

COTTONWOOD RANCH











7 31 99

















1969



• 2003





2019



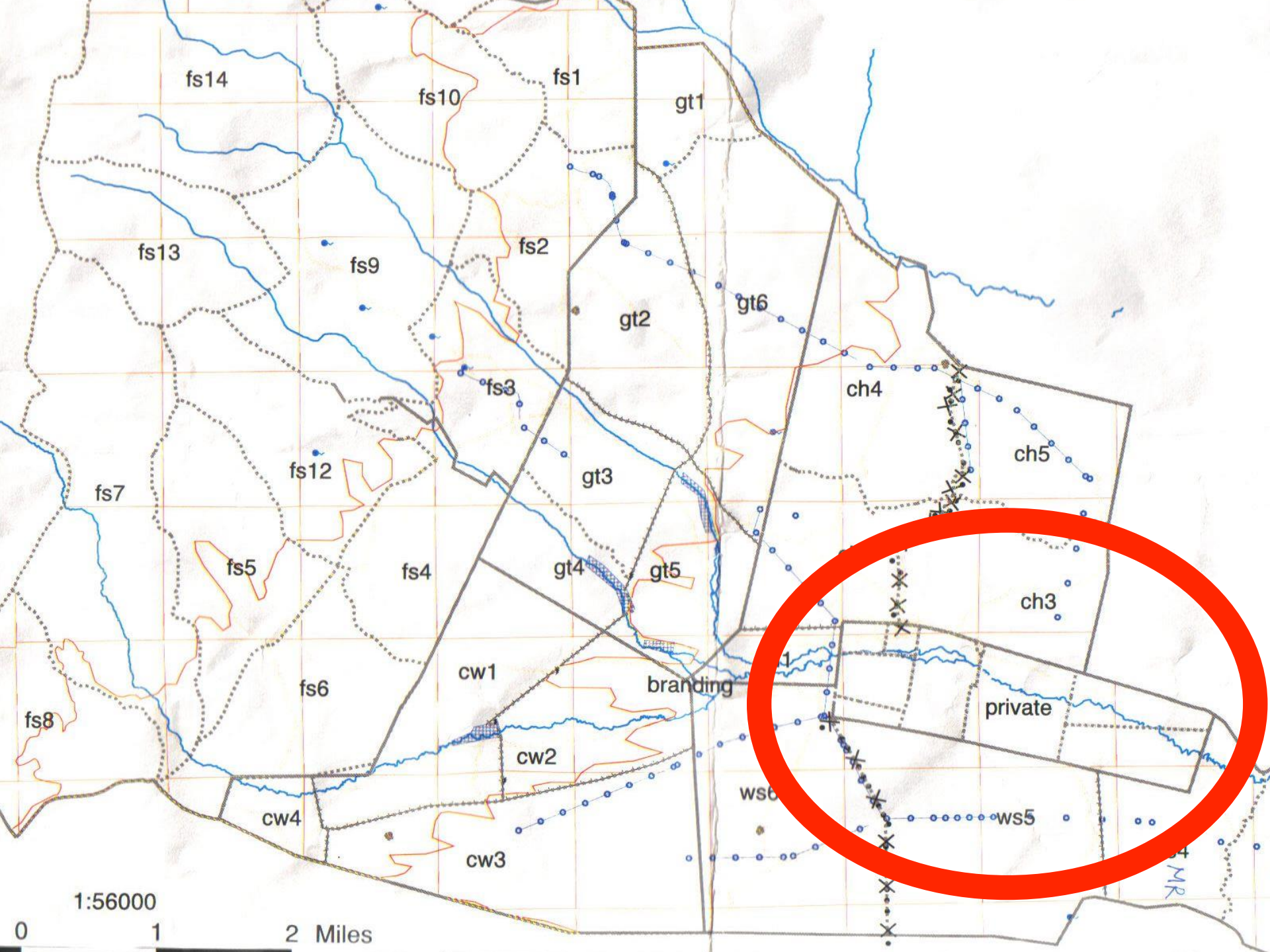




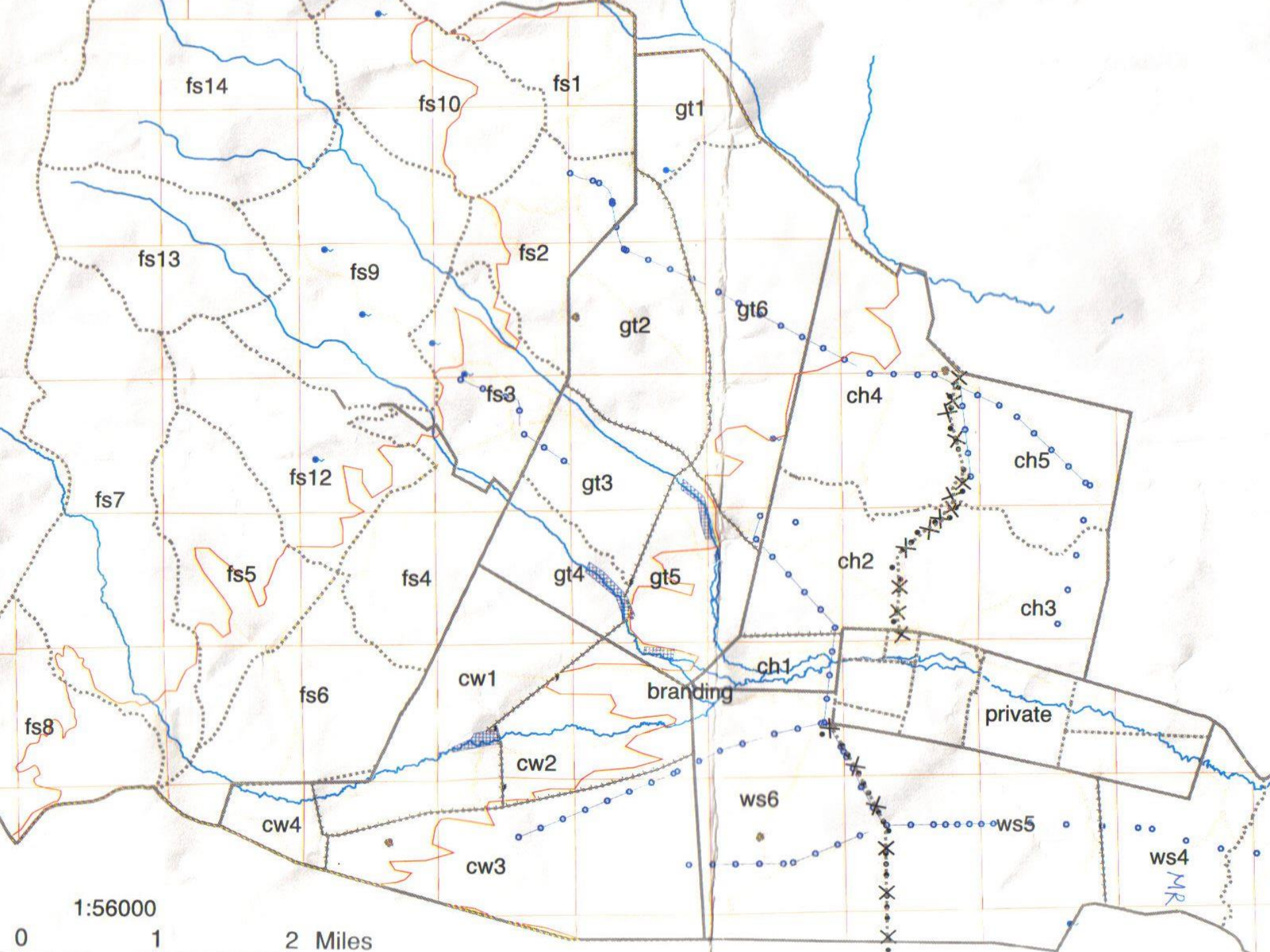














## Time of Use / Grazing History

	April	May	June	July	August	September	October
Pasture	Year	2010	2011	2012	2013	2014	2015
1 Riparian Allotment		Rest			8/19-8/28	5/21-5/28	Light Graze
3,5 Eastside Choke-a-man		4/20-5/15	4/15-4/24	12/1-12/15	10/13-11/9	5/11-5/20	9/11-9/15, 10/16-11/1
2,4 Westside Choke-a-man		4/20-5/15	10/25-10/30	12/1-12/15	10/13-11/9	5/1-5/10	9/2-9/10
6 Lower Goat Creek		5/17-7/6	4/25-5/5 7/27-8/8	11/5-11/30	5/1-5/30	16-Dec	6/2-6/16
Upper Goat Creek		9/3-9/14	5/6-5/15	10/21-11/4	5/31-6/5	10/19-11/5	8/17-9/1
4 Upper North Fork		H 9/1-11/29	7/16-7/26		8/3-8/13		
		9/3-9/14	5/16-5/27	9/15-10/6	6/18-7/8	9/29-10/18	5/15-6/1
Lower North Fork		H 9/1-11/29	8/24-8/30				
		8/28-9/2	8/9-8/23	10/7-10/12	6/6-6/18	Rest	5/1-5/15
1,4 Upper South Fork		7/12-7/26	Horse	6/28-7/19	Horses	8/8-9/3	Rest
			6/1-9/30		25-Apr		
2 Lower South Fork		7/12-7/26	Late Use	5/1-5/25		5/29-6/20	Rest
3 Cottonwood Upland		7/27-8/9	Late Use	6/6-6/27		9/3-9/28	Rest
1,2,3,4 Lower Warm Springs		H 5/15-7/8	Rest	4/15-5/6	12/9-12/27	Horses	Rest



**South Fork  
Cottonwood Creek  
on Bureau of Land  
Management (BLM)**





1973





2009





2014





2015





1973



2015



**Looking downstream**





1973





**2005**



A photograph of a river flowing through a lush green landscape. The river is the central focus, winding through dense green vegetation and bushes. In the foreground, a wire fence with green posts runs across the frame. The sky is blue with scattered white clouds. The overall scene is a natural, rural setting.

