

## National CP33 Monitoring – 2010 Vegetation and Mid-Contract Management Summary

Phase II monitoring includes annual evaluation of buffer vegetation and evaluation of mid-contract management activities from years 4-6 of the CP33 contract (2009-2011). Phase II vegetation sampling extended protocols followed during Phase I to evaluate general vegetation composition and buffer characteristics during the 2010 growing season (May-August) on all monitored CP33 buffers. Vegetation transects included 10 equally-spaced sampling points systematically distributed along midpoints of each buffer. Buffer width was also recorded at each transect point. Other metrics included verification of buffer establishment, percent of entire buffer in native, exotic, and shrub/woody cover, and percent and description of non-compliant activities.

### *Vegetation Data Summary*

Mean contract width established by the conservation plan in the CRP contract over all surveyed CP33 contracts was 79 ft (Table 2). Cover was established on 96% of buffers by 2010 (Table 1). Dominant cover in buffers was Native Warm Season Grasses (NWSG), followed by forbs, and forb/grass mixes (Table 1, Figure 1). Common exotics present in CP33 buffers in both years included bahiagrass (*Paspalum notatum*), Bermudagrass (*Cynodon dactylon*), tall fescue (*Schedonorus phoenix*), Johnsongrass (*Sorghum halepense*), and brome (*Bromus* spp.) (Table 1).

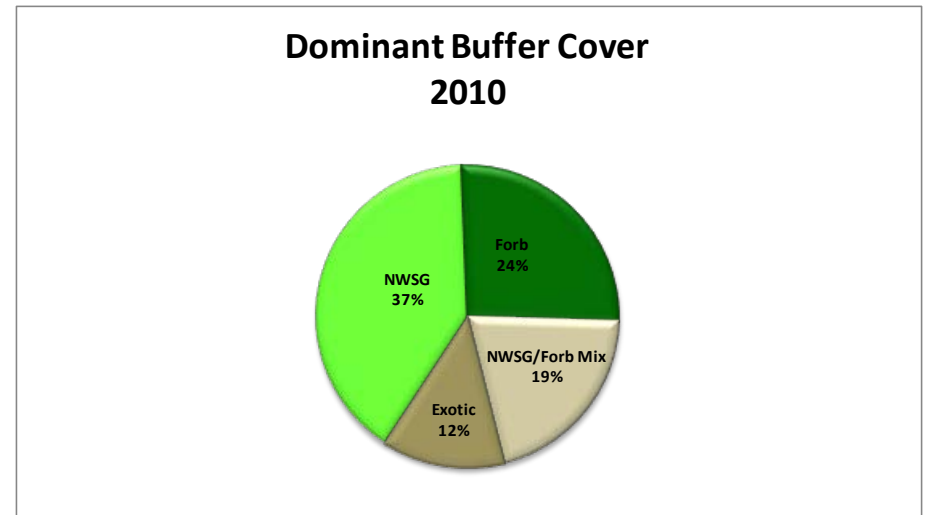
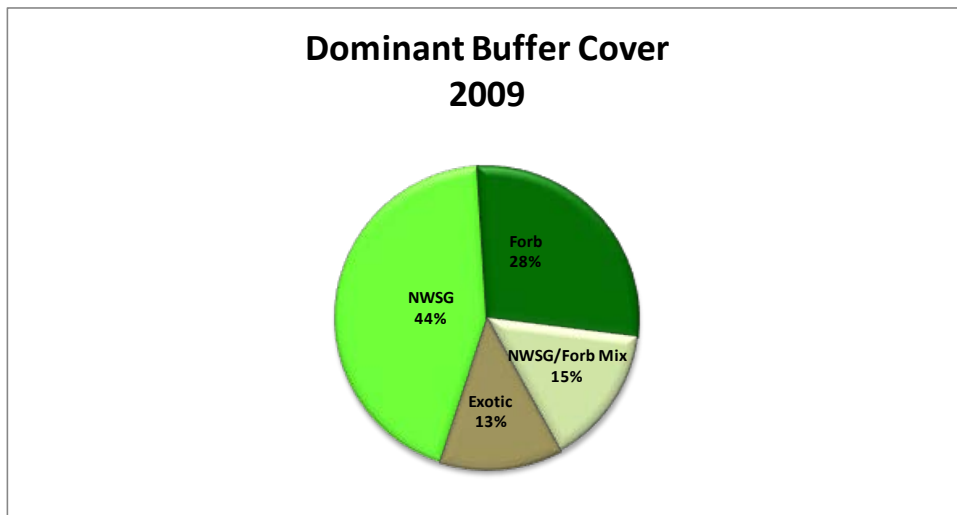
**Table 1. Average designated contract width, method and percentage of cover establishment, and types of exotic species present on surveyed CP33 upland habitat buffers in 13 states in 2010. Mean contracted buffer width and percent of contracts planting native grasses (NG) or allowing buffers to naturally regenerate (NR) based off of contract information from buffers sampled during 2009-2010 vegetation surveys. Note that not all CP33 contracts specified buffer width or contract cover.**

