

**Upper Hayden Cattle & Horse Allotment's
2012 Annual Monitoring Report
for the
National Marine Fisheries Service's 7/29/2010 Biological
Opinion**

(Refer to NMFS No: 2010/00852)

**Annual Monitoring Report Form for Actions covered under the Service's Biological
Opinion for Grazing on Allotments Managed by the Salmon Challis National Forest.**

Please submit annually by March 1 to the Idaho State Director, Habitat Conservation Division,
National Marine Fisheries Service, **Attn: 2010/00852**, 10095 W Emerald St., Boise, ID 83704.

To implement RPM #3 (monitoring and reporting), the SCNF shall ensure that:

- a. Each Allotment Unit's DMA or key area is annually monitored to determine compliance with all identified annual use indicators in the proposed action. The report shall also identify any modifications to move-triggers or annual indicators that result from implementing the adaptive management strategy.

See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.

- b. An end-of-year report is available to NMFS by March 1 of each year. The following shall be included in the report:

- (1) Overview of proposed action and actual management (livestock numbers, on-off dates for each Unit, etc.).

See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.

- (2) Date and location of any specific SCNF implementation monitoring data collected, including monitoring required under term and conditions 1 and 2 above.

See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.

2012 Stream Temperature Data was collected on: Bear Valley Creek 2.1, East Fork Hayden Creek 3.2, Ford Creek 0.1, Hayden Creek 10.2, Kadletz Creek 0.2, and Wright Creek 0.4.

2012 Electrofishing Data was collected on: Bear Valley Creek 2.3, East Fork Hayden Creek 3.2, and Hayden Creek 9.7

2012 Watershed Programs Stream Sediment and Bank Stability Monitoring was collected on: East Fork of Hayden Creek 1A and East Fork of Hayden Creek 2R

- (3) Results from all implementation and effectiveness monitoring identified as part of the proposed action and this Opinion, including required annual use indicator monitoring (e.g., stubble height, riparian shrub utilization, streambank alteration), photo point monitoring, seral condition, streambank stability, water temperature, sediment, and W:D.
See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.
- (4) Discussion of any unauthorized use and/or any maintenance issues related to fences or water developments.
See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.
- (5) Brief review of Allotment management and compliance successes and failures.
See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.
- (6) Any relevant information that becomes available regarding Snake River Basin steelhead or Snake River spring/summer Chinook salmon habitat trends and/or spawning locations that would modify the assumptions made in this Opinion or result in effects not considered. NONE
- (7) A clear description of compliance with the terms and conditions contained in this incidental take statement.
See attached Upper Hayden C&H Allotment's 2012 End of the Year Report. There were no unexpected circumstances or events that resulted in impacts beyond what the forest anticipated.
- (8) Any management recommendations for subsequent years.
See attached Upper Hayden C&H Allotment's 2012 End of the Year Report.

Chinook salmon Redd Surveys

1. What was the name of the stream in this allotment surveyed for impacted redds?
Hayden Creek and Bear Valley Creek. See attached Chinook salmon redd surveys.
2. What was the date of the survey, and what were the water conditions?
The survey dates were 8/21/2012 Bear Valley Creek, 8/29/2012 Bear Valley Creek, 8/29/2012 Hayden Creek and 9/27/2012 Hayden Creek. The water conditions were normal and clear. See attached Chinook salmon redd surveys.
3. What was the date that livestock removed from the pasture with surveyed stream segment?
8/21/2012 Bear Valley Creek – Kadletz Creek Unit – The permittee has not given the Forest an Actual Use Report. According to the AOI the On/Off dates and livestock numbers for the Kadletz Creek Unit are 500 cow/calf pairs between 7/21 and 8/10.

8/29/2012 Bear Valley Creek – Payne/Ford Unit – The permittee has not given the Forest an Actual Use Report. According to the AOI the On/Off dates and livestock numbers for the Payne/Ford Unit are 400 cow/calf pairs between 8/11 and 9/11.

8/29/2012 Hayden Creek – Boulder Flat Unit – The permittee has not given the Forest an Actual Use Report. According to the AOI the On/Off dates and livestock numbers for the Payne/Ford Unit are 500 cow/calf pairs between 9/12 and 9/30.

