



United States Department of Agriculture

Biennial Monitoring Evaluation Report for the Uinta National Forest



Forest Service

Uinta National Forest

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About our Plan Monitoring Program

Purpose

The purpose of the biennial monitoring evaluation report is to help the responsible official (Forest Supervisor) determine whether a change is needed in forest plan direction, such as plan components or other plan content that guide management of resources in the plan area. The biennial monitoring evaluation report represents one part of the Forest Service's overall monitoring program for this national forest unit. The biennial monitoring evaluation report is not a decision document—it evaluates monitoring questions and indicators presented in the Plan Monitoring Program chapter of the forest plan, in relation to management actions carried out in the plan area.

Our monitoring plan covers these eight topics required under FSH 1909.12, in addition to social, economic and cultural sustainability. You'll find each of these topics addressed in this report, with a cross-reference to the Uinta NF Monitoring Questions provided on page 7.

1. The status of select watershed conditions.
2. The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.
3. The status of focal species to assess the ecological conditions required under § 219.9.
4. The status of a select set of the ecological conditions required under § 219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.
5. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.
6. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.
7. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.
8. The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)). (36 CFR 219.12(a))

How Our Plan Monitoring Program Works

Monitoring and evaluation requirements have been established through the National Forest Management Act (NFMA) at 36 CFR 219. Additional direction is provided by the Forest Service in Chapter 30 – Monitoring – of the Land Management Handbook (FSH 1909.12). The Uinta National Forest monitoring program was updated on November 20, 2015 for consistency with the 2012 planning regulations [36 CFR 219.12 (c)(1)]. The Uinta National Forest Plan was administratively changed to include the updated monitoring program (Chapter 6: Monitoring and Evaluation Plan). For a copy of the current monitoring program go to https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd578957.pdf Monitoring questions and indicators were selected to inform the management of resources on the plan area and not every plan component was determined necessary to track [36 CFR 219.12(a)(2)].

The monitoring evaluation implementation guide (monitoring guide) is part of the overall plan monitoring program and provides more specific direction for implementing the more strategic plan monitoring program and details monitoring methods, protocols, and roles and responsibilities. The Monitoring Guide is not part of the plan decision and is subject to change as new science and methods emerge. The Uinta-Wasatch-Cache National Forest monitoring guide is available upon request. Please contact Paul Cowley at the address on Page 2. Providing timely, accurate monitoring information to the responsible official and the public is a key requirement of the plan monitoring program. This biennial monitoring evaluation report is the vehicle for disseminating this information and identifying updates to the plan to keep it current.

Monitoring Objectives

The objectives of our plan monitoring plan include:

- Assess the current condition and trend of selected forest resources.
- Document implementation of the Plan monitoring Program
- Evaluate relevant assumptions, changed conditions, management effectiveness, and progress towards achieving the selected desired conditions, objectives, and goals described in the Forest Plan.
- Assess the status of previous recommended options for change based on previous monitoring & evaluation reports.
- Document scheduled monitoring actions that have not been completed and the reasons and rationale why.
- Present any new information not outlined in the current plan monitoring program that is relevant to the evaluation of the selected monitoring questions.
- Present recommended change opportunities to the responsible official.

Monitoring Results Summary

Monitoring from 2020-2021 identified no issues with the Uinta NF Forest plan.

Monitoring from 2020-2021 identified two issues in the Uinta NF Forest Plan. The first one was that management direction was lacking on many acquired land parcels and on Forest Service lands that were inaccurately delineated during the 2003 WCNF revision. The second one was the need to allow vegetation/fuels treatments in undeveloped areas (Management Prescription 2.6) such as in pinion/juniper areas of the Forest. There were no specific forest amendments but there were Forest Plan corrections to some management prescriptions on the Heber-Kamas RD in 2021 and to Forest Plan GIS layers that were updated in 2020.

Tables 1 and 2 below summarize current adaptation recommendations for line officer consideration. Table 1 shows that three amendments are needed to manage activities on the Uinta NF. Table 2 shows that all of the monitoring questions and monitoring items do not need changes.

Table 1. Quantitative summary of adaptive management recommendations for all monitoring questions addressed in this report (3 total)

Recommendation	Yes, need for change	Unsure	No
Results inconsistent with Forest Plan direction	0	0	16
Change to Forest Plan warranted	0	0	16
Change to management activities warranted	0	0	16
Change to Plan monitoring program warranted	0	0	16
Focused assessment needed	0	0	16

Table 2. Summary of findings for each plan monitoring item (questions and indicators).

Monitoring Item	Last Year Updated	Consistency with Plan Intent¹ <i>Do results demonstrate intended progress of the plan components associated with this monitoring item?</i>	Recommendation² <i>Based on the evaluation of monitoring results, may changes be warranted?</i>	Type of Change(s) under consideration² <i>Where may the change be needed?</i>
All Monitoring Items				
Monitoring Question #4, Are vegetation conditions stable or moving toward desired future conditions?	2021	B-Uncertain	B-Uncertain	More time needed to understand effect of wooly adelgid
Monitoring Question #8 Are Forest management activities and natural events affecting the ecological conditions indicated by the status of Focal species?	2021	B-Uncertain	B-Uncertain	Because of population variability, additional surveys are needed at sites with low populations of cutthroat trout before drawing conclusions as to the cause
Monitoring Question #11 Are Forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?, Indicator #2 – Riparian ecosystem conditions	2021	B-Uncertain	B-Uncertain	Revisit flood-scoured stream channels in Nebo Creek, Bennie Creek, Summit Creek, and Peteetneet Creek drainages in 5 to 10 years to validate expected recovery of stream side vegetation to provide shade and stability
Monitoring Question #11 Are Forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?, Indicator #3 – Forested terrestrial	2021	B-Uncertain	B-Uncertain	<i>Monitoring to determine if stream side vegetation will recover in about 5 to 10 years to provide shade and stability on scoured stream channels in Nebo Creek, Bennie Creek, Summit Creek, and Peteetneet Creek drainages.</i>

ecosystem conditions				
Monitoring Question #12 Are Forest management activities and natural events affecting watershed conditions? Indicator #2 Air Quality - Trends of lichen biomonitoring sites.	2021	A – Uncertain	A - Uncertain	The lichen monitoring interval is 10 years. Next lichen station monitoring expected to be 2026
All Other Monitoring Questions and Indicators	2021	Yes	None	N/A

¹Plan intent:

(A) Uncertain – Interval of data collection beyond this reporting cycle (indicate date of next time this monitoring item will be evaluated);

(B) Uncertain – More time/data are needed to understand status or progress of the Plan Component(s);

²Refer to pages below for more details regarding any specific recommendations for change.