		Contract Cover <sup>1</sup>			Established	Dominant Cover	Exotics Present
		Mean Contract Width (ft)	NR	NG			
Arkansas	2009	70.83	82%	12%	85%	NWSG (60%), Forb (0%), Grass/Forb (24%), Exotic (16%)	a, b, d, e, g
	2010				87%	NWSG (57%), Forb (14%), Grass/Forb (29%)	a, e
Georgia	2009	63.00	97%	3%	97%	NWSG (0%), Forb (84%), Grass/Forb (3%), Exotic (13%)	a, d, f
	2010				83%	NWSG (6%), Forb (56%), Grass/forb (13%), Exotic (19%), Litter (6%)	a, d, f
Illinois	2009	85.21		100%	89%	NWSG (74%), Forb (15%), Grass/Forb (7%), Exotic (4%)	b, c, h
	2010				100%	NWSG (59%), Forb (7%), Grass/Forb (11%), Exotic (22%)	b, c, h, i, j
Indiana	2009	69.26	22%	78%	100%	NWSG (58%), Forb (21%), Grass/Forb (17%), Exotic (4%)	b, c, d, h, k, l, m, n
	2010				94%	N/A	b, c, h, k, m,

<b>Iowa</b>	<b>2009</b>	N/A	16%	84%	100%	NWSG (88%), Forb (0%), Grass/Forb (0%), Exotic (12%)	N/A
	<b>2010</b>				96%	NWSG (82%), Forb (7%), Exotic (11%)	N/A
<b>Kentucky</b>	<b>2009</b>	52.09	98%	2%	100%	NWSG (2%), Forb (0%), Grass/Forb (88%), Exotic (10%)	a, b, c, d, f, h, m, n, p, q
	<b>2010</b>				89%	NWSG (2%), Forb (0%), Grass/Forb (93%), Exotic (5%)	b, c, d, m, n, q, r
<b>Mississippi</b>	<b>2009</b>	88.16	53%	47%	100%	N/A	a, c, d
	<b>2010</b>				N/A	NWSG (34%), Forb (13%), Grass/Forb (22%), Exotic (31%)	a, c, d, i
<b>Nebraska</b>	<b>2009</b>	77.22		100%	88%	NWSG (37%), Forb (15%), Grass/Forb (17%), Exotic (32%)	b, m, s, t
	<b>2010</b>				100%	NWSG (45%), Forb (3%), Grass/Forb (21%), Exotic (24%), Unspecified Grass (8%)	b, h, i, q, u
<b>N. Carolina</b>	<b>2009</b>	75.95	100%		100%	NWSG (29%), Forb (69%), Grass/Forb (0%), Exotic (0%)	c
	<b>2010</b>				100%	NWSG (30%), Forb (60%), Grass/Forb (8%), Woody (3%)	c, v
<b>Ohio</b>	<b>2009</b>	67.00	2%	98%	95%	NWSG (49%), Forb (42%), Grass/Forb (0%), Exotic (10%)	b, c, d, h, j, m, n, q, t
	<b>2010</b>				100%	NWSG (23%), Forb (33%), Grass/forb (4%), Unspecified grass (29%), Exotic (12%),	b, f, h, m, n, t, w
<b>S. Carolina</b>	<b>2009</b>	95.44	100%		100%	NWSG (42%), Forb (58%), Grass/Forb (0%), Exotic (0%)	c
	<b>2010</b>				100%	Grass (31%), Forb (67%), Grass/Forb (3%)	c
<b>Tennessee</b>	<b>2009</b>	N/A	N/A	N/A	100%		a, c, l, m
	<b>2010</b>				100%		a, c, l, m
<b>Texas</b>	<b>2009</b>	120.00	N/A	N/A	100%	NWSG (48%), Forb (7%), Grass/Forb (3%), Exotic (41%)	a, d, x
	<b>2010</b>				100%	NWSG (39%), Forbs (2%), Unspecified Grass (57%), Exotic (2%)	c, d, x, y, z
<b>Overall</b>	<b>2009</b>	<b>78.56</b>			<b>94%</b>	<b>NWSG (44%), Forb (28%), Grass/Forb (15%), Exotic (13%)</b>	
	<b>2010</b>				<b>96%</b>	<b>NWSG (37%), Forb (24%), Grass/Forb (19%), Exotic (12%)</b>	

<sup>1</sup>NR=Natural Regeneration; NG=Native Grass Mix; Both=NR and NG

a - Bermudagrass; b - Brome; c - Fescue, d - Johnsongrass, e - Sericia lespedeza; f - Bahiagrass; g - Echinocloa; h - Reed canary; i - foxtail; j - Redtop; k - C. Thistle; l - Clover; m - Orchardgrass; n - Timothy grass; o - Stiltgrass; p - Mare's Tail; q - Ryegrass; r - Cogongrass; s - Cheatgrass; t - Bluegrass; u - Wheat Grass; v - Crabgrass; w - Barnyardgrass; x - Sorghum; y - Klein; z - Lovegrass



**Figure 1. Percent of buffered fields dominated by Native Warm Season Grass (NWSG), forbs, grass/forb mix, and exotic cover in 2009 and 2010.**

Increased mid-contract management in buffers has set back succession and reduced average cover of trees, shrubs and exotic species (Table 2). For states that quantified noncompliant activities, percent noncompliance decreased to 5.38% in 2010 (Table 2). Predominant noncompliant activities in 2010 included mowing, road/turnrow/driven, equipment disturbance/parking, planted to crops and herbicide drift (Table 2).

