4 Appendix: Completed Field Forms and Associated Photos

4.1 Bad Canyon Creek barrier repair (003-2005)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	003-05	Project Title:	Bad Canyon
Date:		Evaluator:	Jason Rhoten
Waterbody Name:	Bad Canyon Creek	Project Type:	Barrier repair

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)				
Was a PFC assessment conducted?				
Has the trend in riparian condition improved since last visited or last photo?				
Is project in overall compliance with project agreement?				
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo

Riparian (Fencing) Projects

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)				
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?				
If fenced, is the fencing in functional condition?				
If fenced, has grazing occurred within the fenced area?				
If grazed, is grazing in compliance with submitted mngt plans?				
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)				
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)				
Age classes of riparian shrubs present. (None, One, Several, All, NA)				
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)				
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)				

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:

(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)

In 2005, FWP fortified an existing natural barrier to prevent upstream invasion by nonnative fishes, and applied piscicide the following year. Yellowstone cutthroat trout populations recovered to 10 times their previous abundance within a few years. In 2012, Jason Rhoten, FWP's area fish biologist, visited the site and found accumulation of woody debris that could back water flows, and allow nonnatives to breach the barrier. In addition, flows between rock provided potential routes for fish to access the stream above the barrier. In 2014, FWP made several repairs. This project illustrates the need for periodic maintenance of constructed or enhanced barriers.

Land Owner Comments:

Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

4.2 Big Timber Creek (004-2002)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	004-02	Project Title:	Big Timber Creek
Date:	7/6/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Big Timber Creek	Project Type:	Channel Stabilization

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)				
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1			DS	Start of project
2			US	"
3	45.96711	-110.05173	US	Gravel bar, cottonwood recruitment
4	"	"	DS	Pool&vegetation recruitment (bank stabilization)
5	45.96690	-110.05141	DS	Root and log jam (new=April)
6	45.96685	-110.05051	DS	New veg on previously bare bar
7	"	"		
8	45.96821	-110.04859	DS	New veg/channel movement/undercut pool
9	45.96572	-110.04446	US	End of project

Riparian (Fencing) Projects

Does the project agreement include grazing stipulations?(No, Exclosure, Grazing plan, Unk, NA)				
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?		✓		
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?	✓			
If grazed, is grazing in compliance with submitted mngt plans?			✓	
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	None			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Abundant			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	All			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)				
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	some O-w/s			

Streambank Stabilization Projects ✓

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	Root wads/willows
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	Stable
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	Into stream
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	No
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	<45 deg

Channel Restoration Projects ☐

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:

(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)

Some Canada Thistle present, but in low numbers.
New construction done on a section of river near buildings that involved LWD jams and root wads to stabilize a bank (April, 2016).
Owners do allow horses to graze along river, but in low intensity. No evidence of any hoof shear was present.
Willow and Cottonwood recruitment high on previously bare gravel bars and banks.
From past pictures to looking at it now the change in riparian vegetation is evident.
Tom Coleman did mention that he has caught a few large brown trout in the stream and believes the reconstructed stretch does hold more fish now due to better habitat.

Land Owner Comments: Tom Coleman walked me though the project. Did not have contact with landowner

Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1. Overview from start of project looking down stream.

Photo 2. Overview of upper part of project.

Photo 3. Gravel bar with cottonwood recruitment

Photo 4. Created pool with overhanging willow.

Photo 5. Root wad and log revetment installed in April 2016.

Photo 6. Vegetation recruiting on new point bar.

Photo 7. Vegetation recruiting on point bar.

Photo 8. New vegetation, lateral channel mobility, and pool with undercut bank.

Photo 9. Overview of project from end.

4.3 Brackett Creek (002-2003)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	002-2003	Project Title:	Brackett Creek
Date:	6/16/2016	Evaluator:	Shannon Bockmon/Carol Endicott
Waterbody Name:	Brackett Creek	Project Type:	Restoration

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Agriculture/Livestock			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.86626	110.66019		Start of project
2	"	"	DS	Eroding bank and point bar with willows
3	45.86639	110.66019		Evidence of willow stabilization
4	45.86637	110.65954	DS	"
5	45.86665	110.65849	DS	Awesome bank
6	45.86689	110.65816	DS	Bank erosion
7	45.86665	110.65254	DS	Awesome stable bank

Riparian (Fencing) Projects

	Yes	No	Unk	NA
Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)				
Was fencing installed to exclude livestock?		✓		
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?	✓			
If grazed, is grazing in compliance with submitted mngt plans?			✓	
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	Heavy (by game)			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Sparse			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	One			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Maintained plan form			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	Overwidened/Shallo			

