

Montana
Department of
Natural Resources
and Conservation
Forested State Trust
Lands Habitat
Conservation
Annual Update

**Reporting
Period**

January 1,
2022-
December 31,
2022



INTRODUCTION

The Montana Department of Natural Resources and Conservation (DNRC) Forested State Trust Lands Habitat Conservation Plan (HCP) is a plan DNRC developed in cooperation with the United States Fish & Wildlife Service (USFWS) to acquire an Incidental Take Permit (Permit) for the Forest Management Program for a 50-year term. In the HCP, DNRC committed to provide the USFWS annual and 5-year monitoring reports for the duration of the plan. The monitoring reports help the two agencies evaluate DNRC's compliance with required measures, and the effectiveness of conservation commitments. This is the eleventh annual update, and the reporting period for this update is January 1, 2022-December 31, 2022. According to the results reported in the following sections, DNRC has fulfilled its annual commitments for monitoring and reporting according to HCP Chapter 4 – Monitoring and Adaptive Management (DNRC 2010).

As outlined in Chapter 8 (HCP Implementation), DNRC and the USFWS are required to meet annually. These meetings allow DNRC to present the USFWS with annual updates, evaluate new science, and they foster communication between the two agencies (DNRC 2010).

MONITORING AND ADAPTIVE MANAGEMENT

During development of the HCP conservation strategies, DNRC and the USFWS included commitments to monitor key components of the strategies. The monitoring and adaptive management program provides assurances that the HCP is being appropriately and effectively implemented, and it outlines a course of action if the conservation strategies are not yielding the desired results.

Monitoring

There are two types of monitoring: (1) implementation monitoring and (2) effectiveness monitoring. Implementation monitoring ensures implementation of DNRC's conservation commitments throughout the Permit term. Implementation monitoring represents DNRC's largest monitoring commitment associated with the HCP, and it involves tracking, reporting and evaluating whether the covered activities are being performed in compliance with the HCP requirements. Implementation is primarily documented through project-level HCP checklists and validated through office and field reviews (DNRC 2010).

Effectiveness monitoring typically involves evaluation of a particular conservation commitment or suite of commitments designed to have a desired effect on a target species or resource. This type of monitoring is intensive and requires considerable resources and expertise to conduct data collection and perform related analyses. Effectiveness monitoring for the HCP is fulfilled through a commitment by both DNRC and the USFWS to consider any new relevant research at annual meetings, and through DNRC's commitment to conduct monitoring to evaluate whether management prescriptions and conservation commitments are having the desired effect on the given species.

The monitoring tables in this update summarize both the implementation and effectiveness monitoring that took place during this reporting period. The tables contain information that must be reported annually as described in tables in the HCP Chapter 4 (DNRC 2010). The tables contain abbreviated descriptions of the HCP commitments that DNRC is required to report on annually. For full descriptions of those commitments, please see Chapter 2 of the HCP.

Adaptive Management

Adaptive management is a process whereby conservation commitments and management actions may be changed based on the results obtained from effectiveness monitoring and/or research. This process results in a feedback loop that incorporates improved information into everyday practices. This update serves as a component of the adaptive management process.

HCP CHECKLIST

HCP implementation checklists are the primary tool that DNRC uses to demonstrate and document compliance with HCP commitments. The HCP implementation checklists are macro-enabled spreadsheets that list specific commitments applicable to each field office. The checklists allow forest management staff to verify which commitments are applicable on a particular project, if they are being implemented, and how they are being implemented. The checklists serve as prompts to help ensure that all applicable commitments are considered and applied appropriately on each project. The checklists also aid in organizing, tracking and summarizing commitment application and any necessary allowances. At the end of the reporting period checklist data is compiled into a database that provides summary information required in the annual updates and 5-year reports. Much of the information presented in the following tables was compiled using the checklists and the associated database. There were 32 HCP checklists completed during this reporting period all of which were associated with commercial timber harvest.

GRIZZLY BEAR

DNRC manages state trust lands located in grizzly bear habitat. The following table outlines the annual reporting requirements and results for grizzly bears.

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
GB-PR4 Constructed open roads and minimized road in RMZs, WMZs or avalanche chutes. (allowances reported annually)	HCP Checklist was reviewed on each project. All projects with such construction, and the circumstances, would be reported.	From HCP implementation checklist Number of projects that were reviewed = 32 Number of projects had open road construction in one or more of these areas = 0 0 allowances for this purpose were noted.	v.2.4-11
GB-PR5 Suspend motorized forest management activities within 0.6	Report active den sites found, including the following information (to the extent it is available): (1)	0 active dens were found in 2022.	v.2.4-11

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
mile of active den sites until May 31	location of the den, (2) when the bear was documented as present and by whom, (3) when the bear vacated the site (if known), and (4) a description of activities that were delayed as a result of the den site.		
GB-RZ6 Granting of Easements – Discourage granting of easements that relinquish DNRC control on roads within grizzly bear recovery zone. (annual and 5 year)	Use HCP Implementation Checklist to Identify Circumstances and Mitigation Associated with the Easement. Annually compile the number of easements granted and associated miles of newly created open roads.	There were 0 reciprocal access easements or temporary road use permits agreements reported within grizzly bear recovery zones for 2022.	v.2.4-15
GB-ST1(2) Has DNRC installed bear presence signs? Is DNRC maintaining these signs?	Provide informal updates on maintenance issues as needed.	Signs are all present and functional at the six required locations (D. Ring pers Comm. May 2023).	
GB-SW1(5) Is DNRC maintaining “bear aware” signs at designated locations?	Provide informational updates on maintenance issues as needed.	Four signs remain in place and are functional at mapped locations on the Swan River State Forest (C. Blanchard, pers comm. May 17, 2023).	
GB-SC1 Maintain or decrease baseline open road amounts at the administrative unit level. Improve GIS road layer. (annually as needed)	Report open road amounts (tracked with GIS) at the administrative unit level to compare with HCP baseline. GIS data quality and management reported at annual meeting.	Number of projects reviewed when applicable using open road reduction checklists = 4 See Attachment GB-1, which provides information regarding road amounts by road class, unit office and area office during the monitoring period as compared with baseline levels in 2018.	v.2.4-22