**Table 2. Average percent shrubs, trees, and non-compliance (NC), type of non-compliance activities (in order of prevalence), percent mid-contract management (MCM) and type of mid-contract management activities on surveyed CP33 upland habitat buffers in 13 states in 2007, 10 states in 2008, and 13 states in 2009-2010.**

		% Shrub	% Tree	% Exotic	% NC	Noncompliance Type	% MCM
<b>Arkansas</b>	<b>2007</b>	1.03	0.26		2.56	Mow	10.90
	<b>2009</b>	0.96	0.60	22.09	21.49	Uncertain, herbicide drift	
	<b>2010</b>	1.66	1.00	4.58	0.00		
<b>Georgia</b>	<b>2007</b>	1.00	1.08		7.50	Road/turnrow/driven , planted to crops, mow, equipment disturbance, planted to pine, food plot, equipment/parking/debris/hay	11.13
	<b>2008</b>	3.58	1.63		14.18	Mow, planted to crops, road/turnrow/driven, equipment parking	20.20
	<b>2009</b>	2.53	2.90	14.88	15.30	Road/turnrow/driven, mow, planted to crops, herbicide drift	
	<b>2010</b>	5.40	2.83	12.07	7.40	Planted to crops, mow, hay storage, food plots, road/turnrow/driven, herbicide drift	
<b>Illinois</b>	<b>2007</b>	0.73	8.71		10.07	Mow, road/turnrow/driven, planted to crops, not contract width,	0.00
	<b>2009</b>	2.19	0.63	17.96	6.96	Mow, road/turnrow/driven, herbicide drift, equipment parking	
	<b>2010</b>	1.54	3.89	21.25	1.85	Road/driven/turnrow, mow, equipment parking	
<b>Indiana</b>	<b>2007</b>	0.77	2.03		10.91	Herbicide drift, mow, road/driven/turnrow , equipment disturbance	0.00
	<b>2008</b>	0.27	0.00		12.27	Mow, herbicide drift, planted to crops, road/turnrow/driven, equipment parking	5.65
	<b>2009</b>	0.00	2.48	12.12	9.64	Mow, road/turnrow/driven, planted to crops, equipment parking, herbicide drift	
	<b>2010</b>	1.45	1.70	0.00	5.33	Mow, Road/turnrow/driven, planted to crops, herbicide drift	
<b>Iowa</b>	<b>2007</b>	0.13	0.00		N/A	Mow, road/turnrow/driven	12.37
	<b>2008</b>	0.26	0.13		N/A	N/A	8.38
	<b>2009</b>	1.43	0.71	16.43	N/A	N/A	
	<b>2010</b>	0.57	0.95	14.50	N/A	N/A	14.12
<b>Kansas</b>	<b>2007</b>	0.53	0.25		2.76	Road/turnrow/driven, mow, equipment parking/debris/hay, underwater	0.22
<b>Kentucky</b>	<b>2007</b>	1.00	6.00		15.25	Mow, road/turnrow/driven, equipment parking/debris/hay, planted to crops	0.50
	<b>2008</b>	1.07	6.56		21.05	Mow, road/turnrow/driven, equipment storage, barn built	2.26
	<b>2009</b>	4.41	6.75	20.75	7.71	Herbicide drift, road/turnrow/driven, mow, planted to crops	
	<b>2010</b>	6.64	8.20	22.25	11.78	Herbicide drift, mow, road/driven/turnrow, planted to crops, equipment parking/storage	
<b>Mississippi</b>	<b>2007</b>	0.00	1.38		7.00	Road/turnrow/driven, planted to crops, mow, equipment disturbance, herbicide drift	0.00
	<b>2008</b>	0.28	1.03		0.56	Road/turnrow/driven	3.42
	<b>2009</b>	4.11	8.31	49.75	5.66	Mow, road/turnrow/driven	
	<b>2010</b>	1.67	2.69	17.59	8.97	Road/driven	
<b>Nebraska</b>	<b>2007</b>	0.46	0.78		7.39	Road/turnrow/driven, herbicide drift, mow, equipment parking, planted to crops	0.00

