Pine Creek/Sulphurbeds Allotment
GRASSY CREEK #2 (GC2)
Riparian Browse Assessment

(1) July 16, 2008
(2) October 10, 2008
(3) October 12, 2009

Riparian Grass/Grasslike Utilization

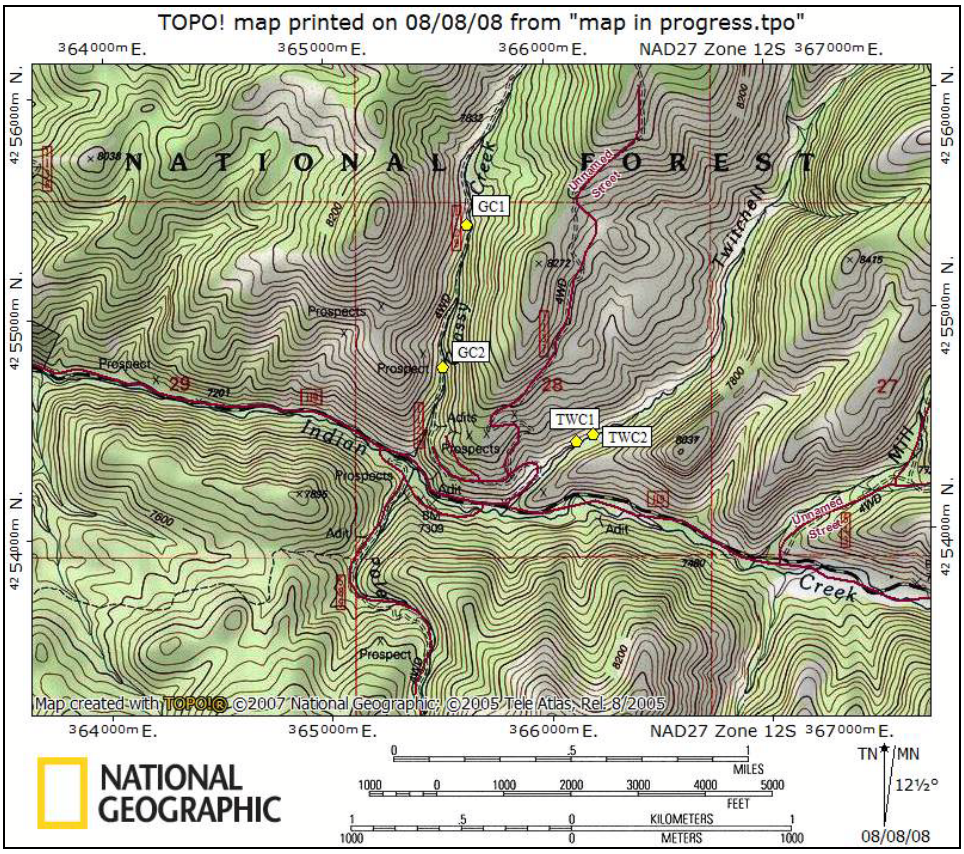
(1) October 10, 2008
(2) October 12, 2009

Grassy Creek is a tributary to Indian Creek, running roughly parallel to and west of Twitchell Creek in the southern portion of Pine Creek/Sulphurbeds Allotment. Grassy Creek #2 runs through a narrow (14'-24') cottonwood gallery along the creek. The site is dominated by large, mature narrowleaf cottonwoods (Fig. 1) and short sprouts growing from the roots of the mature trees. No recruitment cottonwoods (>6' but less than 75% as tall as overstory cottonwoods) were present at the site in 2008. The riparian area at the site, and along the entire creek, is narrow (50' or less), and a significant portion of that is covered by the road that winds up-canyon (Fig. 2). At several places the creek flows across the road.

(1: 7/16/08) As of July 16, 30.4% of cottonwood leaders and 60.2% of subleaders were browsed (Fig. 3). Cattle are scheduled to be in the Wildcat pasture from August 16 through September 30; however, cattle were in the canyon on July 16.