Streambank Stabilization Projects ✓

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	Willow plantings
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	Eroding
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	Into bank
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	No
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	Under cut

Channel Restoration Projects ✓

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	NA
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	Pool-riffle
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	NA
Condition of habitat structures? (Stable, Eroded, Unknown)	NA

Comments:

(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)

Canada thistle present. Leafy spurge is present but is being targeted by lessee and is on the decline
Willow requirement is up compared to previous years
Gravel present in pool tails, embedded with fine sediment
Stream has access to floodplain
Evidence of heavy brows most likely from game species.
Although it is grazed by cattle, there is no evidence of hoof shear or over browsing
Some lateral adjustments on outside bends
Overall maintained plan form

Land Owner Comments:

Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1. Start of project (the plug)

Photo 1. Eroding bank and point bar with willow recruitment

Photo 2. Evidence of willow stabilization

Photo 3. Stable constructed bank with willow recruitment.

Photo 5. Stable bank with willow recruitment.

Photo 6. More bank erosion

Photo 7. Functioning section of reconstructed channel with substantial willow growth.

4.4 Clear Creek (005-2004 & 005-2005)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	005-05	Project Title:	Clear Creek fish passage
Date:	7/27/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Clear Creek	Project Type:	Passage

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Public			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.37360	109.14622	DS	Bridge with pool up to bottom of culvert
2	-	-	US	Up stream of bridge
3	45.37379	109.14622		Project area
4	-	-		-

Riparian (Fencing) Projects

	Yes	No	Unk	NA
Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)				
Was fencing installed to exclude livestock?				
If fenced, is the fencing in functional condition?				
If fenced, has grazing occurred within the fenced area?				
If grazed, is grazing in compliance with submitted mngt plans?				
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)				
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)				
Age classes of riparian shrubs present. (None, One, Several, All, NA)				
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)				
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)				

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	Narrow/deep
Condition of habitat enhancement structures. (Stable, Eroding, NA)	Stable
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	Pool-riffle
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	large rocks
Condition of habitat structures? (Stable, Eroded, Unknown)	Stable

Comments:
(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)
With the amount of over growth it was hard to access the stream, but could see that the step pools as well as the large rocks along the stream banks are still in working conditions. Pool at base of culvert is even with the bottom of the culvert that was previously a plunge pool. Plant recruitment is high, thus the lack of decent pictures. Some evidence of rock movement with in project area, but pools are still present.

Land Owner Comments:	
Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1. Bridge with pool up to bottom of culvert.

Photo 2. Upstream of culvert and project area.

Photo 3. Photo area showing constructed step-pools.

Photo 4. Close up of step-pools in project area.

Photo 5. Another view of step-pools.

4.5 Crooked Creek fish barrier (027-2006)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	027-06	Project Title:	Crooked Creek fish barrier
Date:	7/26/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Crooked Creek	Project Type:	Barrier

Riparian, channel re , bank stabilization, passage. (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Public			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	45.06389	-108.39089	Facing?	Numerous photos	Previous Photo
	From Mapper				

Riparian (Fencing) Projects ☐

Does the project agreement include grazing stipulations? (No, Excessive, Grazing plan, Unk, NA)				
	Yes	No	Unk.	NA
Was fencing installed to exclude livestock?				
If fenced, is the fencing in functional condition?				
If fenced, has grazing occurred within the fenced area?				
If grazed, is grazing in compliance with submitted mngt plans?				
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)				
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)				
Age classes of riparian shrubs present. (None, One, Several, All, NA)				
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)				
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)				

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	
Percent of stream reach in pools. (-total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:

(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)

Barrier still there. Some evidence of weathering but nothing substantial. Still in functioning condition.
Lower natural barrier blew out thus allowing for stream below the barrier to regain gradient and not form a pool.
Upper barriers also blew out allowing for sediments to begin sorting allowing for spawning gravel to become abundant in some areas.
Mike Ruggles had us shock above the dam to see if the cutthroat have moved down to the dam yet. Still no fish above for a ways.
Below the dam there is a high abundance of Brown trout. Although in high numbers, some of the larger Browns are on the skinny side.

Land Owner Comments:

Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1. Splash pad in good condition, and not providing passage over structure

Photo 2. Accumulation of gravel behind wall of barrier forming a solid surface.

Photo 3. Slight amount of scour at downstream of apron, but not deep enough to allow to leap.