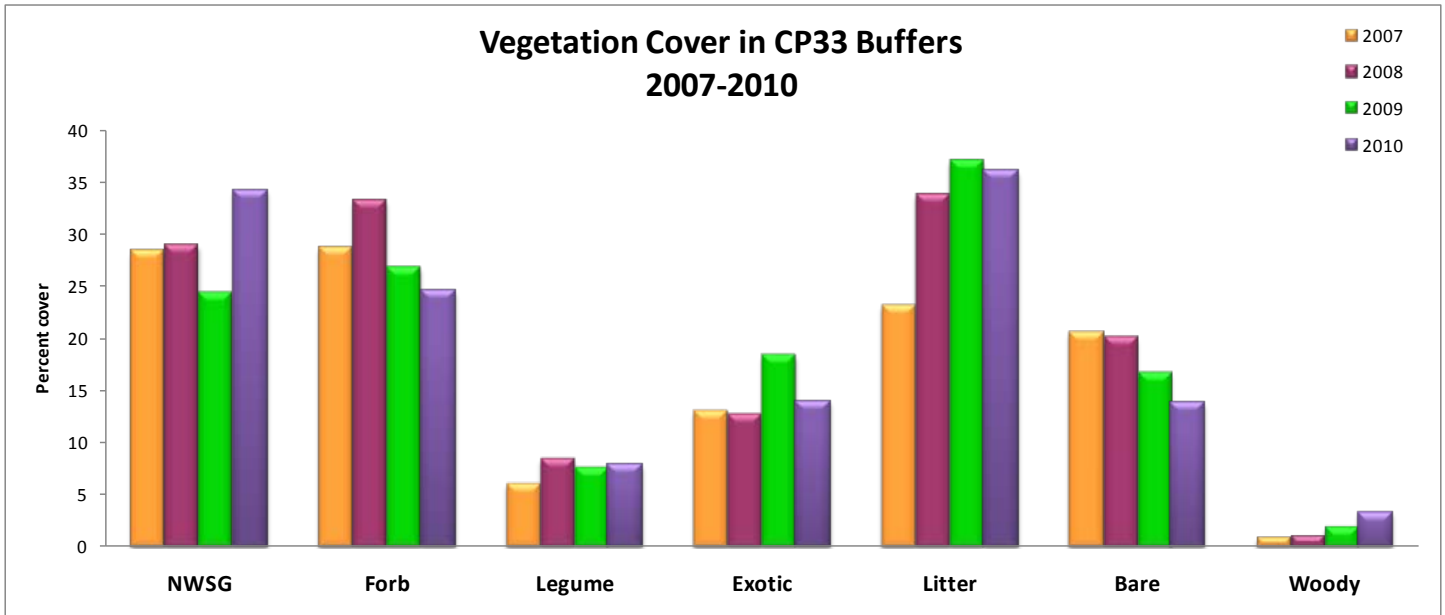
	<b>2008</b>	0.28	0.92		16.25	Road/turnrow/driven, herbicide drift, mow, planted to crops	N/A
	<b>2009</b>	1.96	5.35	19.24	7.97	Herbicide drift, planted to crops, mow, road/turnrow/driven	
	<b>2010</b>	0.33	1.79	21.38	6.00	Herbicide drift, road/driven/turnrow, planted to crops, mow	
<b>North Carolina</b>	<b>2007</b>	2.39	3.34		8.73	Road/turnrow/driven, mowed, planted to crops, plowed, herbicide drift, food plot	13.15
	<b>2008</b>	2.44	6.58		4.39	Herbicide drift, planted to crops, road/turnrow/driven	21.19
	<b>2009</b>	16.54	11.92	17.44	2.56	Mow	
	<b>2010</b>	13.15	7.90	15.00	2.56	Mow	
<b>Ohio</b>	<b>2007</b>	0.10	0.60		N/A		N/A
	<b>2009</b>	4.28	2.88	17.05	9.23	Mow, driven/equipment parking, herbicide drift	
	<b>2010</b>	2.39	0.67	15.99	10.85	Mow, herbicide drift, road/driven, equipment disturbance	
<b>South Carolina</b>	<b>2007</b>	2.89	0.97		4.86	Road/turnrow/driven, planted to crops, food plot, mow, equipment parking, herbicide drift	30.49
	<b>2008</b>	3.99	1.18		3.22	Road/turnrow/driven, planted to crops, herbicide drift, mow, equipment parking	31.63
	<b>2009</b>	8.99	4.87	22.26	N/A	N/A	
	<b>2010</b>	13.47	6.69	19.58	0.00	N/A	
<b>Tennessee</b>	<b>2007</b>	0.00	0.00		6.28	Mow, equipment parking/debris/hay, road/turnrow/driven, planted to crops, herbicide drift	N/A
	<b>2008</b>	0.24	0.12		8.78	Mow	N/A
	<b>2009</b>	N/A	N/A	7.85	5.26	Mow, herbicide drift, road/equipment parking/equipment damage, planted to crops	
	<b>2010</b>	N/A	N/A	10.10	7.93	Road/driven, planted to crops, mow, herbicide drift, plowed, parking/equipment damage, removed after flood damage	
<b>Texas</b>	<b>2007</b>	2.44	4.69		7.46	Mowed, road/turnrow/driven	0.00
	<b>2009</b>	6.21	8.76	35.52	1.90	Road/turnrow/driven, plowed	
	<b>2010</b>	0.91	0.93	8.24	1.90	Equipment parking	
<b>Overall</b>	<b>2007</b>	<b>0.96</b>	<b>2.15</b>		<b>7.57</b>		<b>6.56</b>
	<b>2008</b>	<b>1.38</b>	<b>2.02</b>		<b>10.09</b>		<b>13.25</b>
	<b>2009</b>	<b>4.47</b>	<b>4.68</b>	<b>21.03</b>	<b>7.81</b>		<b>N/A</b>
	<b>2010</b>	<b>4.10</b>	<b>3.27</b>	<b>14.04</b>	<b>5.38</b>		<b>N/A</b>

Mean buffer width at 10 systematically placed points along each CP33 field was 77 ft in 2010, nearly identical to mean contracted buffer width (Table 3). Mean percentage cover was less than 40% in each vegetation category in 2010 (NWSG, forb, legume, woody, exotic, litter, bare) (Table 3, Figure 2). Percent of NWSG and woody cover increased from 2009-2010, whereas percent of forb, exotic, and litter cover decreased (Table 3, Figure 2).