(2: 10/10/08) By October 10, **73.3%** of cottonwood tallest leaders and **92.2%** of subleaders were browsed (Fig. 4). One young cottonwood was >6' because it was inaccessible to ungulates due to some fallen branches (Fig. 5). Sprouts from one old cottonwood were being heavily browsed (Fig. 6). Several cattle were in the pasture (near Twitchell Creek) the night of October 9.

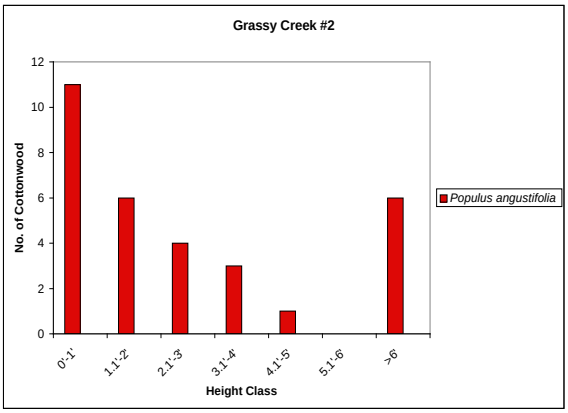
(3: 10/12/09) By October 12, 95% of cottonwood tallest leaders and 99.0% of subleaders were browsed (Fig. 8). Though this pasture was to be rested in 2009, several cattle entered the pasture late in the season and utilized Grassy Creek #2 (Fig. 7) and the spring upstream. As in October 2008, the cottonwood height classes of 4.1'-6' are absent, and the cottonwoods >6' are large and old, with an average diameter of 1.8'-2'. Recruitment is not occurring in this stand. Cottonwood 2.1'-4' now average 10-12 subleaders within 6 vertical inches from the tallest leader, indicating significant bushiness.



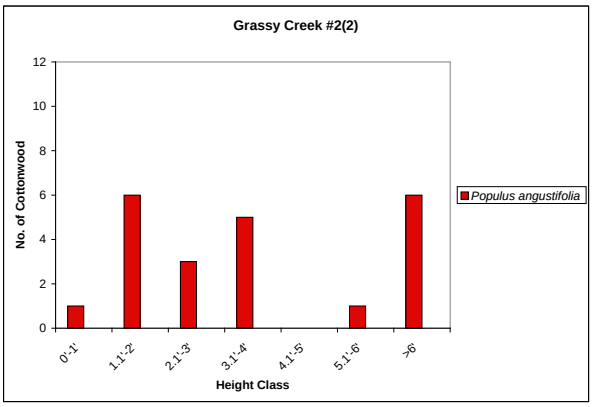
Grassy Creek #2 (GC2) Cottonwood gallery between road and creek	(1) 7/16/2008 Martin/David (2) 10/10/2008 O'Brien/Hoskisson (3) 10/12/2009 O'Brien/Hoskisson/Otting
Fishlake NF/Beaver RD	**Allotment:** Pine Creek-Sulphurbeds **Pasture:** Wildcat
Stake: 12N E 0365526 N 4254749 NAD CONUS 27 Alongside road and between two rocks 6' in from road edge, upstream end of cottonwood gallery, 20' upstream of large cottonwoods	**Elevation: 7**,460'
Aspect: West	**Animal sign:** Cattle
Ave. Riparian Width: Narrowleaf cottonwood sprouts are present within 7' of the creek, and mature overstory cottonwoods are found within 12' of the creek.	
Dominant vegetation: Narrowleaf cottonwood (*Populus angustifolia*),chokecherry, Rocky Mountain juniper, rose, horsemint, intermediate wheatgrass (*Thinopyrum intermedium*), Kentucky bluegrass (*Poa pratensis*), snowberry, stinging nettle, *Veronica biloba*, yarrow, mule's ear (*Wyethia amplexicaulus*), and *Cerastium* sp. 2009 notes: *Agastache urticifolia*; houndstongue (*Cynoglossum officinale*)	
Other notes: Cattle were in the canyon during our survey. No water in the creek at the time of the survey. To our knowledge no Level II Riparian Inventory has been conducted on Grassy Creek.	