Past Monitoring Recommendation and Status Summary

The March 2018 monitoring and evaluation report had no recommendations for changes to the forest plan, management activities for implementing the forest plan, or the monitoring program or to conduct an assessment to determine if there exists a preliminary need to change the plan. The 2020-2021 monitoring and evaluation plan has the same recommendations for monitoring as the 2018-2019 plan with the exception of Monitoring Question #11 Are Forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?, Indicator #3 – Forested terrestrial where there may have been a need for management action of replanting 144 acres of the Little Dip Salvage Timber sale in the Provo River drainage and 39 acres in the Black Hawk Campground if natural regeneration is insufficient. Black Hawk campground was replanted in 2020 but monitoring of the replanted stock suggest that survival was low and may need to be replanted. Indicator #1 under Monitoring Question #13 (NFMA compliance: Are we complying with appropriate NFMA requirements?) states that the UNF does not show any acreage needed to plant or to certify as being restocked.

All other items in Table 2 are still relevant and monitoring is expected to take place at the times listed for each item.

Other Considerations for Adaptive Management

No other considerations not related to the monitoring program have been identified.

Forest Supervisor's Certification

This report documents the results of monitoring activities that occurred through Fiscal Year 2021 on the Uinta National Forest. Monitoring on some topics is long-term and evaluation of those data will occur later in time.

I have considered the monitoring and evaluation results presented in this report. Based on the monitoring, I find no need to change the 2003 Land Management Plan, as amended, at this time and, therefore, consider it sufficient to continue to guide land and resource management of the Uinta National Forest for the near future. I also find no need to change the plan monitoring program or to conduct an assessment to determine if there exists a preliminary need to change the plan.

David Whittekiend
FOREST SUPERVISOR
UINTA-WASATCH-CACHE NATIONAL FOREST

Date

Cross-Walk between Monitoring Required by the Planning Rule and Uinta NF Monitoring Questions

This section of the report presents a cross-walk between the eight requirements which are noted at 36 CFR 219.12(a)(5) and the Uinta NF monitoring questions

Monitoring Question #1, Education-Information: Are we delivering key education/ enforcement messages to Forest employees and users? Addresses Requirement v. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.

Monitoring Question #2, What is visitor satisfaction on Forest Service lands? Addresses Requirement v. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.

Monitoring Question #3, Is adequate access to and across the Forest being provided? Addresses Requirement v. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives and Requirement vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

Monitoring Question #4, Are vegetation conditions stable or moving toward desired future conditions? Addresses Requirement vi. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.

Monitoring Question #5, Fuels Reduction: Are fuels reduction projects protecting property, human health and safety, and reducing the potential for unwanted fire effects (in the Wildland Urban Interface (WUI) and non-WUI)? Addresses Requirement vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

Monitoring Question #6, Fire Management: Are natural ignitions being managed to accomplish resource management objectives? Addresses Requirement vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

Monitoring Question #7, Rangeland Management: What is the extent of the change of ecological conditions due to invasive species? Do rangeland plant communities have desired species composition and is ground cover adequate? Addresses Requirement i. The status of select watershed conditions.

Monitoring Question #8, Are Forest management activities and natural events affecting the ecological conditions indicated by the status of Focal species? Addresses Requirement iii. The status of focal species to assess the ecological conditions required under § 219.9.

Monitoring Question #9, Is there a change in species distribution across the Forest? Addresses Requirement vi. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.

Monitoring Question #10, Are Forest management activities and/or natural events affecting ecological conditions that contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of concern? Addresses Requirement iv. The status of a select set of the ecological conditions required under § 219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.

Monitoring Question #11, Are Forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems? Addresses Requirement ii. The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.

Monitoring Question #12, Are Forest management activities and natural events affecting watershed conditions? Addresses Requirement i. The status of select watershed conditions.

Monitoring Question #13, NFMA compliance: Are we complying with appropriate NFMA requirements? Addresses Requirement vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities and Requirement viii. The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)).

Monitoring Question #14, Are timber management activities impairing soil productivity of the land?

Addresses Requirement viii. The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)).

Monitoring Question #15, Are goods and services being provided in accordance with Forest Plan goals and objectives? Addresses Requirement vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

Monitoring Question #16, National Historic Preservation Act as amended: Are cultural resources being protected as the Forest Plan is implemented and are mitigation measures sufficient prevent damage to cultural resources from project activities? Are *Historic Properties* receiving adverse effects from project implementation, vandalism, looting, and/or neglect? Addresses Requirement vii. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

SUMMARY OF CHANGES TO THE FOREST PLAN SINCE THE 2018 REPORT

In 2020-2021, there were no changes to the Forest Plan.

Summary of Vegetative Changes in 2020-2021

The largest area of vegetative changes on the Uinta National Forest (WCNF) are from timber harvest, fuels treatments, and wildfire. In 2020 to 2021, the main vegetative change that has occurred from commercial harvest of 1,454 acres and 8,015 acres of fuel treatments (compared to 18,459 acres from 2018-2019) and consist of thinning, burning of piled material and broadcast burning. The purpose of these treatments is to reduce large fires and to create diversity in age classes on the Forest. Based on analysis of Burned Area Emergency Response reports for wildfires in 2020-2021, wildfire has resulted in 505 acre of high burn severity where most of the high severity burned areas were in conifer. Overall, there has been a small change in the vegetation across the total landscape area of the Uinta NF.

INFORMATION ON MONITORING QUESTIONS AND INDICATORS

Monitoring Question #1 Education-Information: Are we delivering key education/ enforcement messages to Forest employees and users? (Key Focus Areas: OHV use, recreation user ethics, fire's role/hazardous fuels, noxious weeds, watershed health).

Finding: *No changes are needed. Although no data was reported from the ranger districts, the Uinta NF delivers key education/enforcement messages to the Forest employees at employee orientation meetings and through contacts with Forest users.*

Indicator #1 - Number of key messages.