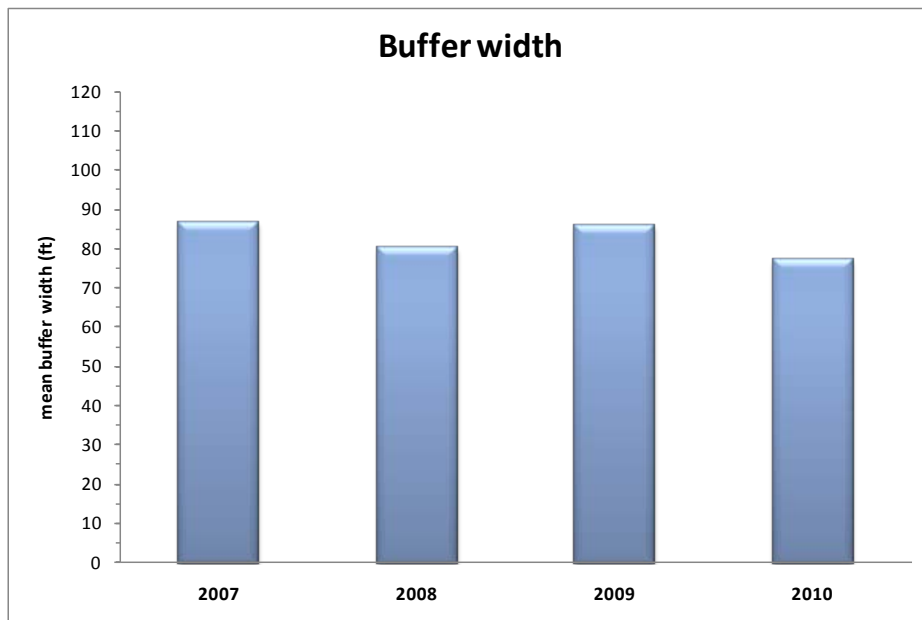
**Table 3. Average buffer width, percent native warm-season grass (NWSG), forb, legume, exotic vegetation, litter, bare ground, and woody across 10 transect points systematically distributed on each surveyed CP33 upland habitat buffers in 15 states in 2007, 10 states in 2008, and 14 states in 2009-2010.**

		Mean Buffer Width (ft)	% NWSG	% Forb	% Legume	% Exotic	% Litter	% Woody
Arkansas	2007	98.82	34.40	24.34	3.18	9.28	11.02	1.03
	2009	98.72	41.46	13.34	18.38	22.65	46.51	N/A
	2010	111.57	52.69	17.37	10.40	6.45	22.71	0.00
Georgia	2007	87.98	8.21	35.34	2.44	15.04	23.58	0.39
	2008	81.10	5.45	31.97	3.27	6.13	35.45	1.19
	2009	82.64	4.91	41.10	5.86	11.64	26.75	N/A
	2010	82.10	7.33	37.20	5.67	9.71	27.71	2.56
Illinois	2007	82.33	36.82	15.49	5.06	13.44	13.89	0.16
	2009	84.76	38.54	15.09	4.56	19.85	11.87	0.24
	2010	70.70	37.96	15.93	7.23	20.63	10.11	2.43
Indiana	2007	67.44	21.38	30.15	8.58	12.33	18.63	1.01
	2008	76.51	35.43	26.31	8.73	12.78	0.00	0.00
	2009	87.35	29.99	26.97	8.31	11.90	18.97	2.09
	2010	82.55	28.24	29.44	9.55	12.67	13.67	1.74
Iowa	2007	111.01	36.68	20.61	3.89	15.91	47.97	0.32
	2008	76.41	61.19	26.25	6.22	2.88	78.12	0.32
	2009	133.46	50.77	33.34	8.97	20.46	46.37	0.14
	2010	64.05	51.95	32.86	7.14	15.42	68.59	0.00
Kansas	2007	106.80	32.50	20.23	3.47	10.28	20.55	0.17
Kentucky	2007	80.16	29.88	21.36	14.53	17.08	27.32	1.44
	2008	77.37	35.21	21.74	20.60	15.86	35.29	1.93
	2009	78.63	30.89	27.40	9.24	18.28	45.85	0.00
	2010	77.33	28.88	27.38	9.75	17.68	51.21	9.35
Mississippi	2007	79.07	62.89	42.36	14.68	11.99	22.20	0.14
	2008	N/A	38.00	43.72	13.12	7.71	22.80	0.40
	2009	100.49	5.89	26.46	16.64	51.71	67.90	N/A
	2010	67.14	34.07	20.24	10.09	26.30	72.49	11.73
Missouri	2007	N/A	N/A	24.05	N/A	20.18	37.15	0.87
	2008	N/A	N/A	39.93	N/A	22.22	61.14	2.08
	2009	13.18	12.01	18.16	3.59	17.13	57.63	0.48
	2010	23.86	13.20	36.62	7.36	13.00	37.00	2.22
Nebraska	2007	77.42	24.67	34.26	11.91	16.00	29.41	1.20
	2008	76.62	28.31	20.79	6.53	16.72	43.36	1.23
	2009	76.69	35.97	20.71	9.03	19.24	32.91	1.58
	2010	63.04	32.99	21.75	8.12	14.61	41.00	1.26
North Carolina	2007	74.95	8.28	41.02	3.33	15.37	12.42	2.87
	2008	88.75	8.06	51.22	6.15	20.01	16.15	1.50
	2009	80.86	1.57	42.31	0.00	0.00	16.01	8.17
	2010	68.38	22.51	37.55	0.38	6.38	15.33	5.73
Ohio	2007	62.34	29.10	28.30	0.85	8.40	26.20	0.60
	2009	64.08	35.25	33.10	11.33	12.25	85.77	0.49
	2010	75.44	34.55	36.83	8.93	12.63	90.60	0.00
South Carolina	2007	92.40	21.63	33.39	2.96	7.03	15.09	1.36
	2008	90.59	19.51	37.11	2.85	7.99	11.60	1.37
	2009	69.60	0.09	38.07	0.14	0.00	12.68	5.44
	2010	20.95	32.99	0.00	8.96	17.53	18.02	
Tennessee	2007	74.80	N/A	N/A	N/A	N/A	N/A	N/A
	2008	74.58	N/A	N/A	N/A	14.73	N/A	N/A
	2009	70.25	N/A	N/A	N/A	N/A	N/A	N/A
	2010	71.61	N/A	N/A	N/A	N/A	N/A	N/A