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)																		
		<p>DNRC Scattered Lands-Recovery Zone</p> <p>Open Roads (mi.)</p> <table border="1"> <thead> <tr> <th>Unit</th> <th>2018 ITP</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>KAL</td> <td>17.8</td> <td>11.2</td> </tr> <tr> <td>STW</td> <td>1.8</td> <td>1.7</td> </tr> <tr> <td>CLW</td> <td>16.8</td> <td>13.9</td> </tr> <tr> <td>MSO</td> <td>4.1</td> <td>0.0</td> </tr> <tr> <td>HEL</td> <td>0.2</td> <td>0.1</td> </tr> </tbody> </table>	Unit	2018 ITP	2022	KAL	17.8	11.2	STW	1.8	1.7	CLW	16.8	13.9	MSO	4.1	0.0	HEL	0.2	0.1	
Unit	2018 ITP	2022																			
KAL	17.8	11.2																			
STW	1.8	1.7																			
CLW	16.8	13.9																			
MSO	4.1	0.0																			
HEL	0.2	0.1																			
GB-SC4	Report Pits Operated >0.25 Miles from Open Roads in Resting Parcels and Mitigations Applied.	From HCP implementation checklist. No minor projects in resting parcels required the use of gravel sources greater than 0.25 miles from an open road during the monitoring period.																			
GB-CY4 Has DNRC expedited reduction of open road densities for recovery zone parcels?	Compile and report information from Open Road Reduction Checklist (Appendix B, Document B-2) for all CYE recovery zone parcels (does not include CYE NROH parcels).	Initially completed in 2012 and again in 2018. No additional reviews were applicable this monitoring period.	v.2.4-25																		

CANADA LYNX

Some forested trust lands managed by DNRC occur within the distribution of Canada lynx, which was listed as threatened in 2000 by the USFWS. The following table outlines the reporting requirements and results for Canada lynx.

Table 2 Canada lynx reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
LY-HB1 Lynx Habitat Map – Track lynx habitat in the HCP project area. (annual)	Provide lynx habitat map depicting annual changes and table that includes lynx habitat amounts by type for each	Results are provided for year 2022 in Habitat tables found in Attachment L-1 and L-2. Baseline tables from 2018 are provided for comparison. Data corrections, model corrections, and	v.2.4-29

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
	administrative unit and LMA.	minor land disposals have accounted for shifts in acreages reported to the USFWS since 2012. All LMAs and Land Offices were in compliance with required habitat thresholds during year 2022.	

AQUATICS

The aquatic conservation strategies were developed by DNRC with the technical assistance of the USFWS. The process was initiated by identifying a specific biological goal applicable to the three HCP fish species. The identified biological goal was to protect bull trout, westslope cutthroat trout and Columbia redband trout populations and their habitat and to contribute to habitat restoration or rehabilitation, as appropriate, which may have been affected by past DNRC forest management activities. Commitments were developed to address known scientific information and uncertainties in scientific knowledge, as well as existing data gaps (DNRC 2010). The following table outlines the reporting requirements and results for the Aquatics Conservation Strategy.

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
AQ-RM (1) Riparian Management Zone Commitments. (annual)	Complete HCP Implementation checklist review on all sites.	During 2022, RMZs were delineated on 15 projects containing Class 1 streams or lakes. Five of these projects include harvest plans for a total of approximately 29.2 acres of RMZ harvest.	v. 2.4-39
AQ-RM (2) Thresholds for RMZ harvest allowances. (annual and 5 year)	Acres of Class 1 RMZ, Acres of Class 1 RMZ harvest under allowances, and RMZ area in non-stocked or seed/sapling size class, by aquatic analysis unit (AAU).	A total of 29.2 acres of the managed portion of the RMZ were harvested in 2022. No RMZ harvest allowances were invoked in 2022. Percent total non-stocked, seedling-sapling size class in each AAU: Lower Clark Fork: 0.0% Middle Clark Fork: 6.9% Upper Clark Fork: 7.1% Lower Kootenai: 7.7% Middle Kootenai: 3.8% Upper Kootenai: 6.3% Flathead Lake: 16.5%	v. 2.4-39

