

Appendix M: Off-Highway Vehicle Monitoring

Monitoring Strategy

Monitoring is critical for evaluating the effectiveness of management decisions and the accuracy of analysis assumptions and conclusions. Monitoring of road and trail conditions is required, and must meet regional and/or national standards. If monitoring determines additional resource damage is occurring, steps to prevent further damage may be taken. If the mitigations are not effective or are not possible, additional road or trail closures may be required and would require additional NEPA analysis.

Proposed route-specific monitoring varies by alternative. As identified in Appendix A (Site Specific Road, Trail and Open Area Information), resource specialists have identified approximately 88 routes where site-specific monitoring would be needed if the routes are added to the system for public use in an action alternative. These include monitoring effects of the routes on botany, heritage, watershed, and lands and recreation resources. In some cases, one route may be monitored to assess conditions of multiple resources.

In addition to effectiveness monitoring related to the actions of this project, many other forms of monitoring and data collection take place on the Forest. These include ongoing monitoring that is already prescribed, such as surveys of roads and trails for infrastructure condition, monitoring of cultural resource sites, noxious weed spread, rare plants, or wildlife surveys. Some of this monitoring may directly or indirectly assess the effects of roads or trails on resources, as well as generally assessing conditions of roads for stability and maintenance. While these monitoring efforts are not prescribed in this Travel Management EIS, these data would also be used whenever possible, in assessing either the effectiveness of the actions proposed or in adjusting future travel management actions.

The Forest Service will conduct annual implementation monitoring for the specific resource concern associated with that route if included in the selected alternative. Routes to be monitored are listed in this Appendix M (OHV Monitoring) in Table M-1 and summarized in Table M-2. Results of the OHV monitoring will be incorporated in the annual Forest Plan Monitoring and evaluation report. This report will be made available on an annual basis.

Table M-1. Routes Identified for Annual Monitoring

Route ID	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7	Resource Category	Monitoring Requirement	Cost
ARM-5	1	1	1		1	Botany	Conduct weed survey annually and manually treat any weeds found	\$500
D_43_a				1		Botany	Monitor the banded sugar pine trees and impacts to these trees	\$200
D_43_b				1		Botany	Monitor the banded sugar pine trees and impacts to these trees	\$200
TKN-J4	1		1	1	1	Botany	Monitor closure of end of route	\$500
TKN-J5	1		1	1	1	Botany	Monitor meadow encroachment.	\$500
TKN-J11	1		1	1		Botany	Monitor effectiveness of barrier	\$1,000
TKN-M2	1		1	1	1	Botany	Monitor the <i>Ivesia sericoleuca</i> and aspen occurrences annually and hand pull any cheatgrass that is introduced into the occurrences.	\$500
Subtotal	5	1	5	6	4	All Botany Resources		\$3,400
25-9p			1	1		Heritage	Monitor Site 05175300469 per the Motorized PA protocols.	\$250
0491-003			1	1		Heritage	Monitor Site 05175300337 per the Motorized PA protocols.	\$250
491-3-2_p			1	1		Heritage	Monitor Site 05175300216 per the Motorized PA protocols.	\$250
491-3_p			1	1		Heritage	Monitor Site 05175300337 per the Motorized PA protocols.	\$250
D_11E03_b	1		1	1		Heritage	Monitor Site 05175300016 per the Motorized PA protocols.	\$85
D_11E03_c	1		1	1		Heritage	Monitor Site 05175300016 per the Motorized PA protocols.	\$85
D_11E03_d	1		1	1		Heritage	Monitor Site 05175300016 per the Motorized PA protocols.	\$85
D_11E10_a	1		1	1		Heritage	Monitor Site 05175300386 per the Motorized PA protocols.	\$250
D_12E66_a	1		1	1		Heritage	Monitor Site 05175300404 and 05175300561 per the Motorized PA protocols.	\$125
D_12E66_b	1		1	1		Heritage	Monitor Site 05175300892 per the Motorized PA protocols.	\$250