Texas	2007	116.12	21.15	30.39	3.72	9.85	18.39	0.48
	2009	159.59	30.29	12.17	3.34	33.38	11.52	0.09
	2010	197.81	68.15	6.44	8.33	8.33	0.93	1.33
Overall	2007	86.55	28.28	28.66	6.05	13.01	23.13	0.86
	2008	80.24	28.89	33.23	8.43	12.70	33.77	1.11
	2009	85.74	24.43	26.79	7.64	18.34	36.98	1.87
	2010	76.89	34.27	24.59	7.84	13.95	36.10	3.20



**Figure 2. Percent cover of native warm-season grasses (NWSG), forbs, legumes, woody plants, exotics, litter, and bare ground within CP33 upland habitat buffers averaged over 15 states in 2007, 10 states in 2008, and 14 states in 2009-2010.**



**Figure 3. Mean buffer width (ft) across 15 states in 2007, 10 states in 2008, and 14 states in 2009-2010 measured at 10 systematic locations on CP33 buffered fields.**

**Mid-contract Management Data Summary**

One of the primary objectives of the Phase II monitoring program was to evaluate bobwhite and upland bird response following the contract period when mid-contract management (MCM) was scheduled to be initiated (generally contract year 4). To successfully evaluate differences in bird densities following MCM, it was required that MCM activities be qualified and if possible quantified within CP33 buffers. We approached evaluation of MCM activities in 2 ways. First was to simply inquire to the landowner if MCM activities had been implemented on his/her CP33 buffers during the previous year, and if so, what type of activities took place (e.g., disking, burning, herbicide, etc.). However, in recognizing the potential limitations of this approach, we also included an in-field visual assessment of MCM activities conducted by experienced individuals during annual vegetation transect surveys. This included recording percent of the buffer that appeared to be managed and what type of management appeared to have taken place.

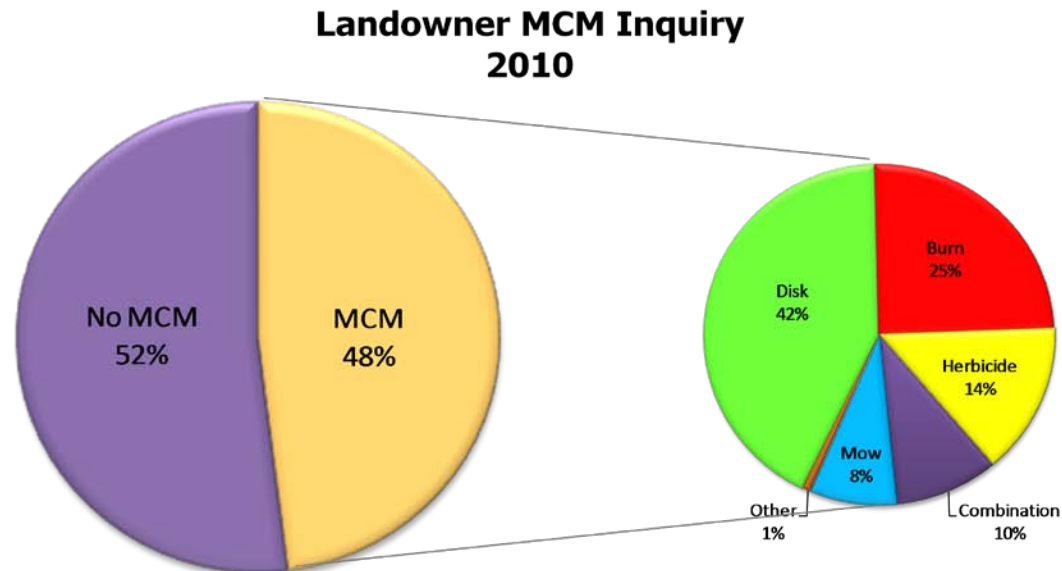
Over 80% of landowners with fields containing CP33 survey points in 8 states participating in MCM surveys were contacted regarding MCM activities in 2010 (Table 4). Nearly 48% of those landowners indicated that some type of MCM activity took place on their CP33 buffers from 2009-2010 (52% indicated no MCM activities had been implemented) (Figure 4). For landowners across all states that indicated MCM activities took place, the majority had disked or burned their buffers (Figure 4). Landowners indicated mowing as only a small percent of MCM activities (mowing is not an accepted MCM practice under CRP-479 except to facilitate subsequent burning, disking, or herbicide) (Figure 4). Herbicide, and combinations of disking, mowing, burning, and herbicide were also suggested by landowners (Figure 4). On average, landowners estimated that they had managed 43% of their buffer area through one of the aforementioned methods (Table 4).