Data source: *Uinta-Wasatch-Cache NF Public Affairs Officer; forms completed by teachers at the Diamond Fork Youth Forest; responses of users of the Uinta NF to questions asked by Forest Service field personnel regarding whether users know the key messages that are on kiosks, and on Forest Service website and social media.*

Monitoring result: *Diamond Fork Youth Forest provides education in the outdoor classroom setting. Students and participants of the program learn about forest management, wildlife, fisheries, hydrology, cultural heritage of the area and participate in working studies of the area. Students work alongside biologists to collect aquatic wildlife and migratory bird data. In 2019 the Youth Forest educated 3600 students. In 2020 the Youth Forest educated 1,425 students in the fall and winter months. All spring education days were cancelled*

due to the COVID-19 pandemic. In 2021, 400 students were reached through virtual education opportunities and virtual lesson videos are being created.

Monitoring Question #2 What is visitor satisfaction on Forest Service lands?

Finding: *No changes are needed.*

Indicator #1 - Level of visitor satisfaction.

Data source: *No National Visitor Use Monitoring (NVUM) Surveys were conducted in 2020 or 2021 and the UNF is currently collecting NVUM data.*

Monitoring result: *No new data has been collected. Please see FY 2018-2019 Forest Plan Monitoring assessment for most current data.*

Monitoring Question #3 Is adequate access to and across the Forest being provided?

Finding: *No changes are needed. Access is adequate.*

Indicator #1 - Miles of classified road open for public use, miles of motorized trail, miles of non-motorized trail.

Data source: *Uinta-Wasatch-Cache NF Motor Vehicle Use Map.*

Monitoring result: *At the end of FY 2021, the miles of classified roads open for public use were 883 miles, 3 miles less than what was reported in 2019. Overall, for the UWCNF management unit, there was no change in road miles since the WCNF had 3 miles more reported in 2021. These are Forest Service public roads only and does not include State highways, administrative roads, or private roads. In 2021, the miles of motorized trails were 313, snowmobile trails were 295, miles non-motorized trails were 299 and ski/ snowshoe trails were 29.*

Monitoring Question #4 Are vegetation conditions stable or moving toward desired future conditions?

Finding: *No changes are needed.*

Indicator #1 Forested Vegetation –Extent of insect/disease infestations.

Data source: *Forest Health Protection Annual Aerial Detection Survey 2018. No data is available for 2019. FACTS Database, treatment accomplishments recorded for FY 2021.*

Monitoring result: *In 2021 on the Uinta, several vegetation treatment activities have been accomplished. These treatments are primarily the result of management actions taken to move toward desired future conditions. These activities include 665 acres of compacting/crushing of fuels, 5,431 acres of rearrangement of fuels, and 799 acres of commercial timber sales. This accounts for a total 6,895 acres that were treated on the Uinta or roughly .78% of the 884,726 acres encompassed by the planning area.*

As shown in the following table, the UNF experiencing some level of mortality due to various pathogens and has remained relatively constant with one exception. The balsam wooly adelgid is an invasive insect that has moved into the Uinta NF from Idaho, and is originally from Europe, and it was first discovered on the forest in 2017. Where this insect is found, the mortality rates in these areas is categorized as mostly moderate to severe. This categorization shows that 11% to 50% of the trees on these acres are experiencing mortality from this insect. Currently, there are no ways of minimizing the long-term effects of balsam wooly adelgid upon native ecosystems. Currently, aerial detection surveys are not providing full forest coverage. The surveys were deemed too costly and time consuming and are now only being flown in areas of high mortality or at areas at the request of the Forest. While the Uinta NF is regularly being monitored due to the detection of balsam

wooly adelgid, the Wasatch Cache NF isn't.

Damage Agent	Affected Species	Estimated Acres ^{(a)(b)} within Insect mortality by Year ^{1/}										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<i>Spruce Beetle</i>	<i>Spruce</i>	9,555	6,785	10,137	3,231	212	479	607	3685	0	0	1
<i>Fir Engraver Beetle</i>	<i>Subalpine and White Fir</i>	32	61	81	2,675	391	318	2907	6820	207	0	155
<i>Subalpine Fir Mortality Complex</i>	<i>Subalpine and White Fir</i>	151	283	909	5,832	5383	2986	6760	10968	2486	433	41
<i>Mountain Pine Beetle</i>	<i>Lodgepole, Limber and Ponderosa Pine</i>	374	54	165	110	97	42	34	2	3	1	1
<i>Douglas-fir Beetle</i>	<i>Douglas-fir</i>	374	173	491	1,095	680	344	435	2224	209	68	170
<i>Ips Beetle</i>	<i>Pinyon Pine</i>	0	0	0	0	10	10	68	1	0	0	2
<i>Balsam Wooly Adelgid</i>	<i>Subalpine and White Fir</i>	NA	NA	NA	NA	NA	NA	NA	739	6412	525	5662

(a) Acres were estimated through GIS analysis for land ownership, mid-scale vegetation, and insect damage type. (From: Peter Howard 12/21/2021)

Monitoring Question #5 Fuels Reduction: Are fuels reduction projects protecting property, human health and safety, and reducing the potential for unwanted fire effects (in the Wildland Urban Interface (WUI) and non-WUI)?

Finding: No changes are needed.

All fuels projects are designed to alter fire behavior in order to meet one or more of the following objectives: protecting property, human health and safety and reducing the potential for unwanted fire effects. From 2020-2021, the Uinta implemented 8,015 acres of treatments (Table 1). These treatments, combined with past fire footprints, have been successful at altering fire behavior in a way that reduced unwanted fire effects, increased firefighter safety, and allowed for more fire management options (which makes it easier to protect property and life).

When a wildfire burns through a fuels treatment, we assess whether or not that treatment was effective. In the last 2 years on the Uinta, 10 fires have started in or burned into 8 different fuels treatments (Table 2). Fuels treatments have been consistently effective at altering fire behavior, increasing safety for firefighters,

increasing suppression opportunities, and contributing to the control and management of a fire. Exceptions to this include times when there are extreme fire weather conditions, enough time has passed that vegetation has regrown, exceeding the “lifespan” of the treatment, or conditions are such that the fire would have remained small regardless of the fuels treatment. In 2020-2021, there were a number of fire/fuels treatment interactions that occurred in campgrounds or along roads where the treatment did not necessarily alter the fire behavior but allowed firefighters to work safely in the area due to fewer hazard trees.

While we can show progress and cite specific examples of fuels reduction projects protecting property, human health and safety and unwanted fire effects, there is still a lot of work that needs to be done to reduce the risk of uncharacteristically large and severe wildfires.

