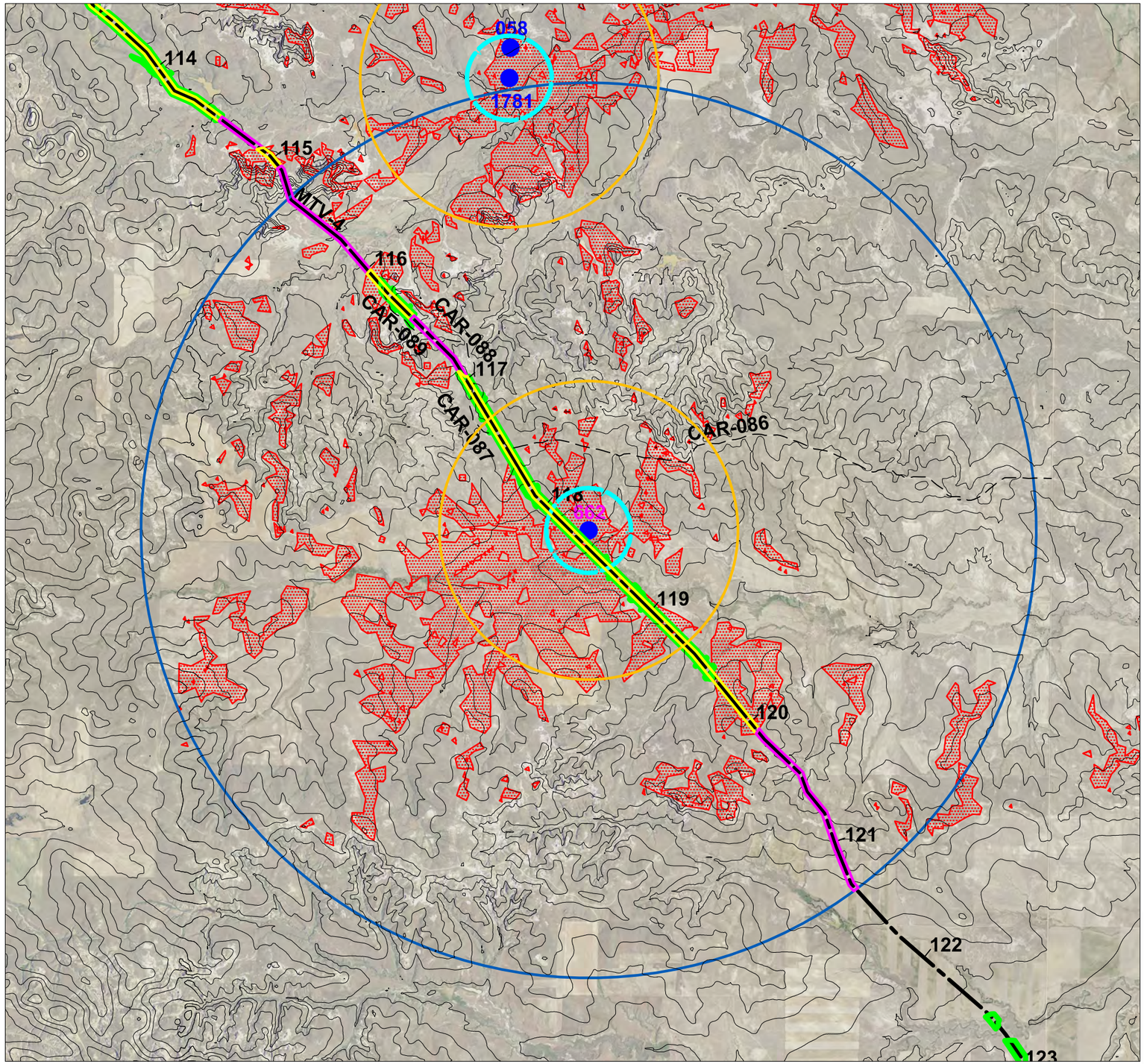



LEGEND

- Proposed pipeline centerline
- MTV-1 — MT DEQ pipeline alternative route
- CAR-013 — Access Road
- PS-09 — Pump Station
- MLV-01 — Valve Site
- 45 — Milepost
- Approximate lek location
- 3-mile buffer
- 1-mile buffer
- Viewshed from lek
- Suitable nesting habitat*
  North of Milk River: Average shrub cover ≥15%, silver sagebrush is approximately half of the shrub cover (Tack 2006).
  South of Milk River: Average shrub cover ≥15-31% of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
  *All nesting habitat based on field mapping within 150' of centerline.
  NOTE: Implement Mitigation I at all areas with suitable nesting habitat.