**Table 4. Percent of landowners contacted regarding mid-contract management (MCM) activities, management activities indicated by landowners, percent of buffers that were estimated managed, and percent of buffer area within managed buffers estimated by the landowner for each state participating in the MCM survey.**

<u>Landowner Inquiry</u>					
		Initial MCM inquiry made? (% Yes)	Management Activities	% Buffers Managed	If managed, % Border Estimated Managed
<b>Georgia</b>	<b>2009</b>	97.37	none (15), disked (13), burned (1), mowed (2), herbicide (2)	59.46	33.65
	<b>2010</b>	98%	None (18), Disk(14), Burn (2), Burn/disk (1)	43%	21%
<b>Illinois</b>	<b>2009</b>	11.00	none (1), burning (1), disking/mowing (1)	66.67	30.33
	<b>2010</b>	32%	None (4), Burn (3), Disk/Mow (1), Mow (1)	56%	52%
<b>Indiana</b>	<b>2009</b>	80.56	Fire (7), Disking(6), Herbicide (1), Mowing (1), none (12)	51.72	22.11
	<b>2010</b>	81%	None (22), Disking (14), Burn (11), Herbicide (5), Burn/Herbicide (1), Mow (1), Other (1)	60%	24%
<b>Kentucky</b>	<b>2009</b>	100.00	Herbicide (1), Mowed (3), Herbicide/Mow (1), none (1)	12.50	2.75
	<b>2010</b>	100%	None (22), Herbicide (3), Mow (2), Burn (2), Burn/disk combo (2), Disk (2)	26%	75%
<b>Mississippi</b>	<b>2009</b>	90.00	none (17), burned (5), disked (9), mowed (4)	60.00	21.55
	<b>2010</b>	97%	None (13), Disk (8), Uncertain (8), Burn (6), Mow (2), Burn/Disk (1)	57%	54%
<b>Missouri</b>	<b>2009</b>	94.83	None (40), Disk (4), Burn (5), Mow (5), Disk/Burn/Mow (1)	25.86	9.51



Nebraska	2009	12.20	None (5)	0.00	
	2010	88%	None (11), Disk (4), Burn (3), Herbicide (3), Burn/Disk (1)	50%	41%
North Carolina	2009	75.00	none (5), burned (1), disked (17), mowed (4), mowed/disked (2), herbicide (1)	83.33	24.77
Ohio	2009	67.44	Burning (1); None (28)	3.45	0.20
	2010	71%	None (31), Mow (3), Herbicide (3), Burn (1)	18%	45%
South Carolina	2009	27.00	disked (7), none (2), disked/mowed (1)	80.00	26.40
Tennessee	2009	85.00	None (19), Disking (3), Mowed (5), Burned/Disked (3), Herbicide (4)	44.11	8.93
	2010	81%	Disk (11) , None (7), Herbicide (4), Disk/Herbicide (4), Burn(3), Mow (1), Disk/Mow (1)	77%	33%
Texas	2009	25.00	Shredding (4), Disking (1)	50.00	36.00
Overall	2009	38.59		27.05	11.56
	2010	81%		48%	43%