Height Distribution

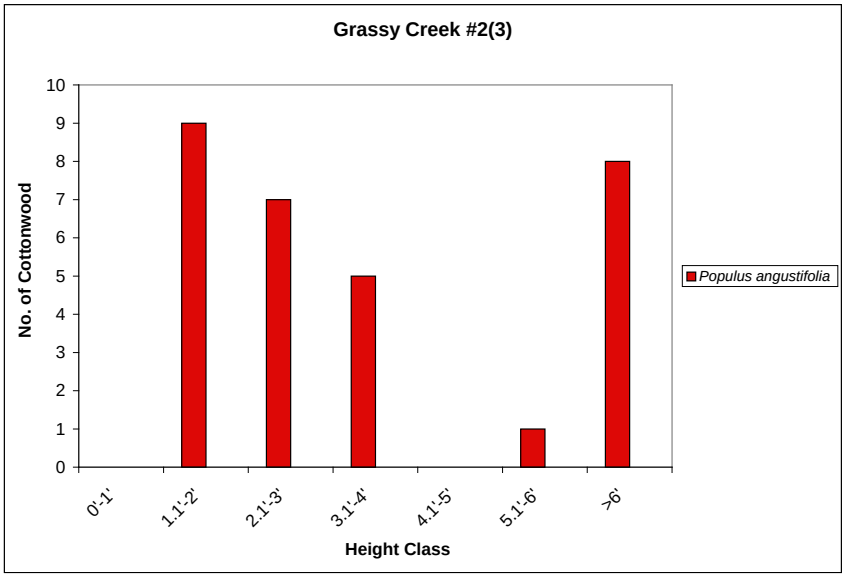
July 16, 2008



October 10, 2008



October 12, 2009



Browse

July 16 and October 10, 2008

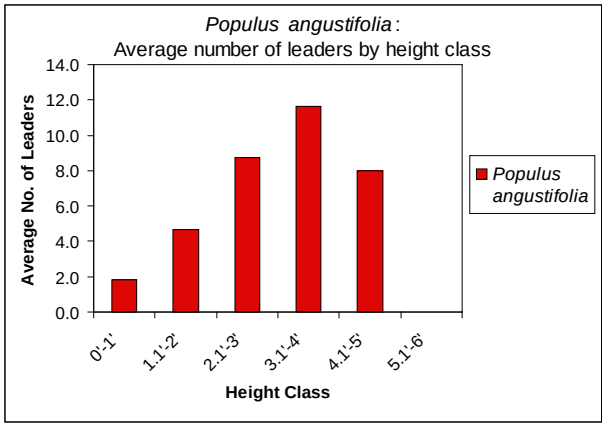
Grassy Creek #2 Percent Browsed or Dead Leaders		
	July 16, 2008 25 *Populus angustifolia* <6' 6 *Populus angustifolia* >6: Ave.DBH 23.6”	October 10, 2008 16 *Populus angustifolia* <6' 6 *Populus angustifolia* >6: Ave. DBH 20.8”
	Populus angustifolia	*Populus angustifolia*
% tall leaders browsed	30.4	73.3
% tall leaders browsed or dead	34.8	73.3
% subleaders browsed	60.2	92.2
% subleaders browsed or dead	64.1	92.2