Proposed Construction Constraints and Mitigation

- Constraint I. No construction from March 1 through June 15.
- Constraint II. No construction from ½ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
- Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
- Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

Notes:
1. Three male sage-grouse observed in 2009.

Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.

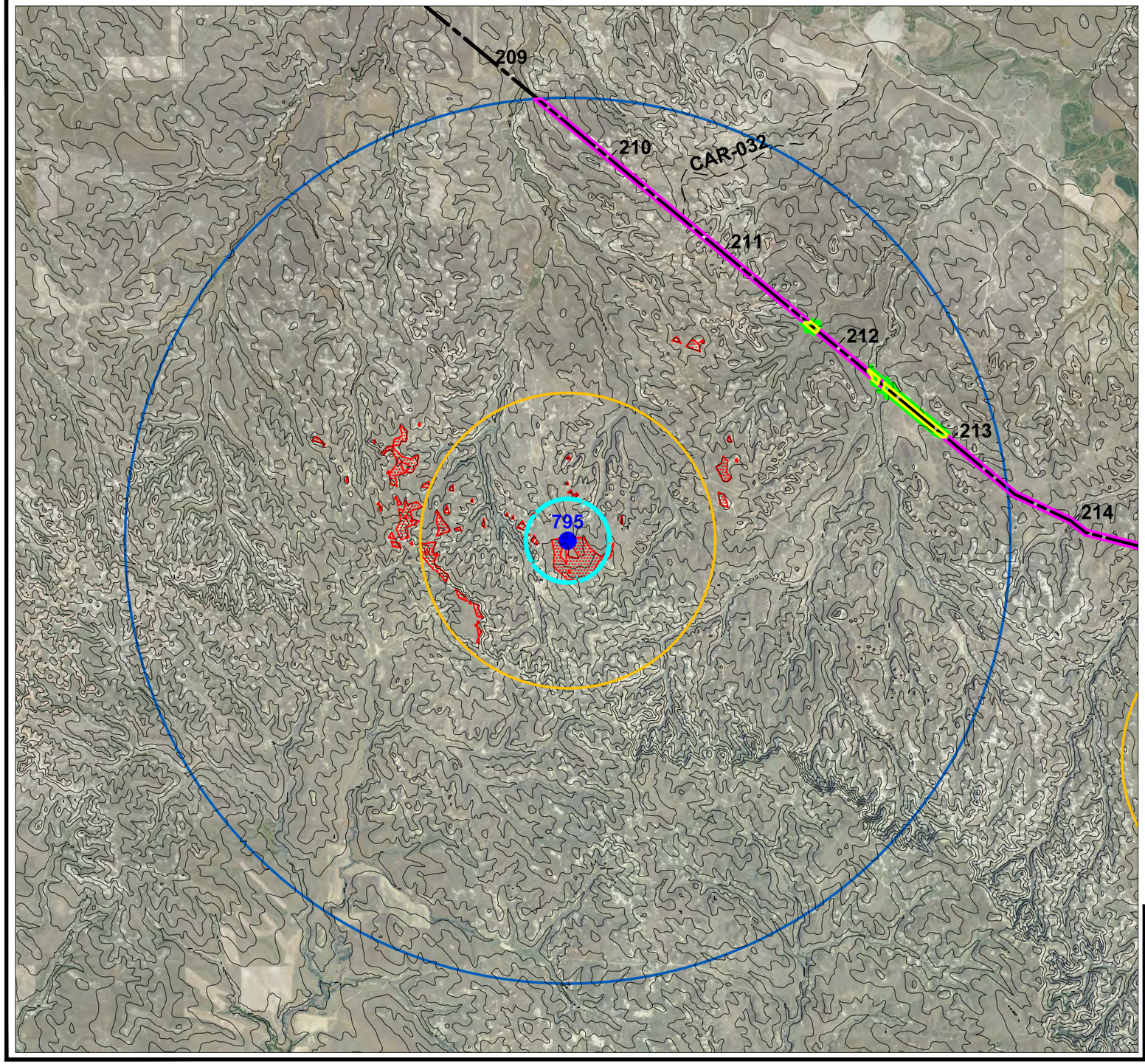
N

4000 2000 0 4000 6000 8000
Feet

# Greater sage-grouse lek 662 : Viewshed from lek and suitable nesting habitat along Keystone XL project

WESTECH
Environmental Services, Inc.
P.O. Box 6045
Helena, Montana 59604

| | |
|---|---|
| SCALE: 1"=4000' | FIGURE |
| DATE: 07/02/10 | 12 |
| DRAWN BY: DC | |
| CHECKED BY: JB | |
| FILE: KXL1006.DWG | SHEET: 1 of 1 |