In 2021, there was a shift in planning for fire suppression and reduction. This shift is referred to as Potential Operation Delineation (PODS). This is an all- lands approach, working with state and local governments, to identified potential fire breaks across the landscape. Emphasis in the future will be to more closely examine these breaks and expand upon them through conducting fuel treatments to reduce fire spread and then treat interior blocks to reduce fire intensities.

Indicator #1 Acres of hazardous fuels reduction in WUI and non-WUI.

Data source: Forest Service Activity Tracking System database.

Monitoring result: See Table below. More details and maps of fires that have interacted with fuels treatments can be found in the Fuel Treatment Effectiveness Monitoring Database.

Table 1. Total number of acres of fuels treatments implemented on the Uinta from 2020 to 2021.

	2020	2021	Total
WUI	0	5,431	5,431
Non-WUI	1,785	799	2,584
Total Acres	1,785	6,230	8,015

Indicator #2 Fire behavior and opportunities for suppression.

Data source: Fuel Treatment Effectiveness Monitoring database.

Monitoring result: As shown in the table below, in 2020 and 2021, 6 of 10 fires resulted in fire behavior changing as a result of vegetation treatments and 5 of 10 fires vegetation treatments contributed to the control and/or management of fire. More details and maps of fires that have interacted with fuels treatments can be found in the Fuel Treatment Effectiveness Monitoring Database.

Table 2. Fires on the Uinta that started in or burned into fuels treatments from 2020 to 2021.

Fire	Fire Year	Treatment	Treatment Date	Treatment Acres Burned	Did fire behavior change as a result of treatment?	Did treatment contribute to the control and/or management of fire?
Maple Dell	2021	Lower Payson thin and pile	9/1/17	0.25	yes	yes
Taos	2021	Lower Payson thin and pile	9/1/17	0.5	yes	yes
Maple Lake	2021	Bald Mountain Fire	August 2018	0.1	yes	no

Saw Mill	2021	<i>Pole Creek Fire</i>	<i>August 2018</i>	0.1	yes	no
South Poke	2020	<i>Springdell South Mech</i>	<i>12/15/10</i>	0.1	no	no
Pine Valley 2	2020	<i>HK CG Fuels Reduction</i>	<i>11/4/19</i>	0.1	no	yes
		<i>Pine Valley CG thinning</i>	<i>7/24/17</i>	0.1	no	yes
		<i>Pine Valley CG thinning</i>	<i>11/15/13</i>	0.1	no	yes
Pine Valley	2020	<i>HK CG Fuels Reduction</i>	<i>11/4/19</i>	0.1	no	yes
Shingle Creek 2	2020	<i>Upper Provo Ph 4 thin/pile</i>	<i>10/8/19</i>	2	yes	no
Maple	2020	<i>Lower Payson thin and pile</i>	<i>9/1/17</i>	0.1	no	no
William	2020	<i>Bald Mountain Fire</i>	<i>August 2018</i>	23	yes	yes

Monitoring Question #6 Fire Management: Are natural ignitions being managed to accomplish resource management objectives?

Finding: *No changes are needed. Conditions must be favorable in order to manage fires for resource objectives, many of which are outside of our control (such as weather, available resources, and fire location). Therefore, the percentage of natural ignitions that can be managed for resource objectives may vary significantly from year to year and it is too early to establish a long-term trend. However, the goal is to see a long-term trend of increasing the percentage of fires that can be managed to meet resource objectives.*

In the last 2 years, we have not managed any natural ignitions to accomplish resource management objectives. Conditions must be favorable in order to manage fires for resource objectives, many of which are outside of our control (such as weather, available resources, fire location, etc.). From 2020-2021, managing for resource objectives was not an option due to the COVID-19 pandemic and the severity of the fire season on a national scale.

In addition to managing wildfires for resource benefit, we hope to see a trend of increasing percentages of acres with resource benefits from natural ignitions. We can increase these percentages by managing more fires for resource objectives and implementing vegetation projects to reduce unwanted fire effects. Over the last two years, there were no acres burned from natural ignitions and therefore no acres with resource benefit. These numbers only consider natural fires that were greater than 10 acres. The low number of acres may be due in part to the inability to manage fire for resource objectives (due to COVID and fire season severity).

Indicator #1 Percent of natural ignitions with identified resource management objective.

Data source: *Wildland Fire Decision Support System database.*

Monitoring results: *In 2020-2021, 0% of natural ignitions were managed with a resource management objective.*

Indicator #2 Percent of natural ignition acres with resource benefit.

Data source: *Forest Service Activity Tracking System database, UWC fire perimeter GIS data.*

Monitoring results: *In 2020-2021, 0% of natural ignitions were beneficial for natural resources on the Uinta NF.*

Monitoring Question #7 Rangeland Management: What is the extent of the change of ecological conditions due to invasive species? Do rangeland plant communities have desired species composition and is ground cover adequate?

Finding: *No changes are needed. The Forest has been making efforts to control weeds on the planning area. Riparian areas and upland conditions of range allotments are overall in satisfactory conditions.*

Indicator #1 Estimated acres infested with noxious weeds.

Data source: *Visual observations and/or treatment reports from seasonal noxious weed USFS crews.*

Monitoring results: *There is very little change in weeds from previous monitoring in 2018-2019. In 2020-2021 on the Heber Kamas RD, on the Wolf Creek and Strawberry Valley corridor of the Uinta NF, current noxious weeds infestations are being controlled and new noxious weed infestations are found almost on an annual basis. Strawberry corridor is a high use recreation area and noxious weeds are increasing in the area. These new noxious weed infestations are aggressively treated to keep infestations controlled and small. Weeds are treated using herbicide, mechanical treatments, and bio-control agents. Musk Thistle, Canadian Thistle, and Whitetop are the three top invasive weeds found on the Uinta NF.*

However, long-term monitoring studies indicative vegetative and ground cover conditions are in overall satisfactory condition and noxious weed infestations account for approximately 5% of the district. Satisfactory condition is defined as meeting desired conditions or trending towards desired condition. Desired condition is defined as the 2003 Forest Plan Standards and Guidelines and having the desired plant communities.

Acres of Noxious Weed Inventory and Treatments				
Ranger District	Weed Treatment Acres¹			
	2018	2019	2020	2021
Pleasant Grove	884	821	1100	448
Heber/Kamas²	742	1307	1139	Not Reported ³
Spanish Fork	9	532	Not Reported ³	434
Totals	1635	2660	2239	882
¹ From USFS FACTS database. ² The value includes Heber and Kamas Ranger Districts because they are reported as one District in FACTS. ³ Data not reported because of personnel change.				