October 12, 2009

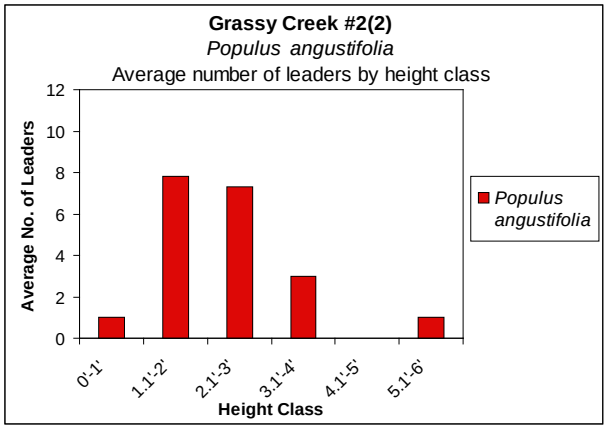
Grassy Creek #2(3) 22 *Populus angustifolia* <6' 8 *Populus tremuloides* >6’: Ave. DBH 26.6”	
	Populus angustifolia
% tall leaders browsed	95.5
% tall leaders browsed or dead	95.5
% subleaders browsed	99.1
% subleaders browsed or dead	99.1

Number of Leaders by Height Class

July 16, 2008



October 10, 2008



October 12, 2009

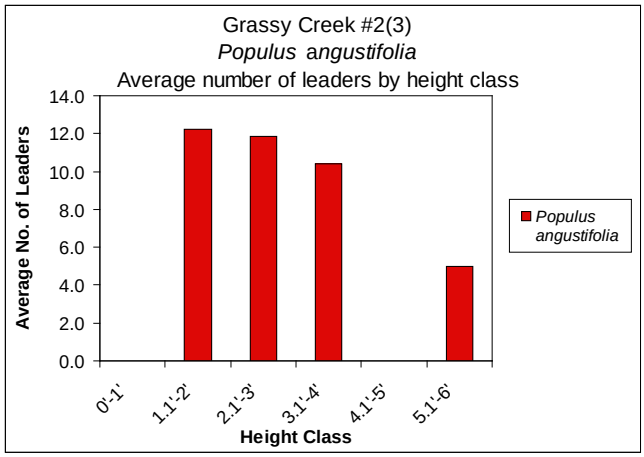


Fig. 1 (7/16/08) Mature cottonwoods, DBH 3’ (left).

Fig. 2 (7/16/08) Cottonwood gallery and adjacent road that could be part of the riparian area.

Fig. 3 (7/16/08) Heavily browsed, multi-leader cottonwood.

Fig. 4 (10/10/08) 4’ cottonwood browsed

Fig. 5 (10/10/08) Young cottonwood attaining >6’ due to fallen branches surrounding it.

Fig. 6 (10/10/08) Browsed cottonwood sprouting from old cottonwood.

Fig. 7 (10/12/09) Fresh cow patty in Grassy Creek #2, though pastures was scheduled to be closed. Cow presence recorded in Grassy Spring upstream.

Fig. 8 (10/12/2009). Cottonwoods continue to fail to exceed 4' in height.

GRASSY CREEK #2 (GC2)
Riparian Grass/Grasslike Utilization
(1) October 10, 2008 (Grassy Creek #2(2)
(2) October 12, 2009(Grassy Creek #2(3)

Allotment: Pine Creek/Sulphurbeds
Pasture: Wildcat
Creek/Stream: Grassy Creek
2008 Annual Operating Instructions dates of livestock entry/exit: Aug 16-Sept 30
2009 AOI: Wildcat Pasture to be rested
Surveyors: **2008:**O'Brien and Hoskisson
2009: O'Brien, Hoskisson, and Otting

Grassy Creek #2 is a tributary to Indian Creek, running roughly parallel to and west of Twitchell Creek in the southern portion of Pine Creek/Sulphurbeds Allotment. Grassy Creek #2 runs through a small cottonwood gallery along the creek. The site is dominated by large, mature cottonwoods (Fig. 1) and short sprouts growing from the roots of the mature trees.

(1: 10/10/2008) This transect was read approximately ten days after cattle were to be moved from the pasture. The only grass encountered was Kentucky bluegrass, and it was sparse. Grass was encountered within 3" of the transect at only 27% of the 63 transect points; forbs were rare.