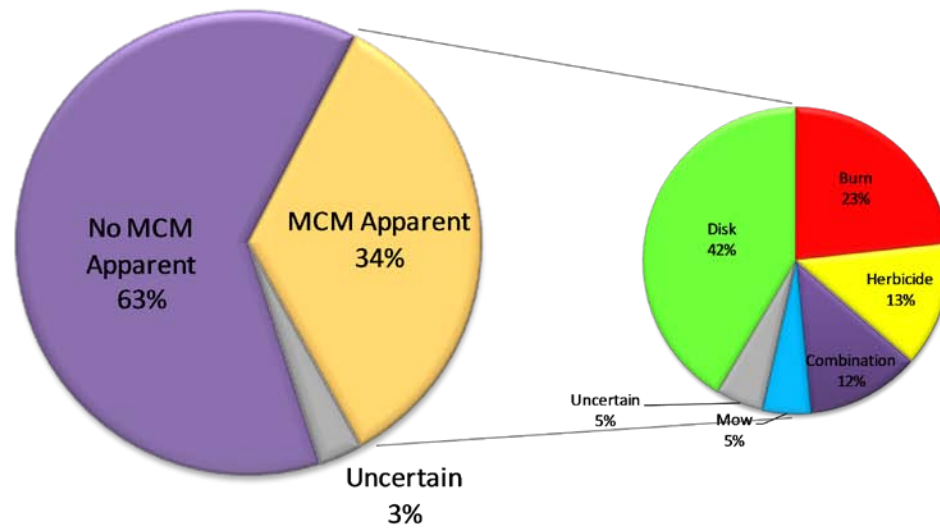
**Figure 4. Percent of landowners indicating that mid-contract management (MCM) was/was not implemented on CP33 buffers in 8 states from 2009-2010 (left). For landowners indicating MCM was implemented, type of management activity landowners indicated (right).**

In-field assessment of MCM activities conducted during vegetation surveys indicated discrepancies from landowner inquiries, likely due to difficulties experienced by the surveyor in determining presence and/or extent of MCM activities. MCM activities appeared to take place on 34% of buffered fields (66% of buffers appeared unmanaged, or the surveyor was uncertain if management had occurred) (Figure 5). For fields with apparent MCM activities, the majority appeared disked or burned, whereas herbicide, mowing, and combination methods accounted for a smaller portion of MCM activities (Figure 5). For buffers where MCM was apparent, 50% of buffer area appeared to be managed within fields (Table 5).

**Table 5. Apparent buffer management, percent of buffer area managed, and type of mid-contract management (MCM) activities from in-field MCM assessment of surveyed CP33 buffers.**

		<b>In-field Assessment</b>				<b>Apparent management activities</b>
		<b>Appeared managed</b>	<b>Did not appear managed</b>	<b>Uncertain</b>	<b>Of those managed, average % of buffer managed</b>	
<b>Arkansas</b>	<b>2009</b>	6%	94%	0%	30%	Disk (2)
	<b>2010</b>	9%	91%	0%	77%	Disk (1), Disk/Burn (1), Mow (1)
<b>Georgia</b>	<b>2009</b>	56%	38%	5%	55%	Disk (17), Herbicide (1), Combination (1)
	<b>2010</b>	58%	35%	3%	50%	Disk (10), Burn (5), Combination (5), Herbicide (2)
<b>Illinois</b>	<b>2009</b>	11%	85%	4%	47%	Burn (2), Disk (1), Uncertain (1)
	<b>2010</b>	21%	75%	4%	60%	Burn (4), Combination (1)
<b>Indiana</b>	<b>2009</b>	33%	67%	0%	54%	Fire (5), Disk (5), Mow (2), Combination (1)
	<b>2010</b>	41%	59%	0%	49%	Disking (12), Burn (9), Herbicide (3), Mow (2), Combination (1), Uncertain (1)
<b>Iowa</b>	<b>2009</b>	34%	66%	0%		
<b>Kentucky</b>	<b>2009</b>	3%	93%	5%	15%	Herbicide (1)
	<b>2010</b>	12%	86%	2%	55%	Disking (5), Burning (1), Disking/burning (1)
<b>Mississippi</b>	<b>2009</b>	10%	8%	83%	44%	Disk (1)
	<b>2010</b>	30%	70%	0%	40%	Disk (6), Burn (2), Uncertain (2)
<b>Missouri</b>	<b>2009</b>	32%	37%	32%	45%	Burn (2), Disk (2)
<b>Nebraska</b>	<b>2009</b>	0%	90%	10%		
	<b>2010</b>	48%	44%	8%	37%	Disk (4), Herbicide (2), Burn (1), Burn/Disk (1)
<b>North Carolina</b>	<b>2009</b>	40%	33%	28%	31%	Disk (11), Mow (2)
<b>Ohio</b>	<b>2009</b>	2%	86%	12%	5%	Herbicide (1)
	<b>2010</b>	24%	67%	7%		Herbicide (3), Burn (1)
<b>South Carolina</b>	<b>2009</b>	59%	8%	32%	33%	Disk (14), Uncertain (7)
<b>Tennessee</b>	<b>2009</b>	41%	54%	5%	53%	Disk (6), Herbicide (4), Mow (2), Burn/Disk (1), Disk/Herbicide (1)
	<b>2010</b>	65%	30%	3%	28%	Disking (8), Herbicide (5), Burn (3), Mow (3), Unspecified Disturbance (3), Disk/Herbicide (2), Disk/Burn/Herbicide (1)
<b>Overall</b>	<b>2009</b>	<b>25%</b>	<b>58%</b>	<b>16%</b>	<b>38%</b>	
	<b>2010</b>	<b>34%</b>	<b>62%</b>	<b>3%</b>	<b>50%</b>	

### In-field MCM Assessment 2010



**Figure 5. Percent of mid-contract management (MCM) that was, was not, or could not be determined apparent during in-field MCM assessment (left) from 2009-2010. For fields where MCM was apparent, type of management activities that appeared to have occurred (right).**