Indicator #2 Riparian and upland condition and trend.

Data source: *Information for riparian and upland condition and trend is based on monitoring studies that were established or re-read on the cattle and sheep allotments between 2020 and 2021 as shown in the table below.*

Number of Range Study Sites Read or Established			
Ranger District	Years	Number of Study Sites	Allotments Studied

Pleasant Grove	<i>No Active allotments occur on this District.</i>		
Heber RD	<i>2018-2019</i>	<i>233</i>	<i>Currant Creek, East Daniels, Mud Creek, North Streeper, Soapstone, Neeley Basin, Wolf Creek and others</i>
	<i>2020-2021</i>	<i>526</i>	<i>Currant Creek, East Daniels, Mud Creek, North Streeper, Soapstone, Neeley Basin, Wolf Creek and others</i>
Spanish Fork	<i>2018-2019</i>	<i>0</i>	<i>No allotments studies due to change in personnel.</i>
	<i>2020-2021</i>	<i>125</i>	<i>Benmore, Bennion, East Cottonwood, Little Valley, Onaqui, Sabie Mountain, Sharpes Valley, Vernon, and West Cottonwood</i>

Monitoring results: *The vegetative communities associated with the allotments are overall in satisfactory condition. Satisfactory condition is defined as meeting desired conditions or trending towards desired condition. Desired condition is defined as the 2003 Forest Plan Standards and Guidelines and having the desired plant communities.*

Monitoring Question #8 Are Forest management activities and natural events affecting the ecological conditions indicated by the status of Focal species?

Findings: *No changes are needed. For conditions indicated by goshawk, the overall trend appears to be stable with variability from one year to the next. Although trends in fish populations vary by drainage, no changes are needed in the Forest Plan since the reasons for downward trends are from natural events or from stocking decisions not from issues with management direction.*

Indicator #1 Active Goshawk territories.

Data source: *Comparison to current inventory of territories based on survey protocols for the UWC NF that have been adapted from the Northern Goshawk Inventory and Monitoring Technical Guide (Woodbridge & Hargis, Northern goshawk inventory and monitoring technical guide, 2006).*

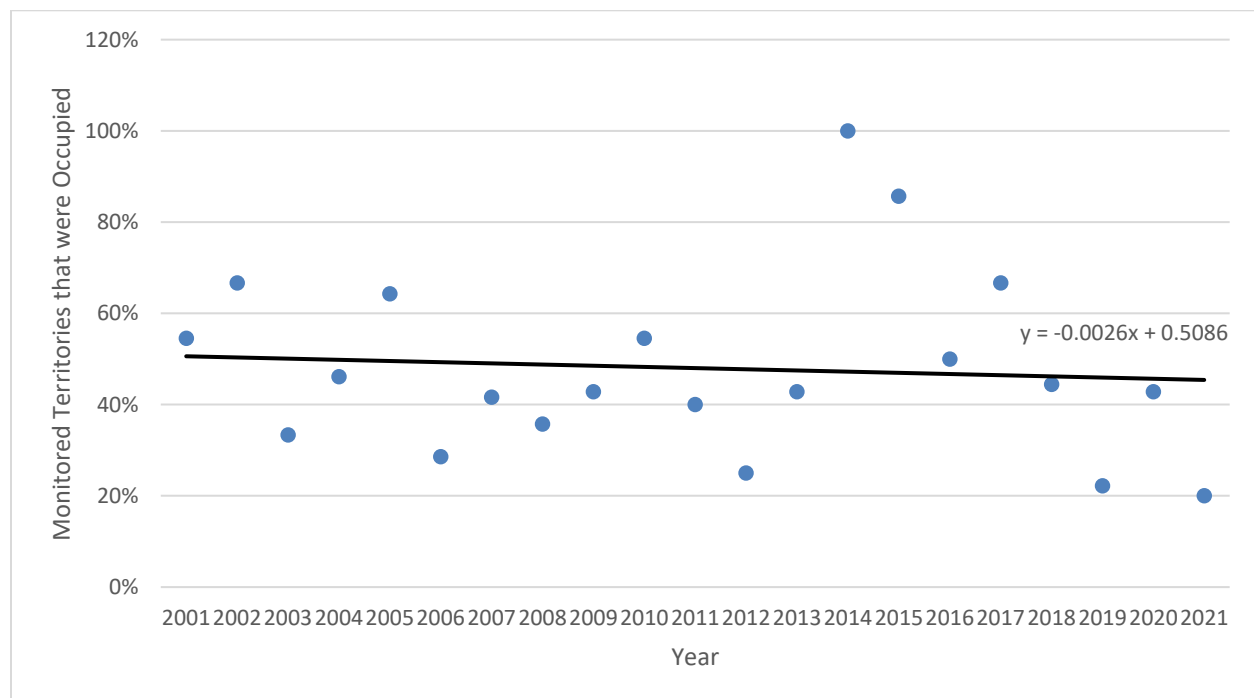
Monitoring results: *Currently there are 11 known territories on the Uinta planning area of the Uinta-Wasatch-Cache National Forest. The Forest Plan requires that one-third of the territories be monitored every year. Due to the low number of territories, more nests are monitored than required by the forest monitoring plan (Table 1 and Table 2).*

Territories known, monitored and occupied on the Uinta National Forest, Utah.																					
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Known Territories	12	13	12	13	14	14	14	14	14	13	12	12	12	12	12	12	13	13	13	11	11
territories monitored for occupancy	11	12	12	13	14	14	12	14	14	11	10	8	7	6	7	8	9	9	9	7	5

Total occupied territories	6	8	4	6	9	4	5	5	6	6	4	2	3	6	5	4	7	4	2	3	1
Percent of monitored territories that are occupied	55 %	67 %	33 %	46 %	64 %	29 %	42 %	36 %	43 %	55 %	40 %	25 %	43 %	100 %	71 %	50 %	67 %	44 %	22 %	43 %	20 %

In general, goshawk territory occupancy fluctuates annually (See Table above). The challenge is to determine what the fluctuation represents (i.e., reflection of survey intensity or truly reflect population trends). The analysis indicates an overall decreasing trend in occupancy from 2001 to 2021. In 2014, the percent of monitored territories that were occupied was 100%. This was not a true representative number in that the territories chosen for survey were ones where there were known occupancy in the past. In 2015, the territories chosen for survey were a more random selection, giving us a high percentage of occupancy, and a more accurate picture of the overall trend. In 2016, half of the eight territories surveyed were occupied. There was a slight increase in 2017, with 5 of the 8 territories being occupied. 2018 showed a slight decrease, and 2019 took another decrease, with only 22% of the territories being occupied. In 2020, it jumped up to 43%, getting close to 2018 numbers. The percentage of occupied territories then drop down to 20% in 2021.