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		North Fork Flathead: 21.9% Stillwater: 6.6% Swan: 4.5% Bitterroot: 38.1% Blackfoot: 3.7% Rock Creek: 7.1% Upper Missouri: 7.6%	
AQ-SD Implement sediment delivery reduction commitments. (annual)	Amount of new road constructed, reconstructed, relocated, abandoned and reclaimed.	See attachment SD-1 and SD-2 on pages 17 and 18.	v.2.4-40
AQ-FC 1/6 of sites in need of corrective actions implemented, planned or designed every 5 years. All priority 1 sites completed within 15 years. All sites completed with 30 years. (annual and 5 year)	Maintain planning schedule and report accomplishments.	DNRC completed a preliminary inventory of stream crossing sites in 2006 and the results were reported in HCP/EIS. The original HCP baseline included 106 inventoried stream crossing sites in need of corrective actions. To date, 55 new sites have been added to the inventory for a total of 161 crossing sites. Currently, 91 sites have been removed from the planning schedule (See Attachment AQFC-1; HCP Fish Connectivity Implementation Monitoring on page 19). 3 crossings were removed from inventory in 2022. There are 70 sites remaining in need of corrective actions or assessment.	v.2.4-41
AQ-GZ Implement grazing conservation strategies for grazing licenses on classified forest lands. (annual)	Update status of grazing evaluations and verifications completed, and corrective action implemented.	For the 2022 monitoring period, 75 grazing evaluations were completed on HCP parcels. Of these evaluations, 31 (41%) support an HCP fish species. During the review of grazing evaluation data, 0 parcels showed evidence that further verification was necessary. For a summary of inspections see Attachment AQ-GZ; Annual Summary Statistics of Grazing Verifications and Corrective Actions (page 20).	v.2.4-41
AQ-Cumulative Watershed Effects	Report number, type and location of CWE analysis	CWE analyses were completed for 16 forest management projects during	v.2.4-41

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
(CWE) Has DNRC implemented the CWE commitments? (annual and 5 year)	completed. Provide documentation of mitigation measures or alternatives developed for projects with moderate or high CWE risks.	2022. For 12 of these projects, a Level 1 CWE analysis (coarse filter) was determined to be sufficient level of analysis due to determination of low risks. More detailed analysis (Level 2 and level 3) were completed on the 4 other projects where the CWE Coarse filter analysis determined that there was potential for moderate to high levels of risk.	
Assess the potential Large Woody Debris (LWD) recruitment and determine whether in-stream LWD targets will be met on five or more riparian harvest sites. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has completed pre- and post-harvest LWD monitoring on 14 sites under SMZ/RMZ harvest prescriptions. Post-harvest LWD levels met or exceeded targets at all sites. Three monitoring sites are in progress (2; Blackfoot AAU, 1; Upper Missouri AAU), with one post-harvest assessment to be completed in 2023. A synthesis report of completed RMZ monitoring sites is available upon request.	v.2.4-42
Evaluate levels of in-stream shade retained after riparian harvest. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has completed pre- and post-harvest instream shade monitoring on 14 sites under RMZ/SMZ harvest prescriptions. Post-harvest shade monitoring indicates that current management is adequate to maintain suitable stream temperature regimes for HCP-covered fish species. Three monitoring sites are in progress (2; Blackfoot AAU, 1; Upper Missouri AAU), with one post-harvest assessment to be completed in 2023. A synthesis report of completed RMZ monitoring sites is available upon request.	v.2.4-42
Monitor stream temperatures to evaluate if levels of in-stream cover are adequate to maintain stream temperatures.	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has completed pre- and post-harvest stream temperature monitoring on 12 sites under RMZ/SMZ harvest prescriptions. Post-harvest monitoring indicated that 10 of 12 sites met thresholds identified in the HCP. Two sites did not meet the chronic threshold,	v.2.4-42

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
(annual and 5 year)		while one site did not meet the acute threshold. (2; Blackfoot AAU, 1; Upper Missouri AAU). A monitoring report synthesizing stream temperature data is available upon request.	
BMP Audits on all applicable projects. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	Internal BMP audits were conducted on 12 timber sale projects during 2022. Results of the both the internal audits found that BMPs were properly applied on 97% of the practices rated. BMPs were effective in protecting soil and water on 98.5% of the practices rated. No major departures were noted on internal audits.	v.2.4-43
Timber sale inspections on all applicable projects. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	During 2022, 102 timber sale inspections were completed on 22 ongoing timber sale projects within HCP project area. Examples of inspection reports are available upon request.	v.2.4-43
Ongoing quantitative studies at two sites. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	The South Woodward turbidity monitoring project was on-going in 2022 with post-corrective action data collection. A collaborative water quality monitoring project with Montana DEQ was also on-going in 2022 on both Goat and Lion Creek (NWLO/SWN) for data collection to inform 303D listing status.	v.2.4-43
Case studies monitoring the effectiveness of corrective actions in reducing sediment from existing sources. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	The South Woodward turbidity monitoring project is on-going with post-corrective action data collection. Upland soil disturbance monitoring of tethered logging systems in planned for 2023 on steep harvest units in the Swan River and Stillwater State Forest.	v.2.4-43
Determine if fish connectivity corrective actions are effective. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	Fish connectivity improvements have been completed on 25 fish passage structures covered under the HCP. DNRC has completed 2-year, 5-year, and 10-year effectiveness monitoring on all sites. No corrective actions were identified from the nine sites evaluated	v.2.4-43

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		in 2022.	
AQ-GR1 Redd Trampling Pilot Study. (Develop and finalize plan by year 2, implement plan by year 3)	Complete a plan for Redd trampling pilot study by year 2.	<p>Assessment of redd risk on all HCP covered Classified Forest Grazing Licenses was completed in 2021. Of the 133 parcels, 80 were confirmed to be Priority 1, with suitable spawning habitat for one or more of the HCP-covered species.</p> <p>A mitigation plan to address specific issues on a parcel-by-parcel manner is currently being developed with a suite of tools to minimize or eliminate grazing impacts to redd trampling on the 45 Priority 1 parcels.</p>	v.2.8-9

TRANSITION LANDS STRATEGY

The purpose of the transition lands strategy is to describe the process for moving DNRC lands into or out of the HCP project area. The strategy ensures adequate levels of conservation for HCP species while allowing DNRC to meet its land management and fiduciary trust obligations. This subsection summarizes land transactions within two cap types (5% and 10%) from the period between January 1, 2022 and December 31, 2022. According to the HCP, DNRC will cap the removal of HCP project area lands in the NCDE and CYE grizzly bear recovery zones, CYE NROH, LMAs, and bull trout core habitat areas to 5% of the baseline of the amended HCP project area. Additionally, DNRC would cap the removal of all other HCP lands at 10 to 15% of the amended HCP project area.