4.6 Daisy Dean Creek off stream watering and fencing (039-1999)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	039-1999	Project Title:	Daisy Dean Creek off stream watering and fencing
Date:	6/14/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Daisy Dean Creek	Project Type:	Riparian

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Livestock			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	46.02554	110.62342		Off site watering #1
2	46.02270	110.62096		Off site watering #2
3	46.02034	110.62267		Off site watering well and pump
4	-	-		healing bank
5	46.01848	110.62044		Off site watering #3
6	46.01988	110.62032		End of electric fence/start of fenced area
7	46.01985	110.62091	DS	Murky water, old cattle watering place
8	46.01974	110.62125	DS	Head cut
9	46.01959	110.62140		Overview of stream segment w/in fenced area
10	46.01966	110.62160		Healing cattle/game trail

Riparian (Fencing) Projects ✓

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)	Grazing Plan			
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?	✓			
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?	✓			
If grazed, is grazing in compliance with submitted mngt plans?	✓			
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	Sparse			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Abundant			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	All			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	Narrow/Deep			

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:

(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)

Frame # 11 46.01970, 110.62198 Old eroding bank healing over
Frame # 12 " " New cattle/game trail across stream
Frame # 13 46.02000, 110.62270 End
Bindweed and Canada Thistle present
W/in electric fence = very little browse, old cattle trails are healing nicely
Beaver above electric fence
Flows are high making water murky and hard to see substrate (what I was able to feel it was fine sediment)
Undercut banks, significant willow coverage, with woody debris making pools and habitat
Head gate on neighbors property down stream looks to be a possible fish barrier, could not get good visual from road. (picture added after project pictures)

Land Owner Comments: Great project, noticeable change in stream habitat

Has this project been beneficial to you?	Yes
Has project improved stream/riparian conditions?	Yes
Effects on land use?	Not really, same patterns as before with some modifications of cattle numbers
Weeds?	Still here but have been working on them (mostly by hand)
Noticable change in fishery?	N/A (does not fish the stream and has not paid attention to any fish in the system)
Thoughts for future work?	More of the same, maybe some more weed control

Photo 1. Off-channel watering source #1.

Photo2. Off-channel water source #2.

Photo3. Off-channel watering well and pump.

Photo 4. Healing stream bank downstream of corrals

Photo5. Off-channel watering source #3.

Photo 6. End of electric fence.

Photo 7.Murky water and cattle trail.

Photo 8. Small head cut.

Photo 9. Overview of a stream segment within the fenced area

Photo 10. Old cattle/game trail healing

Photo 11. Old eroding bank now healing and has access to floodplain

Photo 12. Newer cattle/game trail

Photo 13. View from road of end of project assessment

4.7 Elk Creek channel stabilization (029-2006)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	029-2006	Project Title:	Elk Creek Channel Stabilization
Date:	8/9/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Elk Creek	Project Type:	Bank Stabilization

Riparian, channel re bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Livestock			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	46.01807	-110.63251		Daisy Dean
2	46.01831	-110.63121		Head gate on Daisy Dean
3	46.02782	-110.63514	DS	Start of project/Head gate
4	"	"	US	Above head gate
5	46.02529	-110.63570	US	Emergency cattle access to water
6	"	"	DS	Proof of bank stabilization
7	46.02520	-110.63625		Spring stock water
8	"	"	DS	vertical bank/not done in project
9	46.02502	-110.63593		Re-sloped bank
10	"	"	DS	Willow Recruitment

Riparian (Fencing) Projects

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)	Grazing Plan			
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?	✓			
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?	✓			
If grazed, is grazing in compliance with submitted mngt plans?	✓			
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	None			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Common			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	Several			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	Intermediate			

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	sloping
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	Stable
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	No
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	Yes
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	45

Channel Restoration Projects

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:
(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)
photo 11 Lat. 46.02502, Long. -110.63593 2011 flood demolished part of bank, but most is holding Photo 12 Lat. 46.02382, Long. -110.63500 Off site stock water Head gate on Daisy Dean is starting to become undercut. Landowner stated that he was going to try and get in touch with Scott Opitz about more rock. Riparian has came back strong since the grazing plan has been in use. Some banks that are vertical have not migrated according to landowner. Light grazing during non growing season is being implemented. Canada thistle, hounds tongue Landowners have issues with off channel stock water; pipes and well freeze during early winter, and has to chip ice on the outer portion frequently until cattle drink enough to keep it thawed.