	Grass/Grasslike Utilization:											
	Kentucky Bluegrass (*Poa pratensis)*				**Other Grasses**				**Sedges and/or Rushes**			
	Ave. ht(in) Accessible	N	Ave. ht(in) Inaccessible	N	Ave. ht(in) Accessible	N	Ave. ht(in) Inaccessible	N	Ave. ht(in) Accessible	N	Ave. ht(in) Inaccessible	N
10/10/ 2008	2.2"	16	5.0"	1	NA	0	NA	0	NA	0	NA	0

(2: 10/12/2009) This pasture (Wildcat Pasture) was to have been rested in 2009, and appears to have been largely rested, due to the height and seedheads present on many grasses, but several cattle grazed Grassy Creek later in the season. The site has high litter cover (see, e.g., Fig. 7) due to 2009 cottonwood leaf fall as well as decomposed litter. Only one graminoid individual (Kentucky bluegrass) was encountered on the five transects.

Grass/Grasslike Utilization: October 12, 2009												
	Kentucky Bluegrass (*Poa pratensis)*				**Other Grasses**				**Sedges and/or Rushes**			
Graminoids	Ave. ht(in) Access-ible	% pts	Ave. ht(in) Not Access-ible	% pts	Ave. ht(in) Access-ible	% pts	Ave. ht(in) Not Access-ible	% pts	Ave. ht(in) Access-ible	% pts	Ave. ht(in) Not Access-ible	% pts
	0.0	0.0	-		3.0*	1	-		-		-	
Other	**Forb**	0	**Bare**	7	**Rock**	1	**Litter**	91	**Lichen, moss, biological crust**			0

Blade lengths more than 4X droop height:
*This grass had 3" droop height, 17" blade length

Methodology note

2008 method: The average height (inches) of a grass or sedge was measured every 2' from the creek (0') to 48' along the five browse transects. Kentucky bluegrass (KBG) was recorded separately from other grasses, as a Fishlake NF stubble height standard of 1.5" is applied to KBG rather than 4" for other hydric grass/grasslike species.[1]

The droop height of plants accessible to large ungulate grazing was recorded separately from the droop height of plants inaccessible to grazing, e.g., at the base of a rock or under a shrub.

2009 method changes: In 2009, plants or ground cover were recorded on five point-intercept transects (the same transects used as belt transects for browse/height of cottonwood/aspen/willow). The five point-intercept

[1] The four inch stubble height for hydric (i.e., adapted to a wet, but not flooded habitat) plants is part of the allowable forage utilization criteria that were revised through a Fishlake National Forest Plan amendment in 2002. These revised forage utilization criteria prescribe allowable use levels for both upland and riparian sites. As the Fishlake NF explains this: "The description for riparian areas is a uniform 4" stubble height. Reaching the 4" stubble height triggers the time to move livestock, either between units or off the allotment. These criteria allow no manipulation to plan use of expected regrowth—once the 4" stubble height is reached, livestock are moved, without the opportunity for twice-over use. Livestock are moved to the next pasture or removed from the allotment when any utilization threshold (upland forage utilization, stream bank alteration, riparian forage utilization, riparian vegetation stubble height, or riparian woody browse utilization) is reached. Meeting or exceeding one of these threshold levels initiates a move of livestock." (USFS 2006)

Fishlake National Forest riparian utilization standards include (USFS 2006):
Riparian hydric species:
4" triggers the time to move livestock between units or off the allotment
Riparian Emphasis Management Areas
6" triggers the time to move livestock between units or off the allotment
Non-hydric Sod-Forming Grass Species in Riparian Areas
1 ½ " Primarily Kentucky bluegrass--Triggers the time to move livestock between units or off the allotment

transects at each site were extended only as far back from the bank as the last cottonwood or willow encountered within the 6’ belt (i.e., 3’ to each side of the point-intercept transect).

When the blade length of a grass or grasslike plant is >4X as long as the droop height, the actual blade length is recorded and reported e.g., a grass with a droop height of 3” and a blade length of 17” would be noted and described in a footnote to the graminoid chart.