Land Dispositions

No HCP project area lands were disposed of in 2022. DNRC is well within the cap described above.

TRAINING

Training DNRC staff responsible for implementing the HCP timber sale planning, design and administration is critical to ensure correct and consistent implementation of HCP commitments.

Implementation Training for this Reporting Period

The following training took place during the reporting period and will continue as the HCP progresses forward.

Bear Avoidance Training

A web-based approach to satisfy GB-PR1 was approved by the USFWS and in place July 30, 2013. All staff that normally, or occasionally, perform duties associated with HCP-covered activities are required to view the bear-avoidance training video hosted on the DNRC employee intranet. To date there have been over 350 known employee viewings of the video. Approximately 36 viewings of the video occurred in 2022, of which approximately 12 were new or seasonal employees. A database is maintained and monitored by FMB staff to ensure compliance with GB-PR1 “employees trained on bear avoidance”.

Project-Level Training

FMB staff and field personnel met for in-person trainings during the All-Hands Forest Management Training in 2022. Most implementation questions were addressed on an individual person-to-person basis over the phone or by telecall. Forest Management Bureau and Land Office Specialists participate on all Interdisciplinary Teams (ID) for projects in the HCP planning area. These Specialists are very familiar with the HCP and the conservation commitments. Many of them have served on the HCP Workgroup. This has made project-level training one of the most effective training tools for DNRC field staff. Questions arise on a project that might never surface in a classroom training session. Project-level training is ongoing and will continue to be a primary training method in 2023.

CHANGED CIRCUMSTANCES

The processes for responding to Changed Circumstances are described in Chapter 6 of the HCP. The USFWS and DNRC are required to ensure changed circumstances are identified and planned for in the HCP. Changed Circumstances may be a result of administrative changes, natural events or a natural disturbance (DNRC 2010).

There were no Changed Circumstances during this reporting period.

ADJUSTING FOR NEW RESEARCH

DNRC and USFWS are required to exchange any new relevant research or emerging science annually and at the 5-year review. Both parties cooperatively determine if the new information will warrant changes to commitments or management actions. No new findings or relevant research were provided by either party during 2022.

SUMMARY

The DNRC has successfully met the requirements for the 11th year of HCP implementation and monitoring.

REFERENCES

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Attachment GB-1: Miles of Road in Various Grizzly Bear Management Areas

2018 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Recovery Zones (Scattered or Blocked Status)	Linear Miles of Road in Recovery Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	200.6	630.7	51.7	18.8	43.9	879.9	252.0	161,835	3.5
Kalispell Unit NCDE (Scattered)	17.8	28.2	0.0	2.6	0.0	42.8	10	6,465	4.2
Libby Unit CYE (Scattered)	0.0	8.2	0.1	0.4	0.2	8.3	4	2,848	1.9
Plains Unit CYE (Scattered)**	7.7	6.2	0.0	3.1	0.0	13.9	5	3,517	2.8
Stillwater Unit NCDE (Blocked)	122.0	192.0	42.1	12.5	13.4	356.1	141	90,432	2.5
Stillwater Unit NCDE (Scattered)	1.8	11.1	0.0	0.0	0.0	13.1	4	2,474	3.4
Swan Unit NCDE (Blocked)**	51.3	385.0	9.5	0.1	30.2	445.8	88	56,099	5.1
SWLO	20.9	26.0	2.8	7.4	1.8	42.8	10	6,330	4.3
Clearwater Unit NCDE (Scattered)	16.8	26.0	2.8	7.4	1.8	42.8	10	6,330	4.3
Missoula Unit NCDE (Scattered)	4.1	0.0	0.0	0.0	0.0	0.0	0	-	N/A
CLO	0.1	0.2	0.0	0.0	0.7	0.3	1	639	0.3
Helena Unit NCDE (Scattered)	0.2	0.3	0.0	0.0	0.5	0.5	1	639	0.5
<i>* Does not include Abandoned or Reclaimed Roads</i>									
<i>**land acquisition and subsequent transition into the HCP have created a new baseline for these management units in 2018.</i>									

2022 - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Recovery Zones (Scattered or Blocked Status)	Linear Miles of Road in Recovery Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (Sqr. Miles)	Acres	
NWLO	181.6	743.3	58.9	23.4	71.1	983.8	273.0	175,291	3.6
Kalispell Unit NCDE (Scattered)	11.2	27.3	0.0	1.9	7.0	38.6	10.0	6,459	3.9
Libby Unit CYE (Scattered)	0.0	5.8	0.1	0.4	1.2	5.9	4.0	2,846	1.5
Plains Unit CYE (Scattered)	7.7	6.2	0.0	3.1	0.0	13.9	5.0	3,517	2.8
Stillwater Unit NCDE (Blocked)	109.7	296.9	49.2	16.8	26.4	455.8	162.0	103,887	2.8
Stillwater Unit NCDE (Scattered)	1.7	11.7	0.0	0.0	0.0	13.4	4.0	2,483	3.4
Swan Unit NCDE (Blocked)	51.3	395.4	9.5	1.3	36.5	456.2	88.0	56,099	5.2
SWLO	13.9	26.0	2.8	7.4	2.0	42.6	10.0	6,650	4.3
Clearwater Unit NCDE (Scattered)	13.9	26.0	2.8	7.4	2.0	42.6	10.0	6,330	4.3
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320	0.0
CLO	0.1	0.2	0.0	0.0	0.7	0.3	1.0	639	0.3
Helena Unit NCDE (Scattered)	0.1	0.2	0.0	0.0	0.7	0.3	1.0	639	0.3
<i>* does not include abandoned or reclaimed</i>									