Land Owner Comments:	
Has this project been beneficial to you?	Yes
Has project improved stream/riparian conditions?	Yes
Effects on land use?	Some, but overall easier
Weeds?	Some
Noticable change in fishery?	N/A
Thoughts for future work?	Sloping of more banks from the current vertical angles

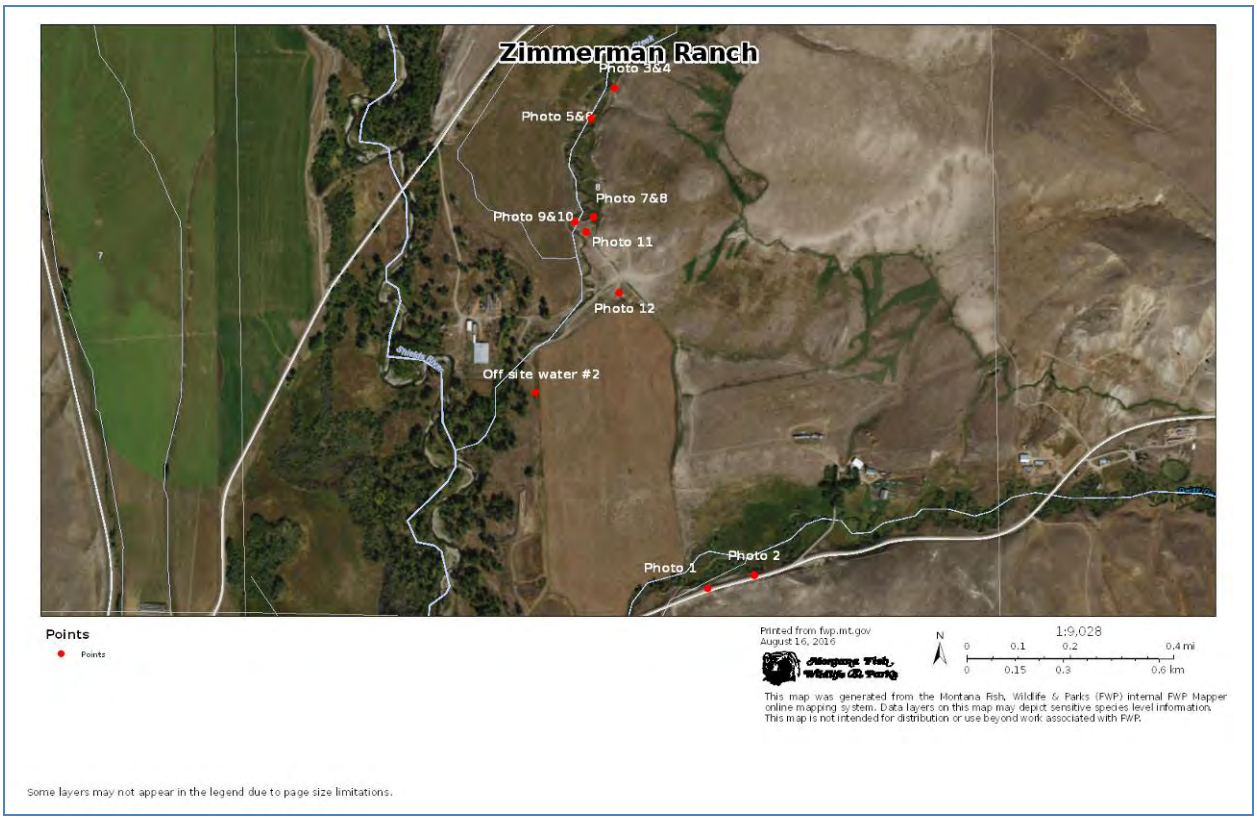

Photo 1: Daisy Dean Creek

Photo 2: Head gate on Daisy Dean Creek

Photo 3: start of project. (head gate on Elk Creek)

Photo 3a: Start of project different angle.

Photo 4: Above head gate

Photo 5: Emergency stock water.

Photo 6: Bank stabilization

Photo 7: Spring stock water

Photo 8: Vertical banks. (no lateral shifting according to landowner)

Photo 9: Re-sloped bank

Photo 10: Willow recruitment.

Photo 11: Evidence of 2011 flood demolishing part of the bank.

Photo 12: Over view of lower end of project.

Photo 13: offsite stock water.