9/27/2012 Hayden Creek – Boulder Flat Unit – The permittee has not given the Forest an Actual Use Report. According to the AOI the On/Off dates and livestock numbers for the Payne/Ford Unit are 500 cow/calf pairs between 9/12 and 9/30.

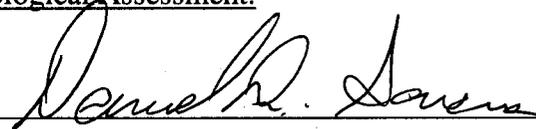
See attached Upper Hayden C&H Allotment's 2012 End of the Year Report and attached Chinook salmon redd surveys.

4. Were there any unexpected circumstances or events that resulted in impacts beyond those anticipated in the Forest's Biological Assessment or the Service's Biological Opinion?

If yes, please describe.

There were no unexpected circumstances or events that resulted in impacts beyond what the forest anticipated in the 2010 Biological Assessment.

Salmon-Challis National Forest Official: _____



Daniel A. Garcia
Salmon-Challis National Forest
North Zone Districts Fishery Biologist

Date: _____

2/28/2013

Contact Information:

Salmon/Cobalt Ranger District, 311 McPherson St South, Salmon, ID 83467

(208) 756-5237 or dgarcia@fs.fed.us

The attached Upper Hayden C&H Allotment's 2012 End of the Year Report was prepared by:

Sara Norman – Rangeland Management Specialist (Leadore Ranger District)
(208) 768-2505 or scnorman@fs.fed.us

Results of the Range Allotment's implementation and effectiveness monitoring will be available at the following website: <http://www.fs.fed.us/r4/sc/projects/range/index.html>.

The attached Hayden Creek and Bear Valley Creek Chinook salmon redd surveys were reviewed and finalized by: Daniel A. Garcia - North Zone Districts Fishery Biologist (Salmon/Cobalt Ranger District)

UPPER HAYDEN C&H ALLOTMENT

PETERSON CREEK C&H ALLOTMENT

2012 END OF YEAR REPORT

Leadore Ranger District

North Zone Salmon-Challis National Forest

MANAGEMENT

Term Grazing Permit				2011 Authorized Use				2011 Actual Use			
No. & Permittee	On date	Off date	H.M.	No.	On date	Off date	H.M.	No.	On date	Off date	H.M.
Shiner Ranches 500 c/c	7/1	9/30	1512	500 c/c	7/1	9/2	1512	*	*	*	*
Shiner Ranches 12 c/c	6/30	8/1	13	12 c/c	6/30	8/1	13	*	*	*	*

*Actual use reflected in the monitoring data.

Unit Schedule in AOI on Upper Hayden C&H Allotment:

Unit	Livestock Numbers	AOI Season of Use
Apple Creek	500 c/c	7/1-7/20
Kadletz Creek	500 c/c	7/21-8/10
Upper Hayden	100 c/c	8/11-9/11
Payne Ford	400 c/c	8/11-9/11
Boulder Flat	500 c/c	9/12-9/30
Tobias/Mogg	REST	9/12-9/30

Unit Schedule in AOI on Peterson Creek C&H Allotment:

Peterson Creek	12 c/c	6/30-8/1
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Compliance with Unit Scheduled in AOI: Actual use for numbers and move dates has not yet been submitted for the 2012 grazing season. On August 15, three cow/calf pairs were report within the Bear Valley Meadows exclosure. The communication plan was initiated, and the permittee was informed of their presence within the exclosure and the livestock were removed.

Allotment Inspections: Allotment inspections were conducted on the following dates: . Allotment inspections consist of a qualified employee working in range management visiting the allotment to monitor implementation of the AOI and/or the annual use indicators.

Compliance with special Terms and Conditions regarding livestock locations and management practices:

USFWS Biological Opinion Reasonable Prudent Measures (Terms and Conditions):

RPM #1 and #2: The whole of this report addresses this term.

NOAA Biological Opinion Reasonable Prudent Measures (Terms and Conditions):

RPM #1(a) The whole of this report addresses this term.

RPM #1(b) Streambank alteration levels were within the established indicators in Boulder Creek, and Kadletz Creek Units. Streambank alteration levels in the Payne/Ford unit were not read [see RMP#1 (c)].

