

# 2004 Annual Monitoring Report Range Forage Utilization

**Activities, Effects and Resources To Be Measured.**

Range forage utilization

**Methods.**

Grazing impact studies, stubble height, clip & weigh, ocular reconnaissance, photo documentation

**Location.**

| District            | Allotment  |
|---------------------|--|
| D1 – Pine Valley RD | Black Hills, Bull Valley, Enterprise, East Pinto, Gunlock, Irontown, Magotsu, Terry Shoal Creek, West Pinto, Pine Valley and North Hills Wild Horse Territory.   |
| D2 – Cedar City RD  | Bowery, Red Creek, Little Valleys, Panguitch Lake, Butler Creek, Haycock Mtn./Brian Head, Six-Lakes/Navajo Ridge, Sage Valley/Horse Valley, Dry Lake/Bunker/Hatch Mtn., Asay Bench, Red Desert/Sidney, Harris Flat, Strawberry, Shingle Mill, Webster Flat/Fife Mill, Haycock Creek, Warren-Bunker/Castle Valley, Black Mtn. |
| D3 – Powell RD      | Blue Fly, Clark Mountain, East Fork, East Pines, Hatch, Jones Corral, Kanab Creek, Pines, Upper Blubber, Widstoe, Willow Springs   |
| D4 – Escalante RD   | Boulder, Cameron Wash, Coyote, Sand Creek, Sweetwater-Griffin Top, Upper Valley East   |
| D5 – Teasdale RD    | North Slope, Pleasant Creek, Oak Creek, Dark Valley, Pollywog Lake, Antelope Springs, Lake Philo   |

**Variation Which Would Cause Further Evaluation and/or Change in Management**

Exceed prescribed utilization by 20% one time or 10% consistently.

**Results.**

| District            | Utilization Levels   |
|---------------------|--|
| D1 – Pine Valley RD | Average < 50% use on 10 allotments                                     |
| D2 – Cedar City RD  | Average ≤ 50% use on 19 allotments; 5 riparian areas on Red Creek ≥80% |
| D3 – Powell RD      | Average 35% use on 22 sample sites/11 allotments                       |
| D4 – Escalante RD   | Average 48% use on 35 sample sites/6 allotments                        |
| D5 – Teasdale RD    | Average 33% use on 46 sample sites/7 allotments                        |

**Interpretation.**

Allotments, as a whole, appear to have been kept within allowable use levels in 2004. This is a positive relationship relating to the desired conditions of these allotments. If this trend continues it is likely that trend will continue to move in a favorable direction. Utilization on some riparian areas exceeded standards by at least 20%. Measures/projects to address these overuse problems are in progress and it is expected that these sites will not experience a downward trend in condition.

Upland vegetation is generally under-utilized by livestock, although some allotments continue to experience heavy grazing in localized upland and riparian areas. The actual livestock use on the Dixie NF was less than the amount that is permitted. This is due to a variety of factors, including drought recovery, and reflects the grazing permittees' willingness to be flexible in order to maintain and improve range conditions.

**Monitoring Resources Available.**

Resources were adequate to monitor 53 of the 87 allotments on the 4 Districts reporting. Under normal permit administration, priority for monitoring is given to those allotments that are of concern. Considering this, monitoring for utilization on 61% of the range allotments, with priority on problem allotments, is adequate to monitor general use. This assumption suggests that forage use on the allotments not monitored would be less than or equal to that on the monitored allotments.

**Recommendation.**

Utilization monitoring should continue at the same frequency and locations for the most part. The intensity level of the 2004 monitoring work described here is considered the minimum standard. Increasing the intensity or detail of monitoring may occur in the future as issues dictate.

Prepared by Dave Grider, Range Specialist  
18 November 2004

# 2004 Annual Monitoring Report

## Range Vegetation Condition and Trend

Prepared By: Mark Madsen, Dixie NF Botanist  
6 January 2005

Activities, effects and resources to be measured.

Range vegetation condition and trend.

