List of Attachments

Exhibit II.1  Fire estimate by forest types SNF INF SQF 8-19-16
Exhibit IV.1  Canopy Cover, and high severity-large Fires in Siera Nevada 2008 to 2015
Exhibit IV.2  Dr. Reginald H. Barrett critique of DEIS and draft plans 8-6-16
Exhibit VII.1  The Wilderness Society, Achieving Compliance with the Executive Order “Minimization Criteria” for Off-Road Vehicle Use on Federal Public Lands: Background, Case Studies, and Recommendations (May 2016)
Exhibit VIII.1  Comments on DEIS Volume 2, Appendix C: Wild and Scenic Rivers Evaluation for the Inyo, Sequoia, and Sierra National Forests
Appendix IX.A:  Areas improperly excluded from Alternative C on the Sierra and Sequoia National Forests
Appendix IX.B:  Alternative C areas on the Sierra and Sequoia National Forests
Appendix IX.C:  Alternative C areas on the Inyo National Forest
Exhibit IX.1:  The Wilderness Society, et al., Comments on Ch. 70 wilderness evaluation process (Oct. 30, 2014)
Exhibit IX.2:  The Wilderness Society, et al., Comments on Ch. 70 wilderness evaluation (June 3, 2015)
Exhibit IX.3:  The Wilderness Society, et al., Comments on Ch. 70 wilderness evaluation (Aug. 28, 2015)
Exhibit IX.4:  The Wilderness Society, et al., Comments on wilderness evaluation process (Dec. 1, 2015)
Exhibit IX.5:  California Wilderness Coalition, Comments on early adopter forests wilderness evaluation process (Dec. 1, 2015)
Exhibit IX.6:  The Wilderness Society, et al., Comments on wilderness evaluation process and areas identified for DEIS analysis (Feb. 1, 2016)

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
Exhibit IX.7: The Wilderness Society & California Wilderness Coalition, Recommendations for management of roadless areas in the Sequoia National Forest (Nov. 17, 2014)

Exhibit IX.8: The Wilderness Society & California Wilderness Coalition, Recommendations for management of roadless areas in the Sierra National Forest (Nov. 17, 2014)

Exhibit IX.9: Wilderness Areas Recommended by the Sierra Club for the Inyo National Forest

Map IX.A: Recommended Wilderness on the Sierra and Sequoia National Forests

Map IX.B: Recreation Opportunity Spectrum (Alternative B) overlap with Recommended Wilderness (Alternative C), Inyo National Forest

Map IX.C: Recreation Opportunity Spectrum (Alternative B) overlap with Recommended Wilderness (Alternative C), Sequoia National Forest

Map IX.D: Recreation Opportunity Spectrum (Alternative B) overlap with Recommended Wilderness (Alternative C), Sierra National Forest

Exhibit XI.1: The Wilderness Society et al., Consideration of Special Designations in Plan Revisions for Sierra, Sequoia, and Inyo National Forests (Nov. 18, 2014)

Exhibit XII.1: The Wilderness Society. 2014. Transportation Infrastructure and Access on National Forests and Grasslands: A Literature Review

Map XII.A: Watershed Condition Framework, Roads & Trails Indicator, Sierra, Sequoia, and Inyo National Forests

Exhibit XII.2: Memorandum from Joel Holtrop to Regional Foresters et al. re Travel Management, Implementation of 36 C.F.R., Part 212, Subpart A (Nov. 10, 2010)

Exhibit XII.3: Memorandum from Leslie Weldon to Regional Foresters et al. re Travel Management, Implementation of 36 C.F.R., Part 212, Subpart A (Mar. 29, 2012)

Exhibit XII.4: Memorandum from Leslie Weldon to Regional Foresters re Travel Management Implementation (Dec. 17, 2013)

Exhibit XII.5: Memorandum from Leslie Weldon to Regional Foresters re Completion of Travel Management and Next Steps (Sept. 24, 2015)

Exhibit XII.6: Examples of road plan components from existing National Forest Land Management Plans

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)

We estimate for these forest plan areas that about 150,000 acres should be burned annually. This value is based on discounting the annual value estimated from the mean FRI by the brush and non-vegetation types on the three national forests.