RPM #1(c) Each of the units (Boulder Flat, Kadletz Creek, Payne/Ford) contain at least one DMA. The DMA locations in Boulder Flat and Kadletz Creek Units were read using the established Livestock Use Module Multiple Indicator Monitoring (MIM) protocol. On 9/19, SCNF employees attempted to find the Payne/Ford DMA and were unable to locate it. The GPS location on file did not correspond to the field location.

RPM #1(d) Streambank alteration levels were within levels listed in BO, there was not a need to trigger the adaptive management strategy during the 2012 grazing season.

RPM #1,2 (e) A ride was conducted with the Permittees, during this ride how to appropriately implement move trigger was discussed.

RPM #1,2 (f) AOI meetings are conducted each year with a discussion of actions necessary to protect vulnerable spawning areas.

RPM #1,2 (g,h). Additional information about the number of days permittees rode may be provided by the permittee with the submittal of Current Plan and Actual Use Record. During allotment moves, riders take all practicable measures to keep cattle on established crossings.

RPM #1,2 (i) Additional information may be provided by permittee with the submittal of Maintenance Record.

RPM #1,2 (j) The AOI address this term.

RPM #2 (a) The whole of this report addresses this term. Conservation measures were followed.

RPM #2 (e) A ride was conducted with the Permittees, during this ride how to appropriately implement move trigger was discussed.

RPM #3 (a) Monitoring in each one of the DMAs is outlined under Monitoring Data of this report.

RPM #3(b) The whole of this report addresses this term.

MONITORING DATA

For the 2012 grazing season, monitoring was completed at the Designated Monitoring Areas (DMAs) previously or newly established using the Multiple Indicator Monitoring (MIM) technical reference (Burton, 2010). If the site did not meet the guidelines for establishment of a MIM, photos were taken documenting the unsuitability of a DMA and are attached to this document. Upland monitoring was completed using the Landscape Appearance Method or Utilization Wheel.

Utilization for the 2012 grazing season, met the standards for the Kadletz Creek, Tobias/Mogg, and Upper Hayden Creek Units. In the Boulder Flat Unit, standards were met with the exception of greenline stubble height at the Hayden Creek DMA (M226), 5 inches compared to a standard of 6 inches. In the Apple Creek Unit, standards were met with the exception of greenline stubble height at the Apple Creek DMA (M262), 3 inches compared to a standard of 5 inches, and percent bank alteration, 29% compared to a standard of less than 20%.

PLEASE REFER TO THE ATTACHED TABLE FOR MONITORING AND UTILIZATION RESULTS.

OTHER INFORMATION

Growing Season conditions: Growing Season Conditions: Precipitation for the District was below normal for 2012. The precipitation information for the District is included in the table below. While this information is collected at the Leadore Ranger Station and is not specific to an allotment area, it gives an idea of the available moisture on the District. The total precipitation for 2012 was 6.05 inches, which is below the average precipitation of 9.34 inches for Leadore .

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Precip. (inches) in 2012	0.22	1.14	1.03	0.46	0.9	0.41	0.45	0.37	0.3	0.25	0.11	0.41	6.05
Average Precip. (in.) from 1981-2010 (NCDC 2012)	0.32	0.31	0.53	0.87	1.55	1.62	0.90	0.90	0.79	0.68	0.36	0.51	9.34

Permit Administration: No instances of livestock found in the wrong units were identified.

Other Improvement Maintenance: Additional information may be provided by permittee with the submittal of Maintenance Record. The Leadore YCC crew completed maintenance on the Bear Valley Exclosure fence.

Recommendations for Future Management:

1. Communication with the Range Specialist is an important part of grazing management. Be sure to contact the Range Specialist should you have concerns/or problems.
2. A meeting between the permitte and Range Specialist will be set up to discuss further management recommendations to ensure that standards are met in the future.

Sources

Burton, T.A., S.J. Smith, and E.R. Cowley. 2011. Riparian area management: Multiple indicator monitoring (MIM) of stream channels and streamside vegetation. Technical Reference 1737-23. BLM/OC/ST-10/003+1737. U.S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, CO. 155 pp.

National Climatic Data Center. 2012. Summary of Monthly Normals 1981-2010 (Station: Leadore Number 2, ID US). National Oceanic and Atmospheric Administraion, Ashville, North Carolina. <http://www.ncdc.noaa.gov/analysis/monthly-us-climate-reports>.