LEGEND

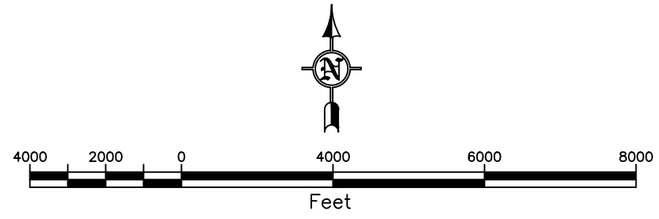
- Proposed pipeline centerline
- MTV-1 — MT DEQ pipeline alternative route
- CAR-013 — Access Road
- PS-09 — Pump Station
- MLV-01 — Valve Site
- 45 — Milepost
- Approximate lek location
- 3-mile buffer
- 1-mile buffer
- Viewshed from lek
- Suitable nesting habitat*
  North of Milk River: Average shrub cover ≥15%, silver sagebrush is approximately half of the shrub cover (Tack 2006).
  South of Milk River: Average shrub cover ≥15-31% of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
  *All nesting habitat based on field mapping within 150' of centerline.
  NOTE: Implement Mitigation I at all areas with suitable nesting habitat.

Proposed Construction Constraints and Mitigation

- Constraint I. No construction from March 1 through June 15.
- Constraint II. No construction from ½ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
- Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
- Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

Notes:
1. Sage-grouse or sage-grouse sign were located at lek site in 2009.

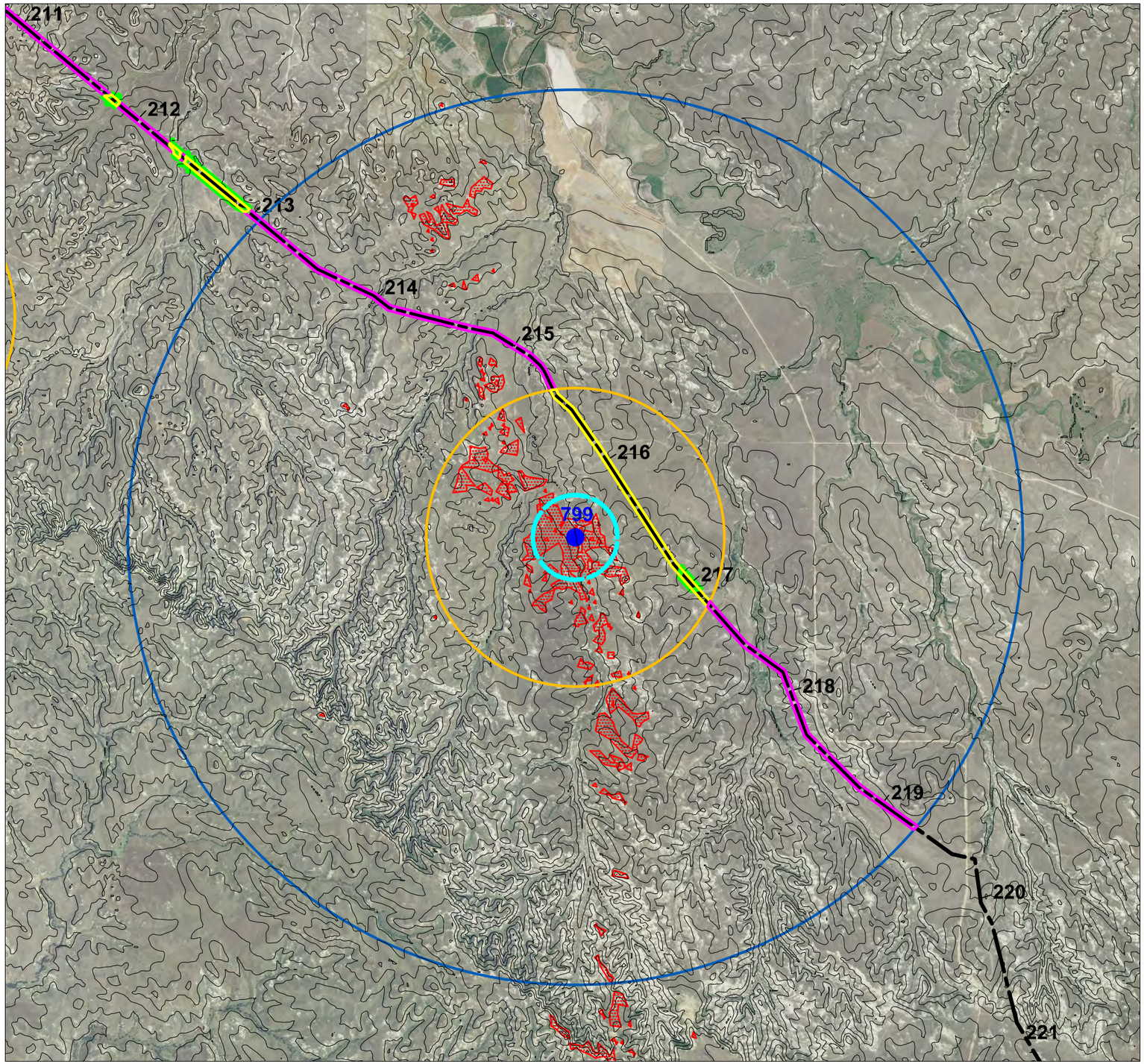
Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.




