Greater Sage-Grouse Monitoring on Pinedale Anticline Project Area
2010 Update
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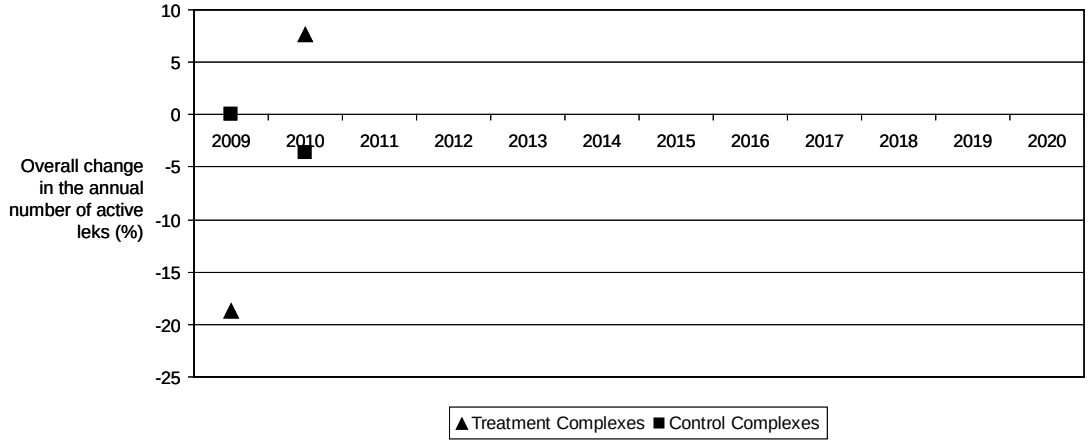
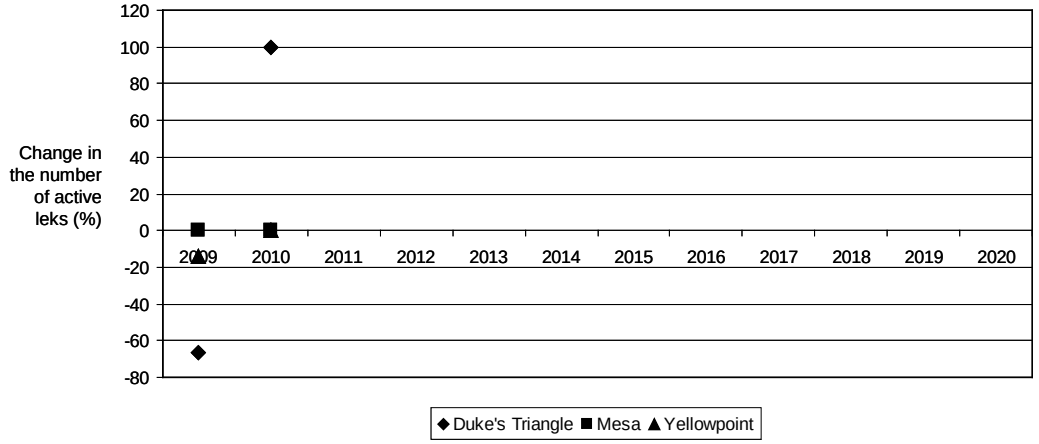
The wildlife monitoring and mitigation matrix (Matrix) appearing as Appendix B of the Pinedale Anticline ROD (U.S. Department of Interior 2008) states the following monitoring and effect size detection requirements for greater sage-grouse populations in the Upper Green River Basin (UGRB):

1. *Lek activity by lek complex; 30% change in the number of active treatment leks overall or by complex;*

Overall percent change in the total number of active leks within treatment (Duke's Triangle, Mesa, Yellowpoint) and control (Ryegrass, Speedway, East Fork) greater sage-grouse lek complexes in the UGRB of Southwestern Wyoming, 2008-10. Percent change was calculated by subtracting the previous year's number of active leks from the subsequent (or year of interest) year's number divided by the previous year's number. Overall percent change in the number of active leks in treatment complexes was 7.7% in 2010 (13 active leks 2009, 14 active 2010).