2018 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Non Recovery Occupied Zone (Scattered or Blocked Status)	Linear Miles of Road in Non Recovery Occupied Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	102.8	147.6	3.0	12.5	7.7	250.1	58.0	37,682	4.3
Kalispell Unit NCDE (Scattered)	17.9	9.0	0.0	0.3	2.1	27.0	9	5,950	2.9
Libby Unit CYE (Scattered)	23.3	49.0	1.2	0.0	0.0	73.4	15	9,856	4.8
Libby Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	0	N/A
Plains Unit CYE (Scattered)**	7.1	9.0	1.8	0.2	0.7	17.9	4	2,237	4.5
Plains Unit NCDE (Scattered)	6.9	9.7	0.0	1.2	0.0	13.4	4	2,813	3.0
Stillwater Unit NCDE (Scattered)	47.6	70.9	0.0	10.8	4.9	118.4	26	16,826	4.5
SWLO	69.7	358.1	17.6	47.6	12.9	445.4	91	58,369	4.9
Anaconda Unit NCDE (Scattered)	6.7	14.4	0.0	0.0	0.0	21.1	9	6,011	2.3
Clearwater Unit NCDE (Scattered)**	63.0	343.7	17.6	47.6	12.9	424.3	82	52,358	5.2
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	0	N/A
CLO	10.3	68.2	0.1	7.3	1.9	78.5	53.0	33,717	1.5
Bozeman Unit GYE (Scattered)	5.0	6.0	0.1	0.0	0.0	11.0	13	8,129	0.9
Dillon Unit GYE (Scattered)	1.5	51.9	0.0	6.7	0.0	53.4	31	19,627	1.7
Helena Unit NCDE (Scattered)	3.8	10.3	0.0	0.6	1.9	14.1	9	5,961	1.5

* Does not include Abandoned or Reclaimed Roads

**land acquisition and subsequent transition into the HCP have created a new baseline for these management units.

2022 - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Non Recovery Occupied Zone (Scattered or Blocked Status)	Linear Miles of Road in Non Recovery Occupied Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (Sqr. Miles)	Acres	
NWLO	107.8	159.8	3.1	13.9	12.0	270.7	57.0	37,669	4.7
Kalispell Unit NCDE (Scattered)	21.9	17.3	0.1	0.3	2.3	39.3	9.0	5,965	4.4
Libby Unit CYE (Scattered)	24.1	56.2	1.2	0.3	0.2	81.4	15.0	9,831	5.4
Libby Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
Plains Unit CYE (Scattered)	7.1	9.0	1.8	0.2	0.7	17.9	3.0	2,237	6.0
Plains Unit NCDE (Scattered)	6.9	5.4	0.0	1.2	0.0	12.4	4.0	2,792	3.1
Stillwater Unit CYE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
Stillwater Unit NCDE (Scattered)	47.8	71.9	0.1	11.9	8.9	119.8	26.0	16,844	4.6
SWLO	63.6	388.8	17.4	49.5	18.8	469.8	92.0	59,164	5.1
Anaconda Unit NCDE (Scattered)	1.3	33.1	0.0	2.4	3.8	34.4	9.0	6,011	3.8
Clearwater Unit NCDE (Scattered)	62.3	355.8	17.4	47.1	15.0	435.5	83.0	53,132	5.2
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0
CLO	16.1	70.5	1.0	1.2	11.6	87.6	53.0	33,700	1.7
Bozeman Unit GYE (Scattered)	5.9	12.2	0.0	0.6	0.4	18.2	13.0	8,142	1.4
Dillon Unit GYE (Scattered)	4.0	52.8	1.0	0.0	4.3	57.8	31.0	19,628	1.9
Helena Unit NCDE (Scattered)	6.1	5.5	0.0	0.6	6.9	11.6	9.0	5,930	1.3

* Does not include abandoned or reclaimed roads.

2018 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices Outside Grizzly Bear Zones (Scattered Status)	Linear Miles of Road in Non Grizzly Bear Designated Areas						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	255.6	318.1	3.4	28.3	15.0	577.0	138.0	88,293.0	4.2
Kalispell Unit	110.4	71.9	0.0	9.8	10.9	182.3	44.0	27,980	4.1
Libby Unit	29.2	75.6	0.3	0.0	0.0	105.1	24.0	15,341	4.4
Plains Unit**	116.0	170.6	3.1	18.5	4.1	289.6	70	44,972	4.1
SWLO	249.4	777.7	13.9	79.6	11.5	1,040.9	242.0	154,299	4.3
Anaconda Unit	78.2	63.4	0.0	2.0	0.8	141.6	61.0	38,760	2.3
Clearwater Unit**	17.7	42.1	5.2	5.6	1.4	65.0	12	7,880	5.4
Hamilton Unit**	32.9	114.4	3.7	56.4	7.0	151.0	37	23,496	4.1
Missoula Unit**	120.5	557.7	5.0	15.5	2.4	683.3	132	84,163	5.2
CLO	44.9	142.8	1.9	13.1	1.7	189.6	122.4	78,358	1.5
Bozeman Unit	6.0	21.0	1.6	0.8	0.0	28.5	13.0	8,363	2.2
Dillon Unit	20.1	100.7	0.3	12.2	1.5	121.1	79.0	50,474	1.5
Helena Unit	18.8	21.2	0.0	0.0	0.2	40.0	31.0	19,520	1.3

