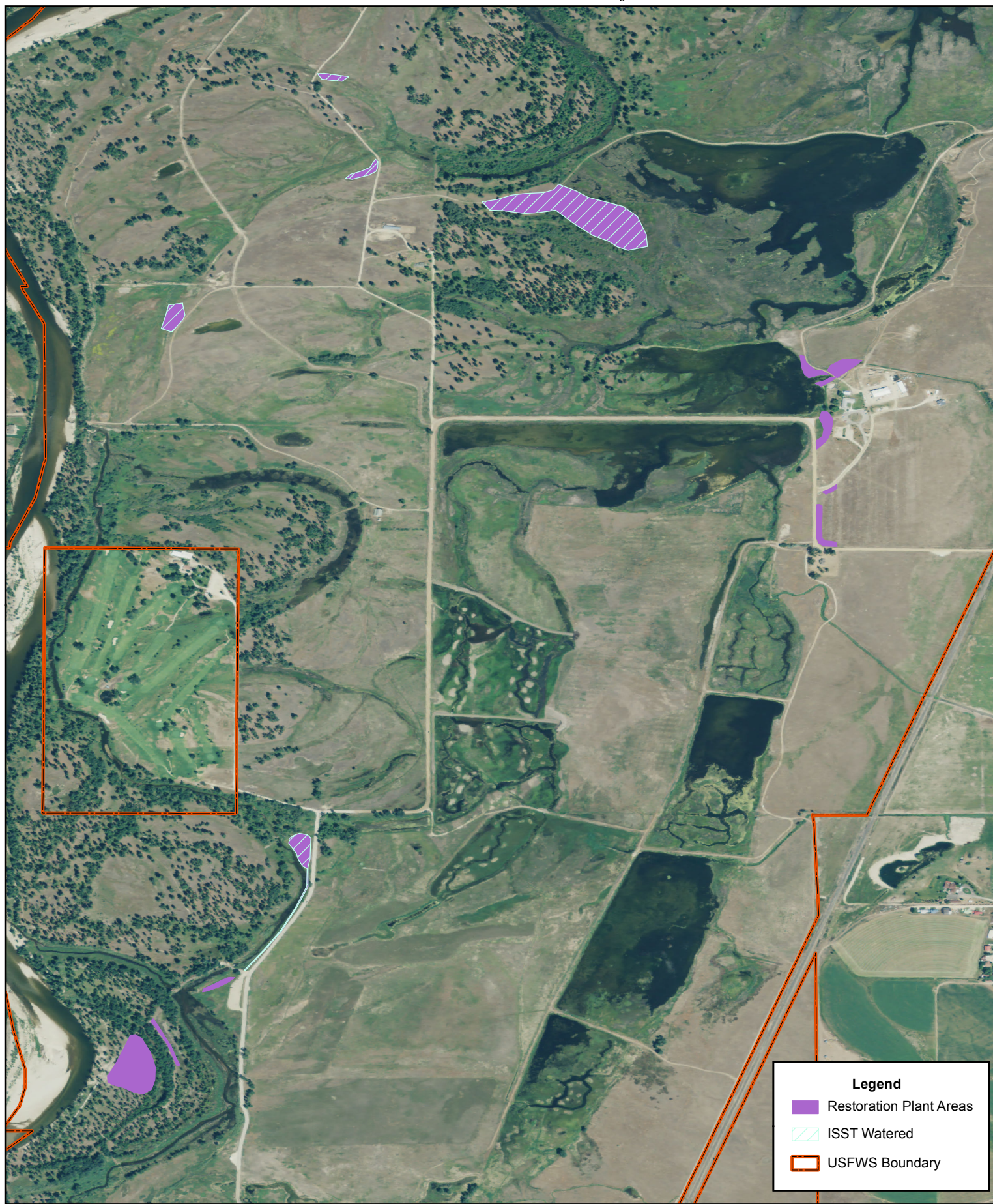
Reference image from 2009 Montana NAIP Imagery



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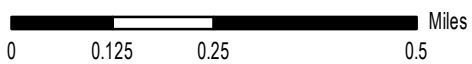
MOYOCO Invasive Species Strike Team

Lee Metcalf NWR - 2012 Restoration Plant Areas



Legend

- Restoration Plant Areas
- ISST Watered
- USFWS Boundary



Reference image from 2009 Montana NAIP Imagery