Prepared by:



Sara Norman

Rangeland Management Specialist

2012 Upper Hayden C&H Allotment Monitoring Results											
Actual Grazing Schedule			Allowable Standards				Actual Results				
Unit Name	On/Off Date	Monitoring Date	Riparian			Upland	Riparian			Upland	
Apple Creek Unit/Apple Creek (M262)	7/1-7/20	7/23	Greenline Stubble	Hydric spp.	5 in.	50%	Greenline Stubble	Hydric spp.	3 in. ¹	8%	
			Bank Alteration	N/A	<20%		Bank Alteration	N/A	29% ¹		
Kadletz Creek Unit/Kadletz Creek (M258)	7/21-8/10	9/5	Greenline Stubble	Carex spp.	4 in.	50%	Greenline Stubble	Carex spp.	6 in.	23%	
			Bank Alteration	N/A	<20%		Bank Alteration	N/A	5%		
Upper Hayden Unit	8/11-9/11	N/A	Utilization	Riparian spp.	50%	50%	Utilization	Riparian spp.	No data ²	No data ²	
Payne-Ford Unit/Fork Creek (M259)	8/11-9/11	9/19	Greenline Stubble	Hydric spp.	4 in.	50%	Greenline Stubble	Hydric spp.	No data*	6%	
			Browse Use	Alder spp.	30%		Browse Use	Alder spp.	No data*		
				Willow spp.	50%			Willow spp.	No data*		
			Bank Alteration	N/A	<15%		Bank Alteration	N/A	No data*		
Boulder Flat Unit/Hayden Creek (M226)	9/12-9/30	10/1	Greenline Stubble	Carex spp.	6 in.	50%	Greenline Stubble	Carex spp.	5 in. ¹		
			Bank Alteration	N/A	<20%		Bank Alteration	N/A	4%		
Boulder Flat Unit/Tobias Creek (M260)	9/12-9/30	10/1	Greenline Stubble	Carex spp.	4 in.	50%	Greenline Stubble	Carex spp.	4 in.		
			Bank Alteration	N/A	<20%		Bank Alteration	N/A	5%		
Tobias-Mogg Unit/E. Fork Hayden Creek (M261)	REST	REST	Greenline Stubble	Hydric spp.	4 in.	50%	Greenline Stubble	Hydric spp.	N/A	N/A	
			Browse	Alder	30%		Browse	Alder	N/A		

			Use	spp.			Use	spp.		
				Willow spp.	50%			Willow Spp.		
			Bank Alteration	N/A	<20%		Bank Alteration	N/A	N/A	

*SCNF employees went to this unit and were unable to find the DMA location on 9/19.

¹Collected data did not meet standards outlined in the BO.

²No data collected during 2012 grazing season.

	PHOTO RECORD	Page 1 of 3
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: 2012	Photographer: C. Brown	Allotment: Upper Hayden C&H
Location: Apple Creek Unit		
Subject: Rediness and EOY		



	PHOTO RECORD	Page 2 of 3
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: 2012	Photographer: C. Brown	Allotment: Upper Hayden C&H
Location: Apple Creek Unit		
Subject: Rediness and EOY		



	PHOTO RECORD	Page 3 of 3
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: 2012	Photographer: C. Brown	Allotment: Upper Hayden C&H
Location: Apple Creek Unit		
Subject: Rediness and EOY		



	PHOTO RECORD	Page 1 of 1
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: July 23, 2012	Photographer: M. Shiner	Allotment: Upper Hayden C&H
Location: Apple Creek		
Subject: End of Season Monitoring		



Survey was conducted along 010 road. Utilization of Idaho fescue was calculated at 8%.



	PHOTO RECORD	Page 1 of 1
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: August 6, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Dry Creek		
Subject: End of Season		



	PHOTO RECORD	Page 1 of 2
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: September 5, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Kadletz Creek		
Subject: Livestock Use Module MIM		



Upstream marker (looking upstream), could not find t-post. Analysis from MIM calculated average stubble height for hydric species as 6 inches, bank alteration as 5% and woody species use as 10%.



	PHOTO RECORD	Page 2 of 2
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: September 5, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Kadletz Creek		
Subject: Livestock Use Module MIM		



Upstream marker (looking downstream).