# Greater sage-grouse lek 795 : Viewshed from lek and suitable nesting habitat along Keystone XL project

WESTECH
Environmental Services, Inc.
P.O. Box 6045
Helena, Montana 59604

| | |
|---|---|
| SCALE: 1"=4000' | FIGURE |
| DATE: 07/02/10 | 13 |
| DRAWN BY: DC | |
| CHECKED BY: JB | |
| FILE: KXL1006.DWG | SHEET: 1 of 1 |




LEGEND

- Proposed pipeline centerline
- MTV-1 — MT DEQ pipeline alternative route
- CAR-013 — Access Road
- PS-09 — Pump Station
- MLV-01 — Valve Site
- 45 — Milepost
- Approximate lek location
- 3-mile buffer
- 1-mile buffer
- Viewshed from lek
- Suitable nesting habitat*
  North of Milk River: Average shrub cover ≥15%, silver sagebrush is approximately half of the shrub cover (Tack 2006).
  South of Milk River: Average shrub cover ≥15-31% of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
  *All nesting habitat based on field mapping within 150' of centerline.
  NOTE: Implement Mitigation I at all areas with suitable nesting habitat.

Proposed Construction Constraints and Mitigation

- Constraint I. No construction from March 1 through June 15.
- Constraint II. No construction from ½ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
- Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
- Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

Notes:
1. Sage-grouse or sage-grouse sign were located at lek site in 2009.

Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.