** Does not include Abandoned or Reclaimed Roads*

***land acquisition and subsequent transition into the HCP have created a new baseline for these management units.*

2022 - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices Outside Grizzly Bear Zones (Scattered Status)	Linear Miles of Road in Non Grizzly Bear Designated Areas						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (Sqr. Miles)	Acres	
NWLO	241.8	376.5	3.2	25.5	15.8	621.5	140	89,306	4.4
Kalispell Unit	87.9	122.4	0.0	7.5	11.2	210.3	44	27,962	4.8
Libby Unit	38.3	82.7	0.1	0.0	0.3	121.1	26	16,335	4.7
Plains Unit	115.6	171.4	3.1	18.0	4.3	290.2	70	45,009	4.1
SWLO	167.9	863.5	15.0	98.4	20.9	1046.4	240	153,675	4.4
Anaconda Unit	20.1	135.4	0.0	14.9	4.7	155.5	59	38,056	2.6
Clearwater Unit	10.9	36.5	4.8	5.5	1.0	52.3	12	7,880	4.4
Hamilton Unit	22.7	123.8	3.7	61.7	8.0	150.2	37	23,496	4.1
Missoula Unit	114.1	567.8	6.5	16.3	7.2	688.4	132	84,243	5.2
CLO	67.8	99.4	5.6	8.1	11.7	172.8	123	78,883	1.4
Bozeman Unit	11.8	16.7	1.6	0.0	1.3	30.1	13	8,368	2.3
Dillon Unit	32.0	82.7	4.0	8.1	10.1	118.7	80	51,000	1.5
Helena Unit	24.0	0.0	0.0	0.0	0.2	24.0	30	19,515	0.8

** does not include abandoned or reclaimed*

Attachment LY-1: Composition of current (May 2023) lynx habitat data, using the HCP lynx habitat definitions, on LMAs in the HCP project area

HCP BASELINE - DNRC lands in the HCP Project Area (Data from March 6, 2019)														
Habitat Class	Proposed LMA's (Land Office)													
	Stillwater West (NWLO)		Stillwater East (NWLO)		Stillwater South (NWLO)		Coal Creek (NWLO)		Swan (NWLO)		Seeley Lake Area (SWLO)		Garnet Area (SWLO)	
Winter Foraging Habitat	17,505	50%	21,136	62%	3,013	23%	5,672	44%	27,095	53%	1,865	42%	1,669	41%
Summer Foraging Habitat	10,114	29%	5,922	17%	4,986	38%	2,169	17%	7,927	16%	187	4%	250	6%
Other Suitable Habitat	3,540	10%	3,057	9%	3,918	30%	1,676	13%	5,021	10%	806	18%	1,555	38%
Suitable Habitat Subtotal	31,159	89%	30,115	89%	11,917	91%	9,517	74%	40,042	79%	2,858	64%	3,475	86%
Temporary Non-Suitable Habitat	3,772	11%	3,913	11%	1,244	9%	3,396	26%	10,763	21%	1,581	36%	588	14%
Total Potential Lynx Habitat	34,931	91%	34,028	93%	13,161	98%	12,914	86%	50,806	91%	4,439	45%	4,063	45%
Non-Habitat	3,644	9%	2,629	7%	245	2%	2,057	14%	5,292	9%	5,480	55%	4,873	55%
DNRC Total Acres	38,575	100%	36,657	100%	13,406	100%	14,970	100%	56,098	100%	9,919	100%	8,936	100%

2022 HCP Annual Report - DNRC lands in the HCP Project Area (Data from May 24, 2023)														
Habitat Class	Proposed LMA's (Land Office)													
	Stillwater West (NWLO)		Stillwater East (NWLO)		Stillwater South (NWLO)		CoalCreek (NWLO)		Swan (NWLO)		Seeley Lake (SWLO)		Garnet Area (SWLO)	
Winter Foraging	17,442	50%	19,705	58%	3,183	24%	5,863	46%	26,976	53%	1,942	44%	1,728	43%
Summer Foraging	9,553	27%	5,943	17%	5,033	39%	1,993	16%	6,688	13%	184	4%	194	5%
Other Suitable Habitat	4,491	13%	2,998	9%	3,897	30%	1,309	10%	6,498	13%	1,412	32%	1,581	39%
Suitable Habitat Subtotal	31,485	90%	28,646	84%	12,113	93%	9,165	73%	40,161	79%	3,538	80%	3,502	86%
Temporary Non-Suitable Habitat	3,406	10%	5,475	16%	920	7%	3,447	27%	10,641	21%	892	20%	561	14%
Total Potential Lynx Habitat	34,891	90%	34,122	93%	13,032	98%	12,612	86%	50,802	91%	4,430	45%	4,063	45%
Non-Habitat	3,730	10%	2,604	7%	247	2%	2,049	14%	5,296	9%	5,506	55%	4,873	55%
DNRC Total Acres	38,621	100%	36,725	100%	13,279	100%	14,661	100%	56,098	100%	9,937	100%	8,936	100%