	PHOTO RECORD	Page 1 of 3
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: September 19, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Payne Ford Unit		
Subject: End of Season Photographs		



On June 19, J. Playfair and S. Norman attempted to find the DMA in the Payne-Ford Unit. They were unable to find the t-post, from GPS coordinates on file. Approximately 0.5 miles upstream, is a t-post, shown in the photographs. This location was included an established recreationist camp site, and therefore not suitable to conduct a MIM survey.



	PHOTO RECORD	Page 2 of 3
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: September 19, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Payne Ford Unit		
Subject: End of Season Photographs		



	PHOTO RECORD	Page 3 of 3
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: September 19, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Payne Ford Unit		
Subject: End of Season Photographs		



	PHOTO RECORD	Page 1 of 1
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: September 19, 2012	Photographer: S. Norman	Allotment: Upper Hayden C&H
Location: Payne Ford Unit		
Subject: End of Season		



	PHOTO RECORD	Page 1 of 2
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: October 1, 2012	Photographer: D. Shiner	Allotment: Upper Hayden C&H
Location: Boulder Flat		
Subject: Livestock Use Module MIM		



Downstream. Analysis from MIM calculated average stubble height to be 6 inches for hydric species, bank alteration as 4%, and woody use as 13%.



	PHOTO RECORD	Page 2 of 2
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: October 1, 2012	Photographer: D. Shiner	Allotment: Upper Hayden C&H
Location: Boulder Flat		
Subject: Livestock Use Module MIM		



	PHOTO RECORD	Page 1 of 2
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: October 1, 2012	Photographer: D. Shiner	Allotment: Upper Hayden C&H
Location: Boulder Flat (Tobias Creek)		
Subject: Livestock Use Module MIM		



Upstream marker (looking upstream), multiple t-posts at this location. Analysis from MIM calculated average stubble height for hydric species as 6 inches, stream bank alteration as 5%, and woody browse use as 18%.



	PHOTO RECORD	Page 2 of 2
INTERMOUNTAIN REGION	SALMON-CHALLIS NATIONAL FOREST	Leadore RD
Date: October 1, 2012	Photographer: D. Shiner	Allotment: Upper Hayden C&H
Location: Boulder Flat (Tobias Creek)		
Subject: Livestock Use Module MIM		



NMFS Biological Opinion Number: 2010/00852

Stream Name: Bear Valley Creek Date: 8-21-12

Allotment Name: Upper Hayden Allotment Unit Name: Kadletz Creek

Start Time: 10:30 Stop Time: 13:00 Number of Pictures Taken: MANY

Stream Segment Length on GPS: 967 meters (straightline start to stop)

Estimated Stream Segment Length measured with GIS: 2,035 meters

Site Directions: TAKE Hwy 28 S. to Hayden Cr. Rd. Follow Hayden Cr. Rd to Bear Valley Cr Rd. Follow Bear Valley Cr Rd up to Campground with house facilities - Park here - WALK DOWN to Fence for Enclosure - Survey Starts just below where Fence crosses Stream.

Survey Crew: Bin Slavin, Dan Garcia, Shawn Sako

H₂O Temp: 47° Air Temp: 66° F Elevation: (top) 6551 Ft (bottom) 6390 Ft

Starting Location GPS (UTM): Zone 12 Easting 0281791 Northing 4962735

Degree Decimal: N: 44.78459° W: 113.75854°

Stopping Location GPS (UTM): Zone 12 Easting 0282046 Northing 4961791

Degree Decimal: N: 44.726599 W: 113.74205

Number of Live Adult Chinook salmon Observed: 0

Number of Adult Chinook salmon carcasses Observed: 0

Number of Chinook salmon Redds Observed: 0

Number of Chinook salmon Redds Observed that Livestock Trampled: 0

Comments: Water conditions were normal and clear

NMFS Biological Opinion Number: 2010 / 00852

Stream Name: Bear Valley Creek Date: 8-29-12

Allotment Name: Upper Hayden Allotment Unit Name: Payne / Ford

Start Time: 14:16 Stop Time: 15:30 Number of Pictures Taken: yes

Stream Segment Length on GPS: 995 meters

Estimated Stream Segment Length measured with GIS: 994 meters

Site Directions: TAKE Hwy 285. to Hayden Cr. Rd. (08) Follow Hayden Cr. Rd. (08) to Bear Valley Cr. Rd. (09) Follow (09) up Bear Valley Cr. to First Bridge. Park just above bridge on Right. Survey starts upstream of Bridge ~ 200 m.