4.8 Emigrant Spring Creek (009-2004)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	009-04	Project Title:	Emigrant Spring Creek
Date:	5/26/2016	Evaluator:	Shannon Bockmon/Carol Endicott
Waterbody Name:	Emigrant Spring Creek	Project Type:	Channel Reconstruction

Riparian, channel re , bank stabilization, passage , (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Livestock			
Was a PFC assessment conducted?		✓		
Has the trend in riparian condition improved since last visited or last photo?		✓		
Is project in overall compliance with project agreement?	✓			
Comments	was visited in 2007, 3 years post project implementation (see comments section)			

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.33152	110.76120	DS	Lower end of exclusion (note fence)
2	"	"	US	"
3	45.33110	110.76099	US	Veg. on point bar, woody plants above bank full
4	45.33088	110.76091	stream bed	good spawning gravel
5	"	"	DS	"
6	45.33055	110.76360		Large area of standing water connected to stream
7	45.3343	110.76450		Stock water
8	"	"	US	Start of meander
9	45.32873	110.76907	DS	End of channel restoration
10	"	"	US	Upper end of enclosure (spring)

Riparian (Fencing) Projects ✓

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)	Grazing Plan			
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?	✓			
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?	✓			
If grazed, is grazing in compliance with submitted mngt plans?	✓			
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	None			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Common			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	Several			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	Variable			

Streambank Stabilization Projects ✓

Current length of stream bank protected. (# Feet or Unknown)	100
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	Sedge mats
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	Stable
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	No
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	No
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	e-channel

Channel Restoration Projects ✓

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	Overwidened/shall
Condition of habitat enhancement structures. (Stable, Eroding, NA)	NA
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	see comments
Percent of stream reach in pools. (~total pool length/total stream length)	see comments
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	NA
Condition of habitat structures? (Stable, Eroded, Unknown)	NA

Comments:
(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)
Lower end has high quality spawning gravel pick 3 = densely vegetated point bar with woody vegetation above bank full mark Nesting Sandhill cranes located in dense sedge along creek Light cattle grazing, no evidence of degradation of stream banks ~3 inches of fine sediment, but gravel under Some Canada Thistle found, abundant amount of Timothy grass Multiple spring inlets Within restored area, most adjacent land is an emergent sedge wetland Age class of riparian shrubs; healthy and functional, little recruitment E6 channel due to silt DA type channel at head of spring

Land Owner Comments:	
Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1: Lower end of exclusion.

Photo 2: Upstream view of lower end of project.

Photo 3: Vegetation on point bar, woody plants above bank full.

Photo 4: Good spawning gravel.

Photo 5: Good spawning gravel.

Photo 6: Large area of standing water connected to stream.

Photo 7: Stock water.

Photo 8: Start of meander.

Photo 9: End of channel restoration. (Downstream view)

Photo 10: Upper end of enclosure.

4.9 ESP/Chambers Spring Creek (045-1998 & 011-2002)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	045-98	Project Title:	ESP/Chambers Spring Creek
Date:	8/10/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Chambers Spring Creek	Project Type:	Riparian

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Livestock			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.79305	-109.82722		Start/confluence into the Yellowstone
2	"	"		
3	45.79293	-109.82749		
4	45.79276	-109.8277		Possible Stream movement
5	"	"		Willow recruitment
6	45.79222	-109.82856		Stock access
7	45.79209	-109.82843	US	End of project

Riparian (Fencing) Projects

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)				
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?	✓			
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?		✓		
If grazed, is grazing in compliance with submitted mngt plans?	✓			
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	None			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Abundant			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	All			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	Narrow/Deep			

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects ✓

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	Narrow/deep
Condition of habitat enhancement structures. (Stable, Eroding, NA)	NA
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	Pool-riffle
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:
(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)
Step pools at the confluence looks passable still, but some of the large rocks that were placed there have been displaced most likely by ice jams. Willow recruitment is high. Chuck Roloff said that the current willow density is a total 180 from when he was working on the project. Good sections of spawning gravel though out sections. Some aquatic plants are present, but there is plenty CFS to flush areas of spawning habitat. Cattle do have access to a section for drinking/crossing. Area is very degraded. But is needed with out having off channel water Hounds tongue, Canada Thistle, Milk weed present in high numbers within enclosure. Would recommend shocking the stream in the future to obtain an up to date data set of what is currently using the stream. Last documented survey was in 2000.

Land Owner Comments: N/A	
Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1: Start of project.

Photo 2: Start of project should have step-pools, but larger rocks have been displaced do to possible ice jams.

Photo 3: project above the downstream culvert.

Photo 4: possible stream movement, or sedges growing within a designed pool.