2009





2015





1973



2015



# **Fire Comes to the Basin**





2000





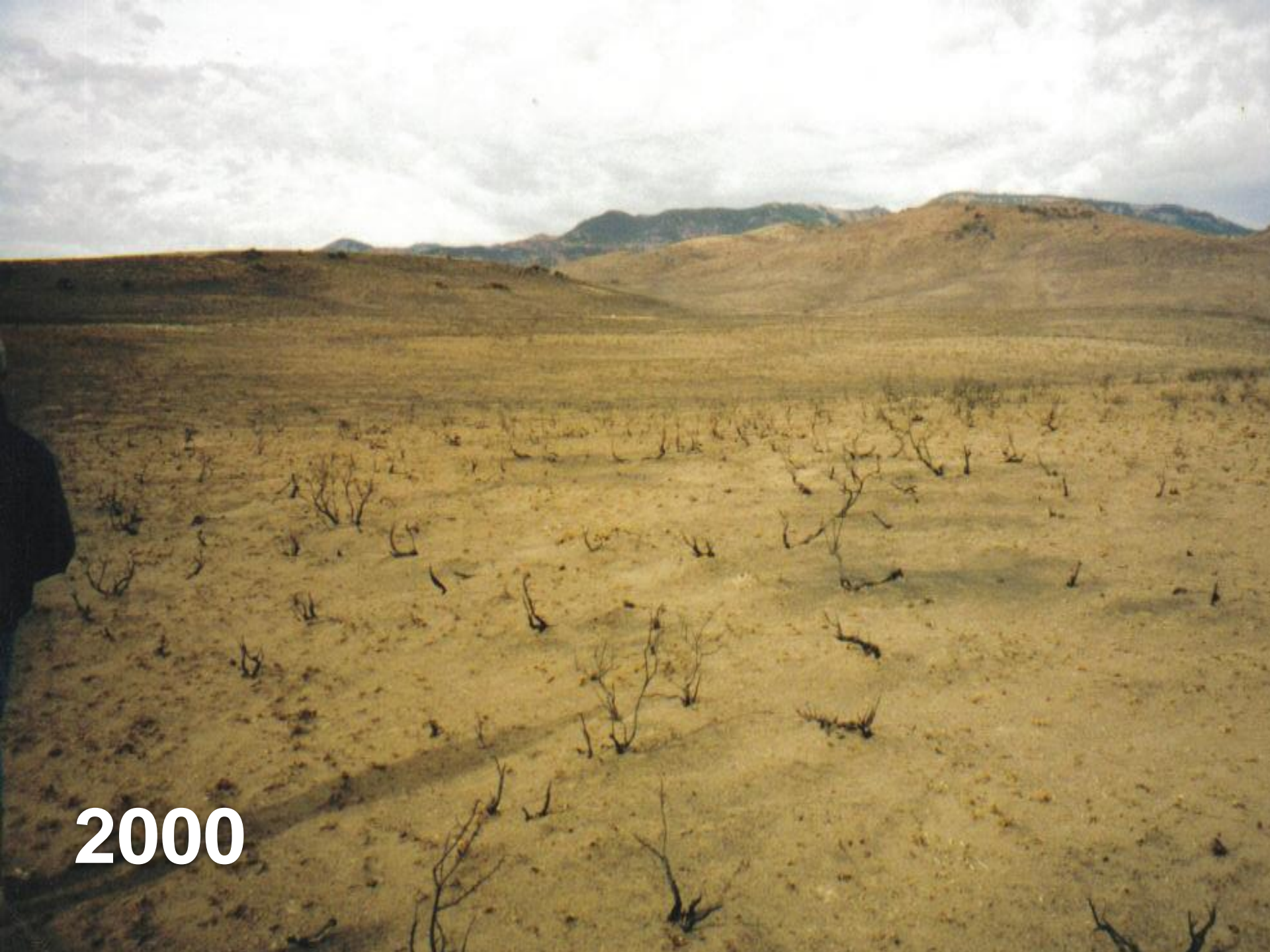
2008