Over the years, several territories have been dropped from surveying after being unoccupied for 7 years. Newly discovered territories have taken their place, keeping the number of known territories in the Uinta Planning Area at a consistent 11-14 territories. Given that the unoccupied territories are being replaced with occupied territories, it only makes sense that the trend would appear to be stable.



Percent of monitored northern goshawk territories that were occupied from 2001 through 2021 on the Uinta Planning

Area of the Uinta-Wasatch-Cache National Forest, Utah.

Indicator #2 Cutthroat Trout population estimates.

Data source: *Prior to 2014, the monitoring protocol required 33% of Colorado (CRCT) and Bonneville (BCT) cutthroat trout sample streams be surveyed annually; however, in 2015, the monitoring protocol was modified to change the Aquatics Management Indicator Species (MIS) sampling frequency to every 5 years. This better aligns the Forest sampling on the Uinta portion of the Forest with the Utah Division of Wildlife Resources, minimizing duplication of effort, allowing for coordination, and reducing handling impacts. In 2016 MIS designation was changed to Focal Species (FS), yet species composition within the designations did not change for Fisheries. To minimize travel costs and maximize sampling efficiency, FS sites sampled each year will be grouped by drainage or proximity to other sites.*

For Diamond Fork and Strawberry River In 2020, fishery field observations suggest that low water from drought conditions in 7 of the last 9 years has either lowered population numbers (for all species) or forced fish into higher elevations to seek habitat and thermal refugia, though sample site elevation did not correlate with population trend or number. In 2021, population trend of two sites in White River drainage trend is down due to insufficient water caused by drought and one site in Soldier Creek is down due to continued recovery of the drainage from a mudslide in 2012 that extirpated the fish population and from continued drought.

Monitoring Question #9 Is there a change in species distribution across the Forest?

Finding: *No changes are needed.*

Indicator #1 Change from cold water to warm water species, change in terrestrial vegetation and species distribution.

Data source: *Field observations of aquatic habitat and fish population surveys*

Monitoring results: *There is no indication of a change from cold to warm water species. There have been increases in riparian terrestrial vegetation due to willow growth in many areas and increased beaver activity. There is no indication of a change in terrestrial species distribution.*

Monitoring Question #10 Are Forest management activities and/or natural events affecting ecological conditions that contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of concern?

Finding: *No changes are needed. For conditions indicated by northern goshawk, a Regional Forester's Sensitive species not a listed species, the ecological and population trends appear to be stable. For fisheries, drought during the last two years has caused decreases in cutthroat trout populations in streams that were surveyed and forest management activities does not appear to have been a factor in the changes.*

Indicator #1 Mature forest conditions and population estimates (e.g, Northern goshawk). *See Monitoring Question # 8, Indicator #1.*

Indicator #2 Aquatic and riparian condition: In-stream channel conditions and population estimates (e.g, Bonneville cutthroat trout and Colorado River cutthroat trout). *For fish abundance and condition surveys see Monitoring Question # 8, Indicator #2.*

Indicator #3 Habitat that contains other federally listed threatened and endangered species, conserve

proposed and candidate species – Documentation of alterations in habitat due to management actions and natural events.

Data source: *Forest Service information in FACTS database on vegetation treatments.*

Monitoring results: *In 2020 and 2021, 803 acres of sagebrush treatments in the Strawberry Reservoir area have improved habitat for sage grouse.*

Monitoring Question #11 Are Forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?

Finding: *No changes are needed. In 2020 on the UNF, the Ether Hollow, William, and Range fires burned a total of 684 acres, 2,801 acres, and 1,069 acres, respectively. Areas within a fire having high soil burned severity is an indication of changes to the soil that can result in reduced soil productivity. An assessment of soil burn conditions on these fires indicate that amount of high burn severity occurring on the Ether Hollow, William, and Range fires were 54 acres, 423 acres, and 28 acres, respectively. The high severity areas were in conifer vegetation types in the Ether Hollow and William fires and non-conifer areas of the Range Fire. Areas burned in conifer may take many decades of time to start the establishment of conifer seedlings. These areas will be left to regenerate naturally. In September 2018, Pole Creek/Bald Mountain wildfire burned in Nebo Creek and in 2019 several debris flows occurred. In 2020 and 2021, in collaboration with the Utah Division of Wildlife Resources, restoration activities were completed that effectively helped reduce sediment from the moving through the stream system by falling trees into the stream channel. In Nebo Creek and Bennie Creek, riparian vegetation and channel morphology continues to adjust to the change due to the fire. The terrestrial vegetation is recovering mostly in the mountain brush and grass sites, but on burned timber areas vegetative recovery is slowly occurring. On the UNF, timber lands are fully stocked or will regenerate naturally.*

Data source for all indicators: *See Monitoring Question # 4, Indicator #1, Monitoring Question #5, Indicators #2, Monitoring Question # 6, Indicators #1 and #2, Monitoring Question # 7, Indicators #1and #2, Monitoring Question # 8, Indicators #1 and #2. Water quality data used for this assessment are 303(d) listed water bodies from Utah Division of Water Quality 2022 303(d) list.*

Indicator #1 Aquatic habitat conditions.

Monitoring results: *For fish abundance and condition surveys see Monitoring Question # 8, Indicator #2. Water quality may indicate natural and/ or man-caused conditions that affect aquatic habitat. Several streams on the Uinta NF that are classified as not supporting its beneficial use, as shown in the table below. The Utah 2022 Integrated Report identifies all streams and lakes that are listed as not supporting are rated as low priority for assessment. In the 2022 303(d) list, five analysis units had parameters delisted from the previous assessment.*