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Route ID	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7	Resource Category	Monitoring Requirement	Cost
D_12E66_c	1	1	1	1		Heritage	Monitor Site 05175300156 per the Motorized PA protocols.	\$125
D_12E66_d	1	1	1	1		Heritage	Monitor Site 5175300156 per the Motorized PA protocols.	\$125
D_12E67_d	1		1	1		Heritage	Monitor Site 05175300404 and 05175300561 per the Motorized PA protocols.	\$125
D_12E68_a	1	1	1	1		Heritage	Monitor Site 05175300455 per the Motorized PA protocols.	\$250
D_14_b	1	1	1	1		Heritage	Monitor Site 05175500105 per the Motorized PA protocols.	\$65
D_14_c				1		Heritage	Monitor Site 05175500105 per the Motorized PA protocols.	\$65
D_14_h				1		Heritage	Monitor Site 05175500105 per the Motorized PA protocols.	\$65
D_14_j	1	1	1	1		Heritage	Monitor Site 05175500105 per the Motorized PA protocols.	\$65
D_14-4				1		Heritage	Monitor Site 05175500105 per the Motorized PA protocols.	\$250
D_16TH19-1				1		Heritage	Monitor Site 05175600119 per the Motorized PA protocols.	\$250
D_18-19_a	1	1	1	1		Heritage	Monitor Site 05175500344 per the Motorized PA protocols.	\$250
D_25_d	1	1	1	1		Heritage	Monitor Site 05175300004 per the Motorized PA protocols.	\$250
D_270-8_b				1		Heritage	Monitor Site 05175700358 per the Motorized PA protocols.	\$125
D_270-8_c				1		Heritage	Monitor Site 05175700358 per the Motorized PA protocols.	\$125
D_5_a				1		Heritage	Monitor Site 05175600394 per the Motorized PA protocols.	\$250
D_5_b				1		Heritage	Monitor Site 05175600018 per the Motorized PA protocols.	\$250
D_560-20_b				1		Heritage	Monitor Site 05175600442 per the Motorized PA protocols.	\$250
D_6149-31				1		Heritage	Monitor Site 05175400008 per the Motorized PA protocols.	\$250

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Route ID	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7	Resource Category	Monitoring Requirement	Cost
D_7-10				1		Heritage	Monitor Site 05175600164 per the Motorized PA protocols.	\$250
D_721-2_a	1	1	1	1		Heritage	Monitor Site 05175300074 per the Motorized PA protocols.	\$250
D_738-4_a	1		1	1		Heritage	Monitor Site 05175300883 per the Motorized PA protocols.	\$250
D_738-4_e	1		1	1		Heritage	Monitor Site 05175500364 per the Motorized PA protocols.	\$250
D_738-4_f	1		1	1		Heritage	Monitor Site 05175500363 per the Motorized PA protocols.	\$125
D_738-4_g	1		1	1		Heritage	Monitor Site 05175500363 per the Motorized PA protocols.	\$125
D_787-19				1		Heritage	Monitor Site 05175700756 per the Motorized PA protocols.	\$250
D_860-25				1		Heritage	Monitor Site 05175600421 per the Motorized PA protocols.	\$250
D_860-42				1		Heritage	Monitor Site 05175600202 per the Motorized PA protocols.	\$250
D_886-10_a	1		1	1		Heritage	Monitor Site 05175700379 per the Motorized PA protocols.	\$85
D_886-18_a	1		1	1		Heritage	Monitor Site 05175700379 per the Motorized PA protocols.	\$85
D_886-18_b	1		1	1		Heritage	Monitor Site 05175700379 per the Motorized PA protocols.	\$85
D_P88_b	1	1	1	1		Heritage	Monitor Site 05175400312 per the Motorized PA protocols.	\$250
D_P88_d				1		Heritage	Monitor Site 05175400176 per the Motorized PA protocols.	\$250
D_S-295_a	1	1	1	1		Heritage	Monitor Site 05175300436 per the Motorized PA protocols.	\$125
D_S-295_b	1	1	1	1		Heritage	Monitor Site 05175300436 per the Motorized PA protocols.	\$125
D_S300_a	1	1	1	1		Heritage	Monitor Site 05175300595 per the Motorized PA protocols.	\$250

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D_S300_b	1	1	1	1		Heritage	Monitor Site 05175300595 per the Motorized PA protocols.	\$250
D_S-301_a	1	1	1	1		Heritage	Monitor Sites 05175300176 and 05175300188 per the Motorized PA protocols.	\$250
D_S450				1		Heritage	Monitor Site 05175600338 per the Motorized PA protocols.	\$250
D_S860_a				1		Heritage	Monitor Site 05175600338 per the Motorized PA protocols.	\$125
D_S-860_a	1	1	1	1		Heritage	Monitor Site 05175700620 per the Motorized PA protocols.	\$125
D_SIE-0301_a				1		Heritage	Monitor Site 05175300176 per the Motorized PA protocols.	\$250
D_SV-M1				1		Heritage	Monitor Site 05175600431 per the Motorized PA protocols.	\$250
Boca Reservoir	1					Heritage	Monitor heritage Sites 05175700303, 05175700305, 05175700307, 05175700747, 05175700749, 05175700750, 05175700775, 05175700776, and 05175700777 per Motorized PA protocols.	\$500
Prosser Reservoir	1					Heritage	Monitor Heritage Sites 05175700609, 05175700608/CA-NEV-64, 05175700753, 05175700754, 05175700755, 05175700756, 05175700757, 05175700758, 05175700759, 05175700760, 05175700761, 05175700762 per Motorized PA protocols.	\$500
Stampede Reservoir	1					Heritage	Monitor heritage Sites 05175700004/SIE-S44, 05175700535, 05175700540 05175700763, 05175700764, 05175700765, 05175700766, 05175700767, 05175700768, 05175700769, 05175700770 per Motorized PA protocols.	\$500
SV-007	1		1			Heritage	Monitor Site 05175600581 per the Motorized PA protocols.	\$250
SV-P14	1	1	1	1	1	Heritage	Monitor heritage Sites 05175600571 per Motorized PA protocols.	\$250
SV-P5	1		1	1	1	Heritage	Monitor Site 05175600574 per Motorized PA protocols.	\$250
TKN-J13	1	1	1	1	1	Heritage	Monitor Sites per the Motorized PA protocols.	\$250