**1996**





2000





**Dec. 2017**



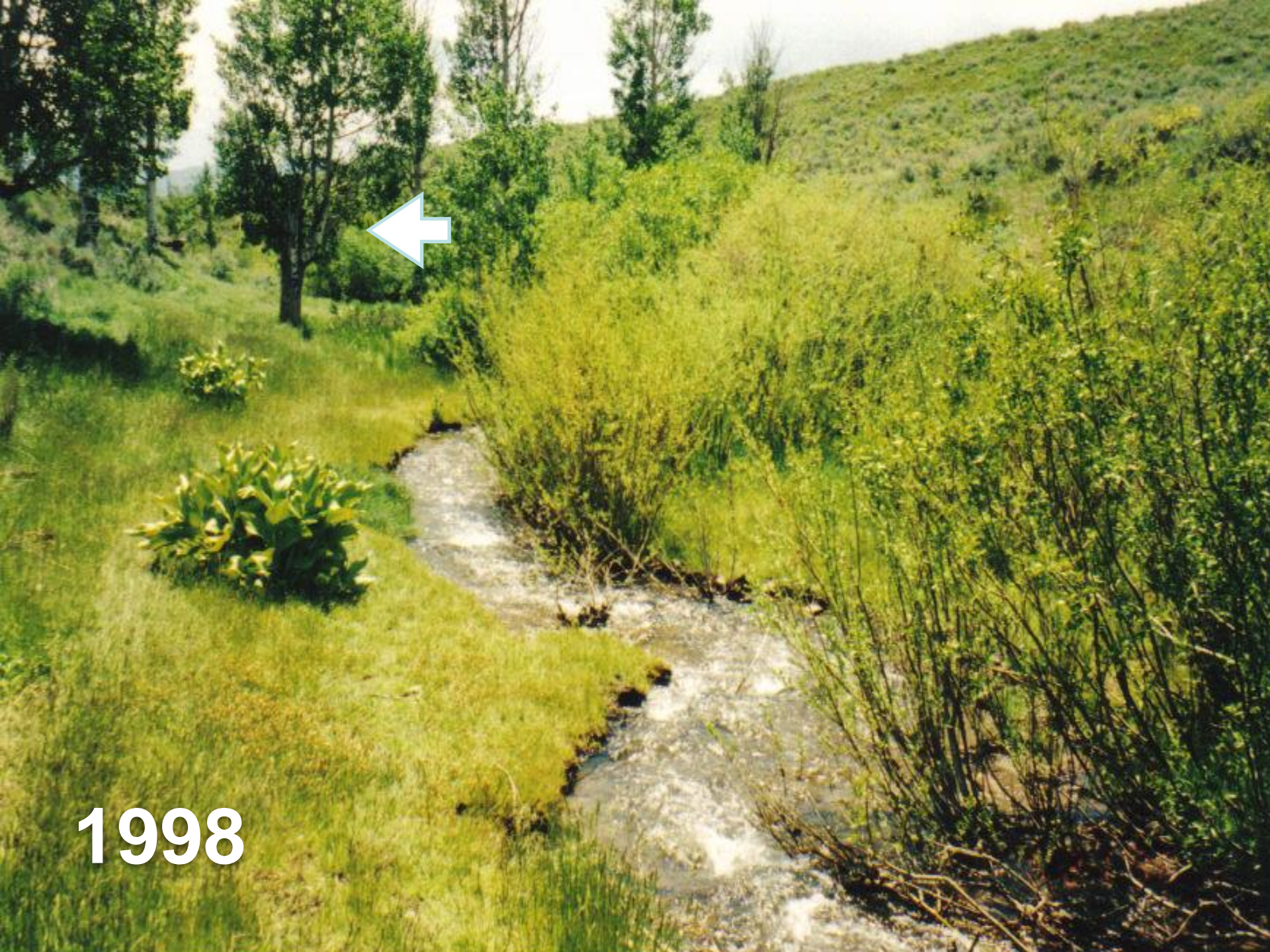
**Middle Fork of  
Cottonwood Creek on  
U.S. Forest Service**