Photo 5: Willow recruitment. (with Chuck Roloff, NRCS district conservationist)

Photo 6: Cattle water gap.

Photo 6a: Next in line for water.

Photo 7: End.

Extra photo: spawning gravel.

4.10 Fishtail Creek corral relocation (031-2006)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	031-06	Project Title:	Fishtail Creek corral relocation
Date:	8/11/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Fishtail Creek	Project Type:	Corral removal

(Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)		Yes	No	Unk.	NA
Does the project have a signed project agreement?		✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)		Livestock			
Was a PFC assessment conducted?				✓	
Has the trend in riparian condition improved since last visited or last photo?		✓			
Is project in overall compliance with project agreement?		✓			
Comments					

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.39209	-109.67731		Fencing & berm to divert runoff
2	"	"		Corrals landowner built
3	45.39162	-109.67813		Recovered riparian
4	"	"	DS	Old fence & riparian
5	"	"	US	"
6	45.39082	-109.67831		Off stream water
7	45.39069	-109.67627		Pressure pump
8	45.39000	-109.67627		Frost free spickit
9	Map			Off site water

Riparian (Fencing) Projects

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)					
		Yes	No	Unk	NA
Was fencing installed to exclude livestock?		✓			
If fenced, is the fencing in functional condition?		✓			
If fenced, has grazing occurred within the fenced area?			✓		
If grazed, is grazing in compliance with submitted mngt plans?		✓			
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)		NA			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)		Sparse			
Age classes of riparian shrubs present. (None, One, Several, All, NA)		Several			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)		Stable			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)		Intermediate			

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	
Condition of habitat enhancement structures. (Stable, Eroding, NA)	
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	
Condition of habitat structures? (Stable, Eroded, Unknown)	

Comments:
(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)
Berms that were built during the project to divert flow of runoff are still in place and still functioning. Landowner does maintain them from time to time. Well and pressure pump are still in functioning condition Off site water greatly helps landowner. It did freeze with in the holding tank last winter. But that was the first time he has ever had it happen. Riparian has came back some, but most of it is weeds as of now. Some aspen are working their way in as well. Landowner has sprayed the weeds in the past. Over all project is well kept by landowner and he states that what was part of the project is still as good as new.

Land Owner Comments:	
Has this project been beneficial to you?	Yes
Has project improved stream/riparian conditions?	Yes
Effects on land use?	some, but has made it more easy
Weeds?	Yes
Noticable change in fishery?	Nope
Thoughts for future work?	Nope

Photo 1: Riparian fencing and berm.

Photo 2: Corrals landowner built on his own time.

Photo 3: Old fence and recovering riparian area.

Photo 4: Old fence and recovering riparian area.

Photo 5: Offsite water with in corrals.

Photo 6: Pressure pump.

Photo 7: Frost free spikit. (one of several)

Photo 8: Offsite water.

4.11 Fleshman Creek channel and riparian restoration (006-2009)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	006-09	Project Title:	Fleshman Creek channel and riparian reconstruction
Date:	6/2/2016	Evaluator:	Shannon Bockmon/Carol Endicott
Waterbody Name:	Fleshman creek	Project Type:	Reconstruction

Riparian, channel re , bank stabilization, passage, (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	Livestock			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments	Photo 11: 45.65313, 110.57721, US, End of project			

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.65496	110.58233	US	Water under bridge is passable by fish
2	"	"	DS	Undercut bank, willow survival high (see comments)
3	45.65485	110.58205		Some sloughing of bank
4	45.65485	110.58260		Some hoof shear through out project area
5	45.65477	110.58114	US	Willow survival and recruitment
6	45.65461	110.58031	DS	Bottomless arch culvert and over-flow
7	45.65445	"	DS	Terrace banks show vegetation regrowth
8	45.65399	110.57948	DS	Cattle trail resulting in bank erosion
9	45.65359	110.57927	DS	2nd bottomless arch culvert
10	45.65285	110.57882		Access to flood plain between terrace and stream

Riparian (Fencing) Projects ✓

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)	Grazing Plan			
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?		✓		
If fenced, is the fencing in functional condition?	✓			
If fenced, has grazing occurred within the fenced area?	✓			
If grazed, is grazing in compliance with submitted mngt plans?			✓	
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)	None			
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)	Common			
Age classes of riparian shrubs present. (None, One, Several, All, NA)	Several			
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable			
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)	Narrow/Deep			

Streambank Stabilization Projects ✓

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	Willow plantings
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	Stable
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	No
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	No
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	Under cut