Table 1. 303(d) listed water bodies from Utah Division of Water Quality 2022 303(d) list.			
Ranger District	Analysis Unit ID	Analysis Unit Description	Parameter
Pleasant Grove RD	UT16020201-015_00	Dry Creek-Alpine	pH (2B, 3A, 4)
	UT16020201-002_02	Mary Ellen Gulch	Zinc (3A), Copper (3A), Cadmium (3A)
	UT16020203-013_00	Provo Deer Creek	Macroinvertebrates (3A)
	UT14060004-013_00	Strawberry-4	Min. Diss. Oxygen (3A); pH (1C, 2B, 3A, 4)
	UT14060004-015_00	Currant Creek Upper	Min. Diss. Oxygen (3A)
	UT16020203-009_00	Main Creek-1	E. coli (1C, 2B), macroinvertebrates (3A), Max Temperature (3A)
	UT16020203-010_00	Main Creek-2	E. coli (1C, 2B)
	UT16020203-026_00	Heber Valley	E. coli (1C, 2B)
	UT-L-14060004-001	Strawberry Reservoir (Has a TMDL)	pH (2B, 3A, 4), Total Phosphorus (3A)
	UT-L-16020203-004	Mill Hollow	pH (2B, 3A, 4), Total Phosphorus (3A)
Heber RD	UT-L-16020202-002	Big East Lake	pH (2B, 3A, 4), Total Phosphorus, Temperature, Dissolved Oxygen (3A)
	UT-L-14060004-001	Strawberry Reservoir (Has a TMDL)	pH (2B, 3A, 4), Total Phosphorus (3A)
Spanish Fork RD	UT16020202-027_00	Beer Creek	Invertebrates (3C), E. coli (3A)
	UT16020201-005_00	Salt Creek-2	pH (2B, 3A, 4)
	UT16020201-014_00	Currant Creek-Juab Valley	Max. Temperature (3A)
	UT16020202-003_00	Hobble Creek-1	pH (2B, 3A, 4)
	UT16020202-012_00	Soldier Creek-1	Max. Temperature (3A), Total Phosphorus as P (3A), Sediment (3A)
	UT16020202-027_00	Beer Creek	Invertebrates (3C); E. coli (3A)
Black – Not Supporting, Carry over from previous 2016 assessment			
Red – Not Supporting, New listing			

Table 1. Utah Division of Water Quality 2022 303(d) listed water bodies that were delisted in the 2022 Integrated Report.			
Ranger District	Analysis Unit ID	Analysis Unit Description	Parameter
Heber RD	UT14060003-018_00	West Fork Duchesne	pH (1C, 2B, 3A, 4) (In 2022 assessment, pH was delisted because it meets WQ criteria with new data)
	UT14060003-019_00	North Fork Duchesne	Aluminum, Diss. (3A) (In 2022 assessment, Dissolved Aluminum was delisted because it meets WQ criteria with new data)
	UT-L-14060004-001	<i>Strawberry Reservoir (Has a TMDL)</i>	Dissolved Oxygen (In 2022 assessment, Dissolved Oxygen was delisted because it meets WQ criteria based on restoration activities)
	UT16020202-009_00	Sixth Water Creek	Selenium (3A), Min Diss. Oxygen (3A), (In 2022 assessment, Selenium (3A), Min Diss. Oxygen was delisted because original listing was incorrect)
	UT16020202-027_00	Beer Creek	Total Ammonia as N (3C), (In 2022 assessment, Total Ammonia as N was delisted because it meets WQ criteria with new data), pH (2B, 3A, 4) (In 2022 assessment, pH was delisted because it meets WQ criteria with new data)

Indicator #2 Riparian ecosystem conditions.

Monitoring results: *Changes to riparian ecosystems have occurred after the 2018 Pole Creek/Bald Mountain fire that burned riparian areas in Diamond Fork, Nebo Creek, Bennie Creek, Summit Creek, and Peteetneet Creek drainages. These fires burned willows and cottonwoods along the streams of Diamond Fork, Nebo Creek and Bennie Creek. In 2019, floods scoured stream channels in Nebo Creek, Bennie Creek, Summit Creek, and Peteetneet Creek drainages. In 2020 and 2021, in collaboration with the Utah Division of Wildlife Resources, restoration activities were completed that effectively helped reduce sediment from the moving through the stream system by falling trees into the stream channel. In Nebo Creek and Bennie Creek, riparian vegetation and channel morphology continues to adjust to the change due to the fire. Flooding continues to occur when the burned watersheds receive short duration, high intensity monsoonal rainfall.*

Indicator #3 Forested Terrestrial ecosystem conditions.

Monitoring results: *In 2020 and 2021, natural events and forest management activities changed ecosystem conditions mainly in the short-term Most of the mountain brush and grass areas of the 120,500-acre Pole Creek/Bald Mountain wildfire have recovered its vegetation although vegetative recovery is slow on 2,120*

acres across the UNF that resulted in high soil burn severity mainly in conifer vegetation of the Pole Creek/Bald Mountain wildfire. On the 2020 Ether and William wildfires, 477 acres in conifer is expected to slowly recover. Most of these affect the seral stage of the vegetation by setting them to an earlier stage.

Indicator #4 Non-forested terrestrial ecosystem conditions. See Monitoring Question #7, Indicator #2.

Monitoring Question #12 Are Forest management activities and natural events affecting watershed conditions?

Finding: No changes are needed. The UWCNF is working cooperatively to collect water samples and to provide information to the Utah Division of Water Quality on possible causes of water quality impairment. No lichen monitoring has occurred in 2016-2017. The next evaluation is scheduled in 2026 when another round of lichen monitoring should be complete. Past lichen monitoring indicates no change is needed. Based on projects monitored in 2020-2021, monitoring indicates that a small amount of impairment of soil properties have occurred from a dispersed site activity, the remaining sites have no permanent or substantial impairment of soil resources and there has been no loss of soil productivity. The Forest Plan allows for the rehabilitation of dispersed sites that have impairment of soil properties.

Indicator #1 Aquatic Habitat conditions.

Data source: See Monitoring Question #8, Indicator #2 and Monitoring Question #11, Indicator #1.

Monitoring results: See Monitoring Question #8, Indicator #2 and Monitoring Question #11, Indicator #1.

Indicator #2 Air Quality - Trends of lichen biomonitoring sites.

Data source: The Uinta National Forest has 23 lichen monitoring sites that were evaluated in 2011. The results of the evaluation were presented in the 2016-2017 Forest Plan Monitoring Evaluation report. The monitoring interval for lichen monitoring is 10 years and no new data has been collected for 2020-2021 Forest Plan Monitoring Evaluation report.

Monitoring results: Next evaluation will be after next monitoring, 2026.

Indicator #3 Changes in soil properties (physical, chemical, and biological) that result in the loss of the inherent ecological capacity or hydrologic function of the soil resource.