1996





1998





1999

1285





2000

8-20-'00





2002

6 25 '02





2005



A photograph of a lush green landscape. On the right side, there is a dense stand of tall, thin trees with green foliage. The left side is dominated by a grassy field with various green plants and small purple flowers. The background shows a line of trees under a clear blue sky. The year '2009' is overlaid in white text in the bottom left corner.

2009





2014





2019





1996



2014



June 2017



















24 mins 1" water infiltration  
80% unpalatable plants, 80% non-mycorrhizal





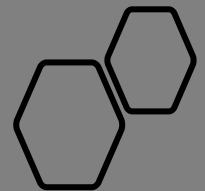
1 min 2" water  
infiltration  
<5% unpalatable  
species

10x humus  
Humus holds 7 X weight  
in water= 70x more water  
holding capacity















# **BLM Photos from Riparian Monitoring Sites**





Nov. 1979





**July 1988**





**Aug. 1997**





**Sept. 2011**



Cottonwood Creek (O'Neil)

1979-2011

Riparian Condition Indices (RCI) Percent Optimum

RCI = Average of streambank stability and streambank cover

Station	2011	2004	1997	1988	1979
1	98% E	65%	0%	54%	36% P
2	75% B	64%	69%		39% P
3	68% B	69%	52%	41%	31% P
4	50% F	35%	54%	0%	52% F
5	71% B	44%	57%	42%	29% P
6	92% E	60%	44%	55%	45% F
7	98% E	86%	59%	52%	39% P
8	98% E	89%	62%	42%	27% P
9	90% E	76%	67%	46%	17% P
10	67% B	69%	61%	55%	25% P
11	96% E	61%	62%	35%	28% P
12	99% E	91%	68%	44%	30% P
SA-1	61% B	40%	0	0	0
SA-2	91% E	76%	72%	67%	55% F
SB-1	69% B	57%	70%	38%	30% P
SB-2	81% E	76%	78%	58%	33% P
SB-3	90% E	63%	69%	39%	35% P
Average	82% E	67%	62%	51%	30% P

Riparian Condition Indices Ratings

0-40% = Poor

41-60% = Fair

61-80% = Good

81-100% = Excellent



Cottonwood Creek (O'Neil)