Survey Crew: B. Slavin, D. Downing, E. Frederick, B. Leayna

(top) H₂O Temp: 52°F Air Temp: 79°F Elevation: 6133 Ft.
(bottom) H₂O Temp: 54°F Air Temp: 84°F Elevation: 6038 Ft.

Starting Location GPS (UTM): Zone 12T Easting 0284166 Northing 4961376

Degree Decimal: N: 44.77319° W: 113.72772°

Stopping Location GPS (UTM): Zone 12T Easting 0285132 Northing 4961137

Degree Decimal: N: 44.77129° W: 113.71544°

Number of Live Adult Chinook salmon Observed: ∅

Number of Adult Chinook salmon carcasses Observed: ∅

Number of Chinook salmon Redds Observed: ∅

Number of Chinook salmon Redds Observed that Livestock Trampled: ∅

Comments: Steep gradient - very few decent spawning sites -
no cows observed -

water conditions were normal and clear

NMFS Biological Opinion Number: 2010 100852

Stream Name: Hayden Creek Date: 8-29-12

Allotment Name: Upper Hayden Allotment Unit Name: Boulder Flat

Start Time: 10:45 Stop Time: 1145 Number of Pictures Taken: yes

Stream Segment Length on GPS: 928m

Estimated Stream Segment Length measured with GIS: 950 meters

Site Directions: Take Hwy 28 S. to Hayden Cr. Rd. (08) Follow Rd (08) Past Bear Valley Rd. up to Bridge Crossing Hayden Cr Survey starts just below Hayden Bridge continuing down to A Allotment Fence crossing stream - END OF Survey

Survey Crew: B. Slavin, D. Downing, E. Frederick, B. Iyua

(top) H₂O Temp: 48° Air Temp: 70° Elevation: 6167 FT

(bottom) H₂O Temp: 48° Air Temp: 70° Elevation: 6091 FT

Starting Location GPS (UTM): Zone 12T Easting 0285307 Northing 4958946

Degree Decimal: N: 44.75169° W: 113.71230°

Stopping Location GPS (UTM): Zone 12T Easting 0289311 Northing 4959870

Degree Decimal: N: 44.76001° W: 113.71265°

Number of Live Adult Chinook salmon Observed: 0

Number of Adult Chinook salmon carcasses Observed: 0

Number of Chinook salmon Redds Observed: 0

Number of Chinook salmon Redds Observed that Livestock Trampled: 0

Comments: Cows present in Area - very little areas with good spawning gravels.

water conditions were normal and clear

NMFS Biological Opinion Number: 2010/00852

Stream Name: HAYDEN Creek Date: 9/27/12

Allotment Name: Upper Hayden Allotment Unit Name: Boulder Flat

Start Time: 14:00 Stop Time: 1500 Number of Pictures Taken: _____

Stream Segment Length on GPS: 900m

Estimated Stream Segment Length measured with GIS: 966 meters

Site Directions: Hwy 28 South to Hayden Creek, follow Hayden Creek road to ^{Hayden} Creek crossing

Survey Crew: Bill Slavin, Desirae Downing, Beth Heyua

(top) H₂O Temp: 48°F Air Temp: 68°F Elevation: 6215 FT
(bottom) H₂O Temp: 49°F Air Temp: 70°F Elevation: 6075 Ft.

Starting Location GPS (UTM): Zone 11T Easting 0736220 Northing 4985411

Degree Decimal: N: 44.98283° W: 114.00377°

Stopping Location GPS (UTM): Zone 12T Easting 0285252 Northing 4959756

Degree Decimal: N: 44.75896° W: 113.71333°

Number of Live Adult Chinook salmon Observed: 0

Number of Adult Chinook salmon carcasses Observed: 0

Number of Chinook salmon Redds Observed: 0

Number of Chinook salmon Redds Observed that Livestock Trampled: 0

Comments: no fish or redds observed, few cows in unit

water conditions were normal and clear