Attachment LY-2: Acres of existing lynx habitat on Non-LMA parcels, using HCP lynx habitat definitions, on DNRC lands by Land Office in the HCP Project Area

2018 HCP BASELINE DATA - DNRC lands in the HCP Project Area (Data from March 6, 2019)							
Habitat Class	HCP Project Area (%)						
	NWLO		SWLO		CLO		Total
Winter Foraging Habitat	38,974	59%	18,289	48%	0	0%	57,263
Summer Foraging Habitat	5,023	8%	6,306	17%	2,783	8%	14,112
Other Suitable Habitat	12,390	19%	7,594	20%	24,572	71%	44,556
Suitable Habitat Subtotal	56,388	86%	32,188	84%	27,355	79%	115,931
Temporary Non-Suitable Habitat	9,346	14%	6,014	16%	7,435	21%	22,795
Total Potential Lynx Habitat	65,734	47%	38,202	19%	34,790	31%	138,726
Non-Habitat (includes non forested)	74,591	53%	162,663	81%	78,434	69%	315,688
Total Acres	140,325	100%	200,865	100%	113,224	100%	454,414

2022 HCP ANNUAL REPORT - DNRC lands in the HCP Project Area (Data from May 24, 2023)							
Habitat Class	HCP Project Area (%)						
	NWLO		SWLO		CLO		Total
Winter Foraging	36,109	55%	17,901	47%	0	0%	54,011
Summer Foraging	4,702	7%	5,142	13%	0	0%	9,844
Other Suitable Habitat	12,834	19%	8,941	23%	0	0%	21,775
Suitable Habitat Subtotal	53,646	81%	31,984	84%	25,701	74%	111,331
Temporary Non-Suitable Habitat	12,247	19%	6,192	16%	8,934	26%	27,373
Total Potential Lynx Habitat	65,893	46%	38,176	19%	34,635	31%	138,704
Non-Habitat (includes non forested)	77,032	54%	162,582	81%	78,622	69%	318,236
DNRC Total Acres	142,925	100%	200,758	100%	113,257	100%	456,940

Attachment SD-1: Road Activities Included in DNRC Timber Sale Contracts Sold Between 2012 and 2022

2022 HCP ANNUAL REPORT - DNRC LANDS IN THE HCP PROJECT AREA												
Road Activity	HCP PROJECT AREA: ROAD ACTIVITIES (MILES) BY REPORTING PERIOD											Total Road Activities
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Permanent Road Construction	15.7	25.6	23.0	27.2	26.0	23.7	9.9	15.1	17.8	20.6	27.86	204.6
Temporary Road Construction	5.3	10.9	9.3	6.0	9.2	10.5	1.6	4.4	7.0	7.1	6.05	71.3
Road Reclamation	4.3	4.6	1.9	0.2	0.0	0.0	1.7	2.1	8.5	5.4	6.02	28.7
Road Abandonment	0.0	0.0	1.0	1.7	0.1	0.0	0.0	0.5	1.3	0.0	0.39	4.5
Road Reconstruction	10.8	11.1	11.3	19.7	16.6	6.6	9.4	15.6	12.1	11.3	12.80	124.5
BMP Maintenance	120.2	111.3	204.6	177.9	176.3	199.8	153.3	171.7	175.7	139.5	185.57	1,630.3
Total Road Activities	156.3	163.5	251.1	232.7	228.2	240.6	175.9	209.4	222.3	183.9	238.7	2,063.9

Attachment SD-2: Road Inventory Progress by Aquatic Analysis Unit Between 2015 and 2022