1979-2011

Riparian Condition Indices (RCI) Percent Optimum

RCI = Average of streambank stability and streambank cover

Station	2011		1979
1	98%	E	36% P
2	75%	B	39% P
3	68%	B	31% P
4	50%	F	52% F
5	71%	B	29% P
6	92%	E	45% F
7	98%	E	39% P
8	98%	E	27% P
9	90%	E	17% P
10	67%	B	25% P
11	96%	E	28% P
12	99%	E	30% P
SA-1	61%	B	0
SA-2	91%	E	55% F
SB-1	69%	B	30% P
SB-2	81%	E	33% P
SB-3	90%	E	35% P
Average	82%	E	30% P

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**Beaver Hold It All  
Together**













**Before beaver, 1998**



**After beaver, 2016**

































**Drought streamflow**



**Water storage with beavers**

































T&T

DEERE 2300





































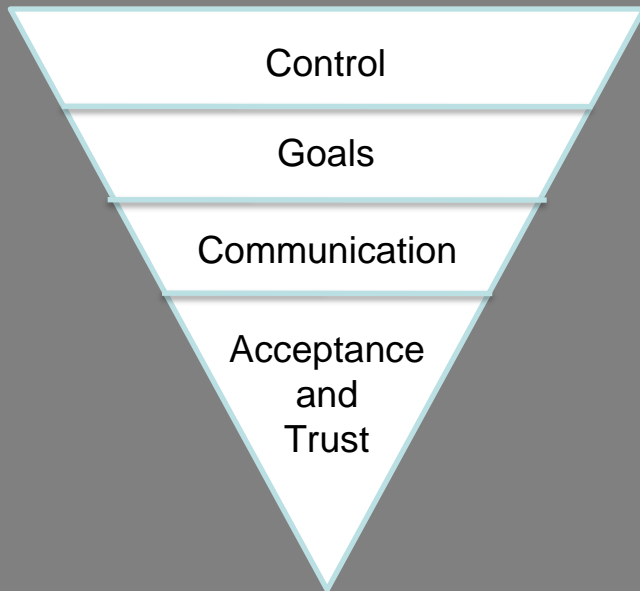








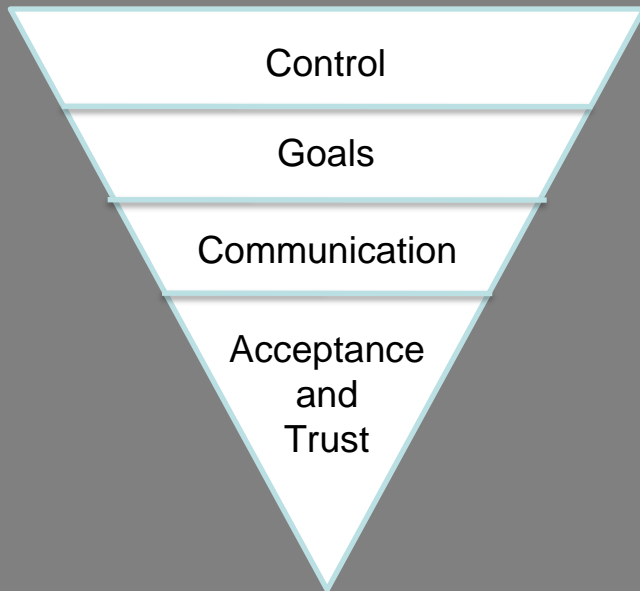
# Gibb Triangle



**Unstable**



# Gibb Triangle



**Unstable**



**Stable + Rewarding**





**Stable + Rewarding**



**This is where  
we need to be  
if we are going to  
get the results  
we all want.**



**Stable + Rewarding**







**This we know.**

**The earth does not belong to man;  
man belongs to the earth.**

**This we know.**

**All things are connected like the blood  
which unites one family.**

**Whatever befalls the earth,  
befalls the sons of the earth.**

**Man did not weave the web of life;  
he is merely a strand in it.**

**Whatever he does to the web,  
he does to himself.**

**— Chief Seattle**



**Thank You and  
Have a Good Day!**

**Questions?**