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Route ID	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7	Resource Category	Monitoring Requirement	Cost
TKN-M2	1		1	1		Heritage	Monitor Sites 05175700397, 05175700395 and 05175700734 per the Motorized PA protocols.	\$250
TKN-PP				1		Heritage	Monitor Site 05175700774 per the Motorized PA protocols.	\$250
TKN-Q1	1		1	1		Heritage	Monitor Site 05175700087 per the Motorized PA protocols.	\$250
TKS-11	1		1	1	1	Heritage	Monitor Site 05175700736 per the Motorized PA protocols.	\$250
YRN-004	1		1			Heritage	Monitor Site 05175700676 per the Motorized PA protocols.	\$250
YRN-007	1		1			Heritage	Monitor Site 05175300426 per the Motorized PA protocols.	\$250
YRN-008	1		1	1		Heritage	Monitor Site 05175300369 per the Motorized PA protocols.	\$250
YRN-1	1		1	1	1	Heritage	Monitor Site 05175300881 per the Motorized PA protocols.	\$250
YRN-2	1		1	1	1	Heritage	Monitor Sites 05175300499, 05175300545, 05175300546 per the Motorized PA protocols.	\$250
YRN-4	1		1	1	1	Heritage	Monitor Site 05175300386 per the Motorized PA protocols.	\$250
YRN-509			1	1		Heritage	Monitor Sites 05175300198 and 05175300205 per the Motorized PA protocols.	\$250
YRN-7	1		1		1	Heritage	Monitor Site 05175300674 per the Motorized PA protocols.	\$250
YRN-M2	1		1			Heritage	Monitor Sites 05175300671, 05175300675, 05175300890 per the Motorized PA protocols.	\$250
YRS-SF5	1	1	1	1	1	Heritage	Monitor Site 05175500272 per the Motorized PA protocols.	\$250
Subtotal	52	19	52	78	11	All Heritage Resources		\$15,770
TKN-J6	1		1	1	1	Recreation	Monitor effectiveness of closure	\$1,500
Subtotal	1	0	1	1	0	All Recreation Resources		\$1,500
SV-005			1	1		Watershed	Monitor water bar function and seep for impacts from motorized vehicles.	\$500

Route ID	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7	Resource Category	Monitoring Requirement	Cost
SV-P14	1	1	1	1	1	Watershed	Monitor stream crossing to make sure route and stream are separated	\$250
SV-P5	1		1	1	1	Watershed	Monitor watershed mitigations at perennial crossing.	\$250
SV-P8	1		1	1	1	Watershed	Monitor watershed mitigations and sediment into Little Truckee River.	\$500
TKS-11	1		1	1	1	Watershed	Monitor closure and drainage.	\$500
TKS-M9	1	1	1	1	1	Watershed	Due to loose soils, need to monitor for incising.	\$500
YRN-008	1		1	1		Watershed	Monitor closure of adjacent Brandy City Diggins for water quality impacts.	\$600
YRN-2	1		1	1	1	Watershed	Monitor route drainage (especially at intersection with access road to Monarch Mine).	\$500
YRS-AF	1	1	1	1	1	Watershed	Monitor effects on water quality at campsites near lake.	\$500
YRS-F1	1		1	1	1	Watershed	Monitor annually for watershed effects.	\$500
YRS-G3	1		1	1	1	Watershed	Monitor route for erosion.	\$500
YRS-G3w	1		1	1	1	Watershed	Monitor route for erosion.	\$500
YRS-SF4	1		1	1		Watershed	Monitor need for additional waterbars.	\$500
YRS-SF5	1	1	1	1	1	Watershed	Monitor crossings and gullies.	\$500
Subtotal	13	4	16	16	13	All Watershed Resources		\$6,600
Grand Total	67	23	72	88	26	Total All Resources		\$27,270

Note: If the alternatives column has a 1 in it, then it is in the alternative and needs monitoring. Table M-1 does not list monitoring requirements for Alternatives 1 and 3 because there are roads, trails, or areas being added to the NFTS and no ML1 roads are proposed for being reopened.

Table M-2. Summary of monitoring requirements by resource category and alternative

Resource Category	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7
Botany	5	1	5	6	4
Heritage	48	18	50	65	9
Watershed	13	4	16	16	13
Recreation	1	0	1	1	0
Grand Total (Number of routes)	67	23	72	88	26
(Cost)	\$20,865	\$5,755	\$21,115	\$24,020	\$9,250

Note: Table M-2 does not list monitoring requirements for Alternatives 1 and 3 because there are no roads, trails, or areas being added to the NFTS and no ML1 roads are proposed for being reopened.