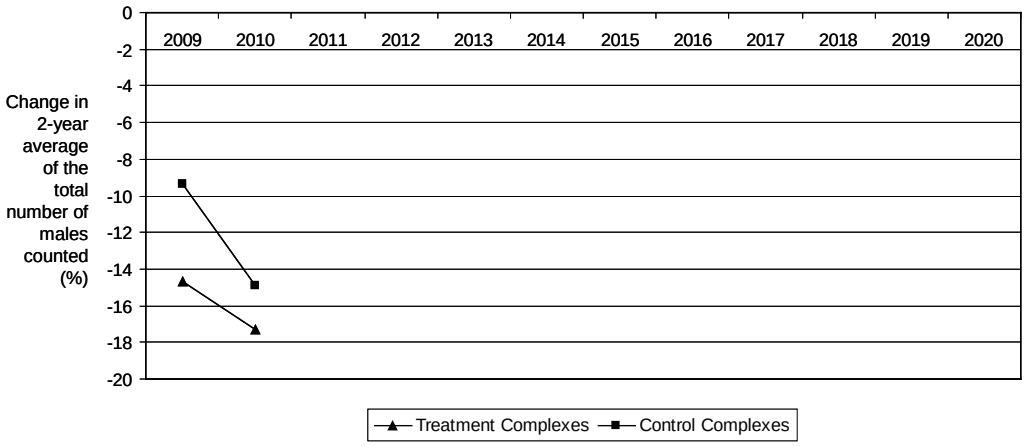


Percent change in the total number of active leks by treatment (Duke's Triangle, Mesa, Yellowpoint) greater sage-grouse lek complex in the UGRB of Southwestern Wyoming, 2008-10. Percent change was calculated by subtracting the previous year's number of active leks from the subsequent (or year of interest) year's number divided by the previous year's number. Percent change in the number of active leks was 100% in Duke' Triangle (1 active lek 2009, 2 active 2010), 0% in Mesa (6 active leks 2009, 6 active 2010), and 0% in Yellowpoint (6 active leks 2009, 6 active 2010).



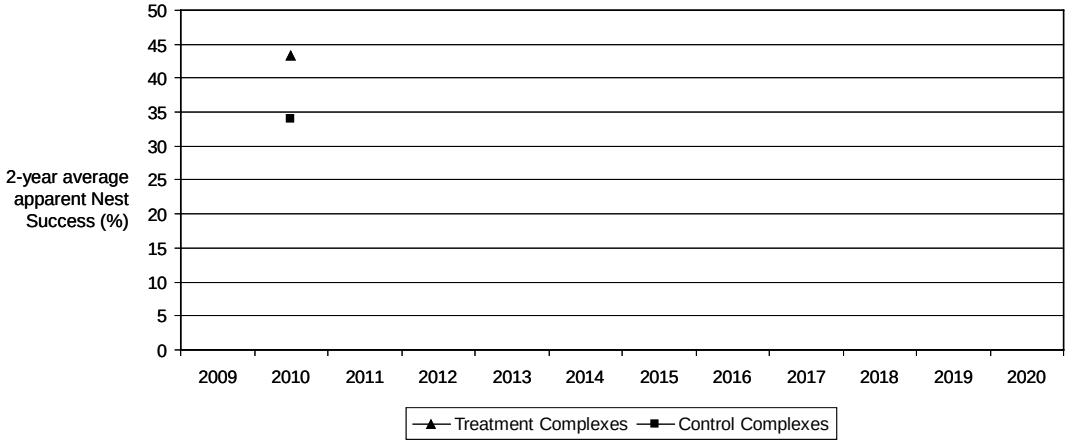
2. *Peak numbers of breeding males by lek complex; 30% average change in the difference between treatment and reference areas over 2 years;*

Percent change in a 2-year running average of the total number of males counted on leks within treatment (Duke's Triangle, Mesa, Yellowpoint) and control (Ryegrass, Speedway, East Fork) greater sage-grouse lek complexes in the UGRB of Southwestern Wyoming, 2008-10. Percent change was calculated by subtracting the previous year's 2-year average total number of males counted from the subsequent (or year of interest) year's average divided by the previous year's average (initiated with the 2008 and 2009 average). Percent change in the 2-year average total number of males for treatment complexes (-17%; 685.5 average number of males 2009, 567 average 2010) as standardized by percent change in the 2-year average for reference complexes (-15%; 1566.5 average number of males 2009, 1332.5 average 2010) was -2.3%.



3. *Nesting success; 15% average difference between treatment and reference areas over 2 years;*

2-year average apparent nest success of treatment (Duke's Triangle, Mesa, Yellowpoint) and control (Ryegrass, Speedway, East Fork) greater sage-grouse lek complexes in the UGRB of Southwestern Wyoming, 2009-10. The difference in 2-year average nest success for treatment complexes (43%; 41.4% nest success 2009, 45.5% 2010) as compared to the 2-year average nest success for reference complexes (34.1%; 47.1% nest success 2009, 21.1% 2010) was 9.4%.



Apparent nest success by complex (n = number of nests) and year:

	2009	2010
Duke's Triangle	75% (4)	0% (1)
Mesa	36% (11)	44% (27)
Yellowpoint	36% (14)	60% (5)
Ryegrass	41% (22)	29% (17)
Speedway	58% (12)	20% (10)
East Fork	N/A (0)	9% (11)

4. *Nesting habitat selection; 0.5 km average increase in infrastructure avoidance distance over 2 consecutive years;*

Discuss at meeting contractor digitizing infrastructure from aerial imagery distributed by PAPO.

5. *Winter concentration area use; 15% average change in the difference of the amount of winter habitat used in treatment and reference areas over 2 years;*

No Data

6. *Winter concentration area use; 30% average change in the difference of the numbers of grouse documented using treatment and reference areas over 2 years;*

No Data

7. *Noise levels at leks; 10 dBA above background.*

No Data