Data source: Soil resource condition surveys

Monitoring results: In 2020 and 2021, three projects were monitored and documented in the National Best Management Practices database that included implementation and effectiveness for the projects. Monitored activities are listed below.

1. Alpine Loop Road surface chip and seal (Monitored 07/28/2021): Tar and gravel were properly placed on road surface and very little overspray was found in the loose gravel off the road surface. No sign of movement of tar or new gravel moving from the road surface.
2. Cascade Road concentrated use area (CUA) (Monitored 07/28/2021): An 80' vegetated buffer from the stream is present from where cars are parked. Gravel is on road leading to CUA and a wooden display has signs posted to encourage proper use of the area.

Results of monitoring indicates that these activities had BMPs mostly or fully implemented and that the BMPs were effective at reducing sediment movement. There was no permanent or substantial impairment of soil properties due to these project activities and no loss of soil productivity.

Monitoring Question #13 NFMA compliance: Are we complying with appropriate NFMA requirements?

Finding: No changes are needed.

Indicator #1 Stocking of lands.

Data source: Uinta-Wasatch-Cache NF Annual Reforestation and Timber Stand Improvement Needs Report

Monitoring results: The Uinta National Forest did not have any planting activities in 2021. The forest does not show any acreage needed to plant or to certify as being restocked. (From Peter Howard, 12/21/2021)

Monitoring Question #14 Are timber management activities impairing soil productivity of the land?

Finding: No changes are needed.

Indicator #1 Changes in soil properties (physical, chemical, and/or biological) that result in the loss of the inherent ecological capacity or hydrologic function of the soil resource. Specific indicators are amount of soil disturbance, change inorganic matter, or change in Soil structure, soil temperature, A horizon depth.

Data source: Data consisted of observations taken in the field.

Monitoring results: In 2020 and 2021, one project was monitored to determine soil conditions following timber vegetation treatments. On 07/29/2020, timber harvest along Bjorkman Road showed no accelerated erosion or sediment movement from harvest units. Landing area was within 20' of Bjorkman Creek and was an area already compacted from dispersed recreation use. Landing area showed no sediment movement to stream likely due to relatively flat and small area where logs were placed.

Monitoring Question #15 Are goods and services being provided in accordance with Forest Plan goals and objectives?

Finding: No changes are needed. The Uinta NF is providing a variety of goods and services according to the Forest Plan.

Indicator #1 Number of Lands Special Use Permits.

Data source: Forest Service Special Uses Data System (SUDS) database.

Monitoring results: The number of lands and recreation special use permits are presented by ranger district in the table below. Lands SUPs are uses such as dams, water transmission lines, geophysical exploration. Recreation SUPs are uses such as recreation residences, outfitter and guides, and recreation events. Since 2019, total number of Lands SUPs increased by 3 and Recreation SUPs increased by 27.

Number of Lands Special Use Permits.									
Ranger District	Number of Lands SUP			Number of Recreation SUP			Total		
	2017	2019	2021	2017	2019	2021	2017	2019	2021
Supervisor's Office ¹	48	50	44	14	12	12	62	62	56
Pleasant Grove	54	63	69	63	60	66	117	123	135
Heber/Kamas ¹	55	55	55	59	95	113	114	150	168
Spanish Fork	67	68	73	23	26	29	90	94	102
Total	224	236	241	159	193	220	383	429	461

¹Note that Supervisor's Office is for both the Uinta NF and the Wasatch-Cache NF because they are managed as a combined Forest unit. Kamas/Heber RDs data is the total for both ranger districts and is not broken out by separate planning areas.

Indicator #2 Number of Recreation Special Use Permits. See indicator #1 and table above.

Indicator #3 Acres leased for oil and gas exploration and development.

Data source: US Bureau of Land Management LR2000 database.

Monitoring results: As of 11/10/2021, there are 25 authorized oil and gas leases containing 52,588 acres within the Uinta-Wasatch-Cache NF plan area. There has been no change from the 2018-2019 UNF Forest Plan Monitoring Report.

Indicator #4 Level of permitted livestock grazing.

Data source: Range Allotment Annual Operating Plans

Monitoring results: The level of permitted livestock grazing has not changed since 2015. The table below presents the permitted commercial livestock use levels. The term AUM means animal unit months.

Level of permitted livestock grazing.							
<i>Ranger District</i>	<i>Number of permittees</i>	<i>Cattle Numbers</i>	<i>Cattle AUM</i>	<i>Sheep & Goats Numbers</i>	<i>Sheep & Goats AUM</i>	<i>Total number</i>	<i>Total AUM</i>
<i>Pleasant Grove</i>	0	0	0	0	0	0	0
<i>Heber</i>	23	4,003	20,488	41,640	39,587	45,643	60,075
<i>Spanish Fork</i>	24	7,375	42,051	2,000	3,445	9,375	45,496
<i>Total</i>	47	11,378	62,539	43,640	43,032	55,018	105,571

Indicator #5 Other Forest Products (Fuelwood and Christmas Tree Permits).

Data source: Forest Service PTSAR database.

Monitoring results: The Uinta National Forest sold 8,998 special forest product permits to individuals in 2021. Among these permits were Christmas trees, firewood, and posts and poles.

Indicator #6 Total Timber Sale Program Quantity.

Data source: Forest Service PTSAR database.

Monitoring results: The Uinta NF the amount of commercial timber and personal use permits volume sold for 2020-2021 is 29,430 CCF. This Uinta Forest plan identifies that the Forest should be offering 3,190 CCF of timber per year, of which 640 CCF is chargeable to the ASQ. Since the material that the forest is selling is salvage material resulting from beetle killed trees, we are exceeding our average annual sale of timber.

Monitoring Question #16 National Historic Preservation Act as amended: Are cultural resources being protected as the Forest Plan is implemented and are mitigation measures sufficient prevent damage to cultural resources from project activities? Are *Historic Properties* receiving adverse effects from project implementation, vandalism, looting, and/or neglect?

Finding: *No changes are needed.*

Indicator #1 Number of *Historic Properties* that received new adverse effects from looting, vandalism, and/or neglect.

Data source: *Heritage data module, hard copy reporting.*

Monitoring results: *On the Spanish Fork RD, one archaeological site, a prehistoric rock art panel was vandalized by spray paint. The paint was not located directly on the rock imagery. There is no need to change management or change the Forest Plan because the Forest has the ability to take action to reduce these activities such as installing education signs and exclosures. The Forest is also using Utah State Archaeological Site Stewardship Volunteers to monitor sites across the Forest.*