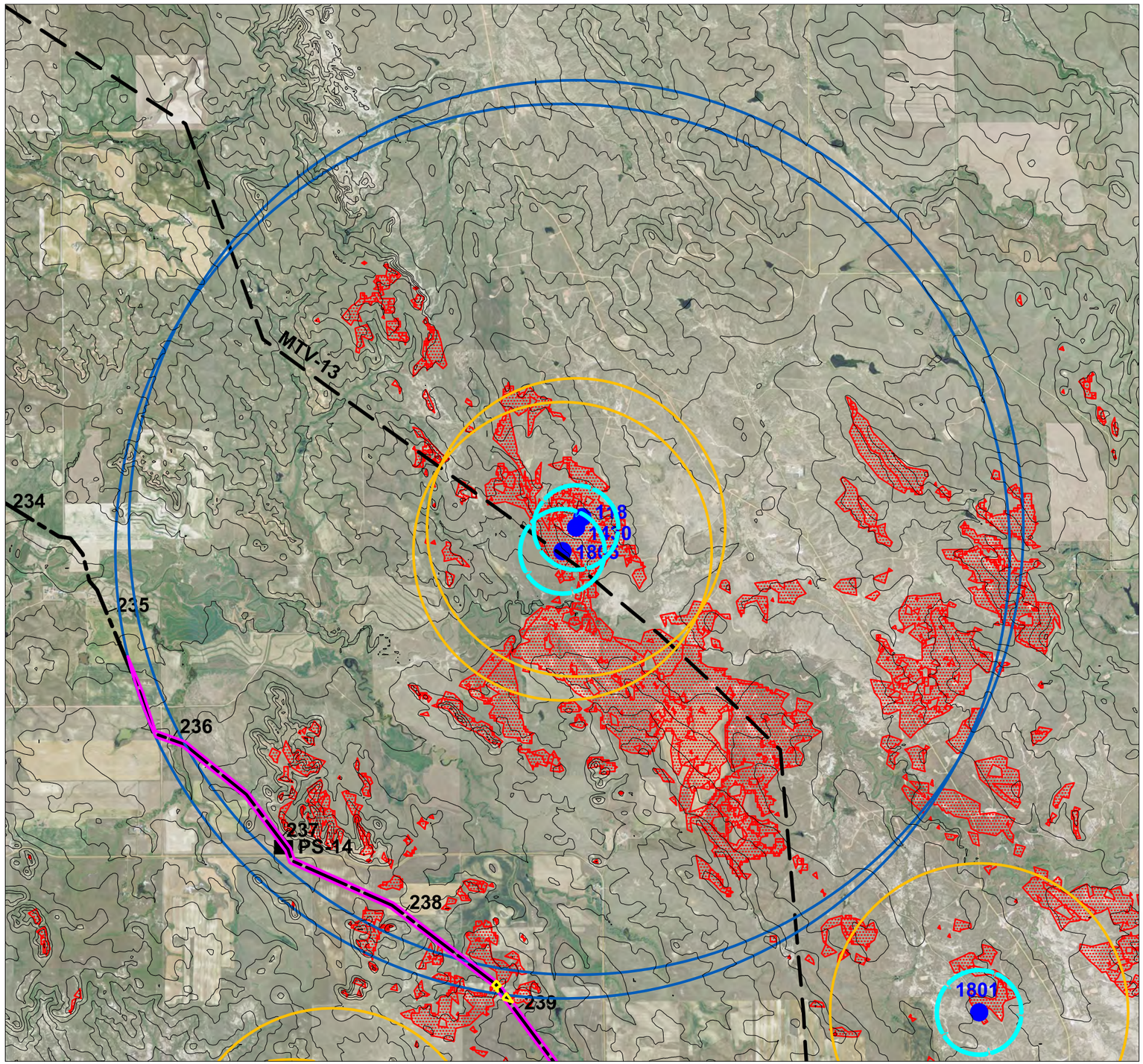
N

4000 2000 0 4000 6000 8000
Feet

# Greater sage-grouse lek 799 : Viewshed from lek and suitable nesting habitat along Keystone XL project

WESTECH
Environmental Services, Inc.
P.O. Box 6045
Helena, Montana 59604

| | |
|---|---|
| SCALE: 1"=4000' | FIGURE |
| DATE: 07/02/10 | 14 |
| DRAWN BY: DC | |
| CHECKED BY: JB | |
| FILE: KXL1006.DWG | SHEET: 1 of 1 |




LEGEND

- Proposed pipeline centerline
- MTV-1 — MT DEQ pipeline alternative route
- CAR-013 — Access Road
- PS-09 — Pump Station
- MLV-01 — Valve Site
- 45 — Milepost
- Approximate lek location
- 3-mile buffer
- 1-mile buffer
- Viewshed from lek
- Suitable nesting habitat*
  North of Milk River: Average shrub cover ≥15%, silver sagebrush is approximately half of the shrub cover (Tack 2006).
  South of Milk River: Average shrub cover ≥15-31% of which the majority is sagebrush (Montana Sage Grouse Work Group 2005).
  *All nesting habitat based on field mapping within 150' of centerline.
  NOTE: Implement Mitigation I at all areas with suitable nesting habitat.

Proposed Construction Constraints and Mitigation

- Constraint I. No construction from March 1 through June 15.
- Constraint II. No construction from ½ hour before sunrise to 2 hours after sunrise from March 1 through June 15.
- Mitigation I. Mow suitable nesting habitat between September 1 and November 30 in the year prior to construction. Implement sage-grouse nesting habitat Construction/Reclamation Unit.
- Mitigation II. Monitor lek when pipeline construction is within 3 miles. If displaying males that were present prior to construction are not present for three consecutive mornings after construction has commenced, confer with designated personnel.

Notes:
1. Twelve male sage-grouse were observed in 2009 at lek 1430.
2. Fourteen male sage-grouse were observed in 2009 at lek 1805.
3. Keystone observed 12 male sage-grouse at point 118 in April 2010.
4. RECOMMEND CONSTRAINT II RATHER THAN CONSTRAINT I AT MP 238.9 SINCE VISIBLE AREA IS VERY RESTRICTED.

Centerline and facilities: 03/26/10.
Aerial photography: NAIP 2009.
Viewshed and 10 meter topography generated from USGS 1 arc-second NED.

N

4000 2000 0 4000 6000 8000
Feet

# Greater sage-grouse leks 1430 & 1805 : Viewshed from leks and suitable nesting habitat along Keystone XL project

WESTECH
Environmental Services, Inc.
P.O. Box 6045
Helena, Montana 59604

| | |
|---|---|
| SCALE: 1"=4000' | FIGURE |
| DATE: 07/02/10 | 15 |
| DRAWN BY: DC | |
| CHECKED BY: JB | |
| FILE: KXL1006.DWG | SHEET: 1 of 1 |