EIS AAU	6th Code Watersheds	2022 Total DNRC Road Miles	2015 Inventoried (mi)	2015 Inventoried (%)	2016 Inventoried (mi)	2016 Inventoried (%)	2017 Inventoried (mi)	2017 Inventoried (%)	2018 Inventoried (mi)	2018 Inventoried (%)	2019 Inventoried (mi)	2019 Inventoried (%)	2020 Inventoried (mi)	2020 Inventoried (%)	2021 Inventoried (mi)	2021 Inventoried (%)	2022 Inventoried (mi)	2022 Inventoried (%)
Bitterroot	27	236.3	126.8	55.1%	141.5	61.5%	179.2	77.9%	179.2	77.9%	186.0	80.9%	188.9	82.1%	208.0	88.0%	232.3	98.3%
Blackfoot	52	967.8	346.9	36.1%	350.0	36.5%	366.7	38.2%	376.5	39.2%	865.9	90.2%	884.1	92.1%	932.5	96.4%	967.3	100.0%
Flathead Lake	10	69.6	20.7	29.1%	20.7	29.1%	21.3	30.0%	21.3	30.0%	26.3	37.0%	28	39.4%	35.8	51.4%	64.9	93.2%
Lower Clark Fork	15	23.6	5.4	23.0%	5.4	23.0%	5.4	23.0%	5.5	23.2%	4.9	20.8%	5.6	23.8%	18.6	78.9%	23.6	100.0%
Lower Kootenai	7	14.3	4.5	29.4%	4.6	30.2%	4.9	32.0%	4.9	32.0%	4.9	32.0%	4.9	32.0%	13.0	90.7%	14.3	100.0%
Middle Clark Fork	84	588.0	143.9	24.2%	227.8	38.4%	290.2	48.9%	298.0	50.2%	345.7	58.3%	372.4	62.8%	457.0	77.7%	551.1	93.7%
Middle Kootenai	25	221.3	75.9	33.6%	76.3	33.8%	82.3	36.5%	97.6	43.2%	103.6	45.9%	104.2	46.2%	162.1	73.2%	202.3	91.4%
NF Flathead	15	69.6	2.1	3.1%	2.4	3.5%	2.4	3.5%	2.4	3.5%	39.0	57.4%	39.7	58.4%	60.4	86.8%	63.4	91.1%
Rock Creek	8	23.5	12.3	54.4%	12.3	54.4%	14.6	65.0%	15.1	67.3%	15.1	67.2%	15.1	67.1%	23.4	99.6%	23.5	100.0%
Stillwater	18	480.4	129.5	27.7%	131.7	28.2%	138.1	29.6%	230.5	49.4%	331.5	71.0%	337.2	72.2%	425.1	88.5%	465.2	96.8%
Swan	10	520.5	148.1	28.3%	173.7	33.2%	178.8	34.2%	219.0	41.9%	390.3	74.7%	420.9	80.6%	494.9	95.1%	515.1	99.0%
Upper Clark Fork	55	254.9	123.5	49.8%	135.2	54.6%	139.5	56.3%	140.6	56.7%	190.2	76.7%	196.2	79.1%	212.8	83.5%	254.5	99.9%
Upper Kootenai	19	96.1	37.8	40.2%	38.7	41.2%	39.6	42.1%	39.6	42.1%	37.3	39.7%	41.8	44.5%	65.4	68.1%	95.7	99.6%
Upper Missouri	51	153.6	2.9	1.9%	3.3	2.2%	5.2	3.4%	5.2	3.4%	8.9	5.8%	14.8	9.6%	23.4	15.2%	67.6	44.0%
Total	396	3,719	1,180.1	31.9%	1,323.6	35.8%	1,468.3	39.7%	1,635.4	44.3%	2,549.6	69.0%	2,653.8	71.8%	3,132.4	84.2%	3,540.7	96.5%

Attachment FC-1: Fish Connectivity Implementation Monitoring (AQ-FC1) for 2020

1. Prioritization of road-stream crossing improvements will be based on existing levels of connectivity, as well as species status and population biological goals established while taking into consideration other regulatory agencies or cooperative organizations activities and goals. Genetic data used for coarse filter will be obtained primarily from MFWP data sets. Where practicable and where time is permitting, DNRC will collaborate with MFWP to collect species genetic information to supplement those data sets. All Priority 1 sites should be completed within 15 years of implementation, all remaining sites should be completed within 30 years of implementation.
 - a. Priority 1 – Habitat includes any bull trout life stage
 - b. Priority 2 – Habitat includes 100% pure westslope cutthroat or Columbia redband trout
 - c. Priority 3 – Habitat includes westslope cutthroat or Columbia redband trout of unknown genetic purity
 - d. Priority 4 – Habitat includes 80-99% pure westslope cutthroat trout or Columbia redband trout
 - e. Priority 5 – Habitat includes <80% pure westslope cutthroat trout or Columbia redband trout

Table 1: 2022 activities associated with Aquatic Conservation Strategy AQ-FC1.

Aquatic Analysis Area	Inventory Start 2022		Sites Added to Inventory 2022		Sites Removed from Inventory 2022		Inventory End 2022	
	Priority 1	Priority 2-5	Priority 1	Priority 2-5	Priority 1	Priority 2-5	Priority 1	Priority 2-5
Bitterroot	0	1	0	0	0	0	0	1
Blackfoot	0	13	0	1	0	0	0	14
Flathead Lake	0	2	0	0	0	0	0	2
Lower Clark Fork	0	0	0	0	0	0	0	0
Middle Clark Fork	0	7	0	0	0	0	0	7
Upper Clark Fork	0	4	0	0	0	0	0	4
Lower Kootenai	0	0	0	0	0	0	0	0
Middle Kootenai	0	0	0	0	0	0	0	0
Upper Kootenai	0	1	0	0	0	0	0	1
North Fork Flathead	0	1	0	0	0	0	0	1
Rock Creek	0	1	0	0	0	0	0	1
Stillwater	0	29	0	0	0	0	0	29
Swan	0	12	0	0	0	3	0	9
Upper Missouri	0	1	0	0	0	0	0	1
Total Crossings	0	72	0	1	0	3	0	70

Attachment AQ-GZ: Annual Summary Statistics of Grazing Inspections, Verifications, and Implemented Corrective Actions

Calander Year	Midterm Evaluations	Renewal Evaluations	Total Evaluations	HCP Parcels	% HCP	Supporting HCP Fishery?	% HCP Fishery	Verification Completed	% Verification	Corrective Action Implemented	Cumulative Corrective Actions
2012	19	81	100	83	83%	30	36%	12	12%	0	0
2013	63	60	123	98	80%	24	24%	10	8%	5	5
2014	33	25	58	39	67%	13	33%	3	5%	3	8
2015	17	26	43	27	63%	7	26%	3	7%	2	10
2016	42	62	104	76	73%	13	17%	2	2%	0	10
2017	55	28	83	65	78%	16	25%	4	5%	0	10
2018	51	69	120	96	80%	37	39%	4	3%	1	11
2019	25	31	56	37	66%	12	32%	2	4%	0	11
2020	25	17	42	26	62%	7	27%	0	0%	1	12
2021	61	19	80	58	73%	14	24%	1	1%	1	13
2022	29	71	100	75	75%	31	41%	0	0%	1	14
Totals/Averages	420	489	909	680	73%	204	30%	30	4%	14	14