### Methods

Measurement of plant composition, % frequency, shrub cover, shrub density, shrub form/age classes, and ground cover on all benchmark upland sites selected. These measurements were collected in accordance with the Intermountain Region Protocol as defined in FSH 2209.21 – Rangeland Ecosystem Analysis and Monitoring Handbook – Chapter 40 – Rangeland Trend Monitoring (R4 Amendment 2209.21-2003-1 : Effective Date 12/19/2003) [http://fsweb.r4.fs.fed.us/directives/fsh/2209.21/2209.21\\_40.doc](http://fsweb.r4.fs.fed.us/directives/fsh/2209.21/2209.21_40.doc)

Measurement of community type % composition on cross sections, greenline, and woody species regeneration transects on all riparian benchmarks selected. These measurements account for:

- riparian complex plant composition (Cross-section)
- streamside plant composition (Greenline)
- riparian shrub regeneration (Woody Species Regeneration)

These measurements were collected in accordance with: General Technical Report RMRS-GTR-47 “Monitoring the Vegetation Resources in Riparian Areas” by Alma H. Winward, April 2000. [http://www.or.blm.gov/nrst/Tech\\_References/rmrs\\_gtr047\\_Winward\\_2000.pdf](http://www.or.blm.gov/nrst/Tech_References/rmrs_gtr047_Winward_2000.pdf)

This method was used under authority of approved range protocol guidelines on page 7 of FSH 2209.21 – Rangeland Ecosystem Analysis and Monitoring Handbook – Chapter 40 – Rangeland Trend Monitoring (R4 Amendment 2209.21-2003-1 : Effective Date 12/19/2003)

### Location

This monitoring included a total of 57 monitoring studies. 42 of these monitoring studies were upland range trend monitoring studies. 15 of these monitoring studies were Level III Riparian Inventories. These studies were split up across the Dixie National Forest as outlined below.

D1 - Pine Valley Ranger District --- 11 upland trend studies  
4 riparian level III inventories

D2 – Cedar City Ranger District --- 5 upland trend studies  
5 riparian level III inventories

D3 – Powell Ranger District --- 12 upland trend studies  
3 riparian level III inventories

D4 – Escalante Ranger District --- No monitoring studies performed

D5 – Teasdale Ranger District --- 14 upland trend studies  
3 riparian level III inventories

These monitoring studies were performed in 22 allotments and 37 units (pastures) across the Dixie National Forest. This work was accomplished by the Forest Botany Crew. People on this crew included Mark Madsen (Forest Botanist), Hans Lovell (Biological Science Technician), and Angela Merkley (Biological Science Technician). These monitoring studies were accomplished during the 2004 field season from May 19 – September 28.

#### **Variation**

Variation that would cause further evaluation and/or change in management direction would be a “downward vegetation and/or soil trend”.

#### **Results**

The raw data and data summaries for each of these 57 individual monitoring studies is kept on record at the Supervisor’s Office, Dixie National Forest, Cedar City, UT. The contact person for these records is Mark Madsen, Dixie NF Botanist, 435-865-3725. See interpretation below for evaluation of variation from the Dixie NF Monitoring & Evaluation Program.

#### **Interpretation**

Since 38 of the 57 studies were established in 2004, vegetation and soil trend for these 38 studies cannot be measured. It requires a minimum of two readings of a monitoring study to make any inferences toward trend. For these studies, no variation from the Forest Monitoring & Evaluation Program can be accurately measured at this time. However, of the 19 remaining “repeat” studies, there were only 14 (all upland trend studies) that used similar protocols and had complete and reliable replication. Therefore, trend could only be accurately assessed on these 14 studies. Summary of trends delineated from these 14 studies are outlined in Table 1 below:

**TABLE 1**

|    | <u>District</u> | <u>Study Name</u>         | <u>Study #</u> | <u>Allotment</u>           | <u>Pasture</u>             | <u>Vegetation<br/>Composition<br/>Trend</u> | <u>Ground<br/>Cover (Soil)<br/>Trend</u> | <u>Overall<br/>Trend</u>        | <u>Variation<br/>from Forest<br/>Standard</u> |
|----|-----------------|---------------------------|----------------|----------------------------|----------------------------|---|--|---------------------------------|---|
| 1  | Pine Valley     | Honeycomb                 | 1891           | Terry-Shoal<br>Creek       | Mountain Big<br>Bench Unit | upward                                      | downward<br>(due to time<br>of season)   | slightly<br>upward              | No  |
| 2  | Pine Valley     | Overflow<br>Camping       | 1893           | Pine Valley                | Pine Valley<br>Unit        | stable                                      | slightly<br>upward                       | stable to<br>slightly<br>upward | No  |
| 3  | Pine Valley     | Pinto Spring              | 1996           | East Pinto                 | South Richie<br>Unit       | slightly<br>upward                          | downward                                 | not available                   | Yes   |
| 4  | Pine Valley     | Iron Peg<br>Exclosure     | 1895           | East Pinto                 | South Richie<br>Unit       | downward                                    | downward                                 | downward                        | Yes   |
| 5  | Pine Valley     | Sewage<br>Lagoon          | 1981           | Pine Valley                | Four Mile<br>Bench         | downward                                    | slightly<br>upward                       | downward                        | Yes   |
| 6  | Pine Valley     | Pine Valley<br>Cemetery   | 1992           | Pine Valley                | Pine Valley<br>Unit        | downward                                    | slightly<br>downward                     | downward                        | Yes   |
| 7  | Pine Valley     | Southwest<br>Grass Valley | 2533           | Pine Valley                | Grass Valley<br>Unit       | stable                                      | downward                                 | slightly<br>downward            | Yes   |
| 8  | Cedar City      | Webster Flat              | 1011           | Webster Flat-<br>Fife Mill | Webster Flat               | stable                                      | not available                            | stable                          | No  |
| 9  | Powell          | Ahlstrom<br>Hollow        | 1006           | Blue Fly<br>C & H          | South Unit                 | stable                                      | not available                            | stable                          | No  |
| 10 | Powell          | Kanab Creek               | 1026           | Kanab Creek                | Middle Unit                | stable                                      | not available                            | stable                          | No  |
| 11 | Teasdale        | Roundup Flat              | 1034           | Oak Creek                  | Pole Corral<br>Draw Unit   | not available                               | downward                                 | downward                        | Yes   |
| 12 | Teasdale        | Roundup Flat<br>Exclosure | 1033           | Oak Creek                  | Pole Corral<br>Draw Unit   | not available                               | downward                                 | downward                        | Yes   |
| 13 | Teasdale        | Pole Corral               | 1037           | Oak Creek                  | Pole Corral<br>Draw Unit   | not available                               | downward                                 | downward                        | Yes   |
| 14 | Teasdale        | Pole Corral<br>Exclosure  | 1036           | Oak Creek                  | Pole Corral<br>Draw Unit   | not available                               | slightly<br>downward                     | slightly<br>downward            | Yes   |

Of the 2004 data that is applicable for assessing vegetation and/or soil trend (Table 1), management is not meeting Forest Plan objectives on 9 of the 14 study sites. These 9 study sites are located on 5 pastures (South Richie, Four Mile Bench, Pine Valley, Grass Valley, and Pole Corral Draw) spread out over 3 allotments (East Pinto, Pine Valley, and Oak Creek). These allotments occur on the Pine Valley and Teasdale Ranger Districts of the Dixie National Forest. If downward trends continue on these 9 study sites

Forest Plan objectives will continue to not be met in these areas. Five of the study sites listed above (see Table 1) are meeting Forest Plan objectives.

It is conceded that in 1986, the Dixie Forest Plan did not define vegetation and soil conditions that would serve as a baseline from which to measure. Therefore, there are no reference conditions (from 1986) from which to measure trend. Since there is no baseline, sole reliance is placed on measuring trend during a defined time frame, from one reading to another (in the case of these 14 studies, between 1989 - 2004 or 1996 – 2004). Therefore, variation that would cause further evaluation may be appropriate but, in the absence of periodically recorded post-1986 data, may not give us a clear picture of how much the range has improved or not over 1986 levels.

#### **Monitoring Resources Available**

Yes, enough dollars were available to accomplish to the standards required.

#### **Recommendation**

This monitoring needs to be continued at, a minimum of, the same level. If new studies are not established and these studies re-read, range condition and trend cannot be evaluated, in future years, as per the Forest Plan Standards.