Channel Restoration Projects ✓

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	Narrow/deep
Condition of habitat enhancement structures. (Stable, Eroding, NA)	see comments
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	Pool-riffle
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	NA
Condition of habitat structures? (Stable, Eroded, Unknown)	NA

Comments:

(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)

Willows transplanted by students. Harvested in fall, soaked though winter, planted in spring
High survival rate of willows, and recruitment. Consider fall harvest, and spring springing for all projects
Sedges have fully vegetated most banks, and coir fabric has apparently biodegraded
Lots of trash in stream and floodplain (Livingston winds)
Pool tails had sediment, not good spawning habitat
Some alder recruitment
Weeds are abundant: tansy, Canada thistle, sticky bind weed
Upstream bottomless arch culvert: the bank full rock placement still intact. Woody debris on stream banks suggests over bank flows. Periodic cleaning debris from the inlet of over flow pipes is warranted
Talk with NRCS about weed control plan
Consider hardened watering areas for cattle to access with out causing bank erosion.
Overall, the stream restoration has tremendously improved habitat, by providing high quality pools, overhanging willows, and undercut banks. This is a silt rich stream, with considerable down cutting upstream.

Land Owner Comments:

Has this project been beneficial to you?	Yes
Has project improved stream/riparian conditions?	not much of a change in water flow
Effects on land use?	Not much change, water rights since maybe 1879
Weeds?	not really, deer seem to keep them down
Noticable change in fishery?	no change noticed
Thoughts for future work?	not really, maybe come in and clean up what was left behind by the contractors.

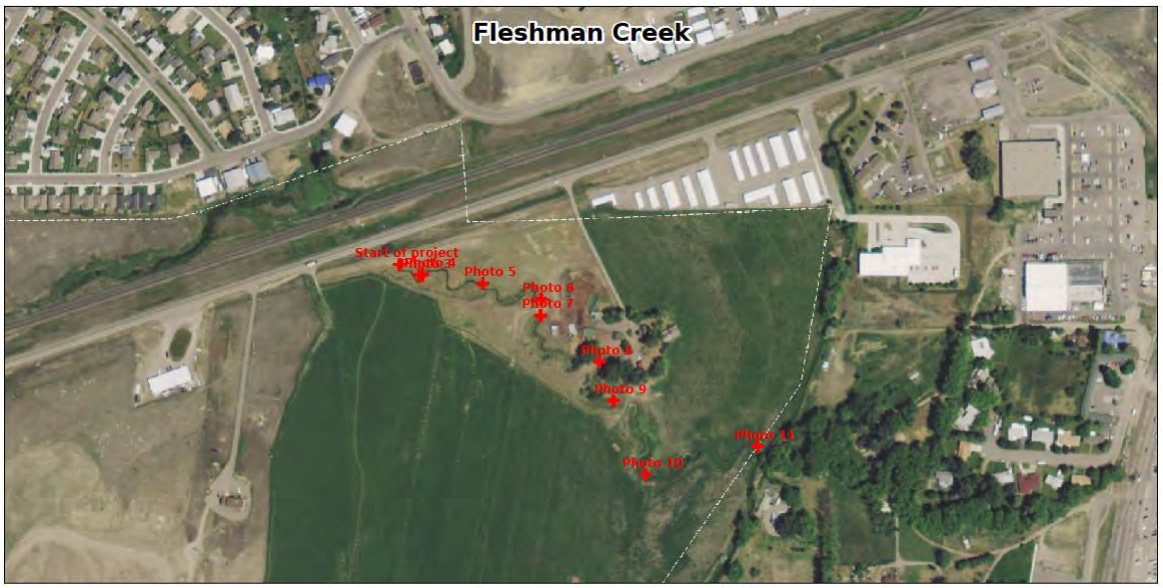

Photo 1: Start of project.

Photo 2: Undercut bank, willow survival high.

Photo 3: Some bank sloughing.

Photo 4: Some hoof shear. (Similar though out project)

Photo 5: Willow survival and recruitment.

Photo 6: Bottomless culvert and overflow.

Photo 7: Terrace banks show vegetation re-growth.

Photo 8: Cattle trail resulting in bank erosion.

Photo 9: Second bottomless culvert.

Photo 10: Floodplain bench still in working condition.

Photo 11: End of project.

4.12 Kickabuck Spring Creek spawning habitat enhancement (010-2009)

FFIP PROJECT & LAND USE MONITORING FORM

Project #:	010-09	Project Title:	Kickabuck Spring Creek spawning enhancement
Date:	6/1/2016	Evaluator:	Shannon Bockmon
Waterbody Name:	Kickabuck Spring Creek	Project Type:	Channel Reconstruction

Riparian, channel re ; bank stabilization, passage. (Some projects may have multiple types)

Land Use Information (all projects)

	Yes	No	Unk.	NA
Does the project have a signed project agreement?	✓			
Land use type (Livestock, Residential, Public, Recreational, Agriculture, Timber, Other)	recreation			
Was a PFC assessment conducted?			✓	
Has the trend in riparian condition improved since last visited or last photo?	✓			
Is project in overall compliance with project agreement?	✓			
Comments				

Photo Points

Frame #	Lat	Long	Facing?	Scene description/Previous Photo
1	45.84363	109.90591	US	Mouth of stream
2	45.84362	109.90620	US	Start of project area
3	"	"		Sloughing of stream bank
4	45.84364	109.90620	US	Plants in stream with willow recruitment
5	"	109.90688		Exposed gravel
6	45.84377	109.90736	US	Possible Spawning gravel
7	"	109.90762	US	Pool full of sediment (higher grade=exposed gravel)
8	"	109.90836		Ideal Channel (width/depth ratio)
9	45.84368	109.90886	US	End of project

Riparian (Fencing) Projects

Does the project agreement include grazing stipulations? (No, Exclosure, Grazing plan, Unk, NA)				
	Yes	No	Unk	NA
Was fencing installed to exclude livestock?				
If fenced, is the fencing in functional condition?				
If fenced, has grazing occurred within the fenced area?				
If grazed, is grazing in compliance with submitted mngt plans?				
Level of observed browsing on riparian shrubs. (None, Sparse, Moderate, Heavy, NA)				
Density of riparian shrubs present. (None, Sparse, Common, Abundant, NA)				
Age classes of riparian shrubs present. (None, One, Several, All, NA)				
Channel Stability? (Stable, Unstable, Aggrading, Degrading, Unknown)				
Channel Conditions? (Over-widened&shallow; Narrow&deep; Intermediate; Multi-thread)				

Streambank Stabilization Projects

Current length of stream bank protected. (# Feet or Unknown)	
Type of stabilization used. (Root wads, Soil wrap, Willow plantings, Rip rap, Other-describe)	
Current condition of stream bank. (Stable, Unstable, Eroding, Percent stable/unstable)	
Has stream bank migrated. (No, Into stream, Into bank, Unknown)	
Is any infrastructure (fence, etc.) in danger of being compromised. (No, Yes-describe)	
Predominant bank angle within stabilization. (Under cut, 90°-45°, <45°)	

Channel Restoration Projects ✓

Channel stability? (Stable, Unstable, Aggrading, Degrading, Unknown)	Stable
Channel Conditions? (Over-widened & shallow; Narrow & deep; Intermediate, Multi-thread)	see comments
Condition of habitat enhancement structures. (Stable, Eroding, NA)	NA
Complexity of stream channel? (Pool-riffle, No pools, Wood forced pools, Lateral scour pools)	see comments
Percent of stream reach in pools. (~total pool length/total stream length)	
Habitat enhancement structures involved? (LWD, Rootwads, Cross vanes, Other)	NA
Condition of habitat structures? (Stable, Eroded, Unknown)	NA

Comments:
(Existing land use?;Weeds?; Beneficial to fishery?; Public access?; Needs? What did we learn? ;etc.)
mouth of stream not passable at current flow patches of Leafy spurge and Canada thistle lots of small fry (Browns?) maintaining project plan ~4 inches of silt build up sod mats have settled, sedges are dominant plant species gravel patches increased up stream (width/depth ratio) to sinuous for gradient no livestock/human disturbance Beaver maybe? excavating small channels drawing water off stream *need to revisit when flows are higher to evaluate stream flow and sediment transport.

Land Owner Comments:	
Has this project been beneficial to you?	
Has project improved stream/riparian conditions?	
Effects on land use?	
Weeds?	
Noticable change in fishery?	
Thoughts for future work?	

Photo 1: Mouth of spring creek.

Photo 2: Start of project area.

Photo 3: Sloughing of stream bank.

Photo 4: Plants in stream with evidence of willow recruitment.

Photo 5: Exposed gravel.

Photo 6: Possible spawning gravel.

Photo 7: Pool full of sediment, higher grade=exposed gravel.

Photo 8: Ideal channel, width/depth ratio.

Photo 9: End of project.