<table>
<thead>
<tr>
<th></th>
<th>brush grass</th>
<th>hardwood</th>
<th>subalpine</th>
<th>Eastside Pine</th>
<th>Inyon-Juniper</th>
<th>Lodgepole</th>
<th>Mixed-conifer</th>
<th>Giant Sequoia</th>
<th>Ponderosa Pine</th>
<th>Red fir</th>
<th>Western White Fire</th>
<th>Total (ac)</th>
<th>Total (chart)</th>
<th>Area covered by revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean HFRI (yr)</td>
<td>30</td>
<td>20</td>
<td>50</td>
<td>5</td>
<td>20</td>
<td>30</td>
<td>12</td>
<td>15</td>
<td>5</td>
<td>45</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>high HFRI (yr)</td>
<td>60</td>
<td>35</td>
<td>150</td>
<td>15</td>
<td>35</td>
<td>110</td>
<td>25</td>
<td>20</td>
<td>12</td>
<td>90</td>
<td>45</td>
<td>2,040,659</td>
<td>2,039,000</td>
<td>2,039,000</td>
</tr>
<tr>
<td>INF</td>
<td>1,285,247</td>
<td>23,973</td>
<td>149,734</td>
<td>100,464</td>
<td>339,999</td>
<td>83,184</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>25,374</td>
<td>32,684</td>
<td>2,040,659</td>
<td>2,039,000</td>
<td>2,039,000</td>
</tr>
<tr>
<td>SQF</td>
<td>306,246</td>
<td>130,745</td>
<td>0</td>
<td>100,685</td>
<td>94,745</td>
<td>12,792</td>
<td>73,090</td>
<td>15,036</td>
<td>65,196</td>
<td>137,157</td>
<td>174,758</td>
<td>1,110,450</td>
<td>1,112,000</td>
<td>783,685 Reflects non-GSNM area</td>
</tr>
<tr>
<td>SNF</td>
<td>286,097</td>
<td>139,977</td>
<td>218,207</td>
<td>35,245</td>
<td>0</td>
<td>17,327</td>
<td>140,354</td>
<td>2,243</td>
<td>148,999</td>
<td>163,944</td>
<td>163,944</td>
<td>1,316,337</td>
<td>1,319,000</td>
<td>1,319,000</td>
</tr>
</tbody>
</table>

|               | brush grass  | hardwood | subalpine | Eastside Pine | Inyon-Juniper | Lodgepole | Mixed-conifer | Giant Sequoia | Ponderosa Pine | Red fir | Western White Fire | Total (ac/yr) |
|---------------|--------------|----------|-----------|----------------|---------------|-----------|---------------|---------------|----------------|---------|---------------------|---------------|-------------------|
| INF           | 42,842       | 1,199    | 2,995     | 20,093         | 17,000        | 2,773     | 0             | 0             | 0              | 564    | 1,307               | 88,772        |
| SQF           | 10,208       | 6,537    | 0         | 20,137         | 4,737         | 426       | 6,091         | 1,002         | 13,039         | 3,048   | 6,990               | 50,552        |
| SNF           | 9,537        | 6,999    | 4,364     | 7,049          | 0             | 578       | 11,696        | 150           | 29,800         | 3,643   | 6,558               | 80,373        |

219,696 Grand total all three forests for mean HFRI

|               | brush grass  | hardwood | subalpine | Eastside Pine | Inyon-Juniper | Lodgepole | Mixed-conifer | Giant Sequoia | Ponderosa Pine | Red fir | Western White Fire | Total (ac/yr) |
|---------------|--------------|----------|-----------|----------------|---------------|-----------|---------------|---------------|----------------|---------|---------------------|---------------|-------------------|
| INF           | 21,421       | 685      | 998       | 6,698          | 9,714         | 756       | 0             | 0             | 0              | 282    | 726                 | 41,280        |
| SQF           | 5,104        | 3,736    | 0         | 6,712          | 2,707         | 116       | 2,924         | 752           | 5,433          | 1,524   | 3,884               | 23,024        |
| SNF           | 4,768        | 3,999    | 1,455     | 2,350          | 0             | 158       | 5,614         | 112           | 12,417         | 1,822   | 3,643               | 36,337        |

100,641 Grand total all three forests for high HFRI

<table>
<thead>
<tr>
<th>Alternative B</th>
<th>Rx fire</th>
<th>managed fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF</td>
<td>25,000</td>
<td>170,000</td>
</tr>
<tr>
<td>SQF</td>
<td>15,000</td>
<td>83,000</td>
</tr>
<tr>
<td>SNF</td>
<td>60,000</td>
<td>49,000</td>
</tr>
<tr>
<td></td>
<td>100,000</td>
<td>302,000</td>
</tr>
</tbody>
</table>

acres/year    10,000  30,200  0.97% annual over national forest area
References


### Table 3.1c. Number of acres of hardwood types occurring on each of the National Forests.

<table>
<thead>
<tr>
<th>National Forest</th>
<th>Blue Oak</th>
<th>Black Oak</th>
<th>Oak (unproductive)</th>
<th>Live Oak</th>
<th>Riparian Hardwoods</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eldorado</td>
<td>407</td>
<td>6,602</td>
<td>10,736</td>
<td>108</td>
<td>11,834</td>
<td>17,321</td>
</tr>
<tr>
<td>Humboldt-Toiyabe</td>
<td>4,332</td>
<td>4,532</td>
<td>3,432</td>
<td>3,432</td>
<td>3,432</td>
<td>3,432</td>
</tr>
<tr>
<td>Inyo</td>
<td>2,750</td>
<td>2,123</td>
<td>21,923</td>
<td>21,923</td>
<td>21,923</td>
<td>21,923</td>
</tr>
<tr>
<td>Lassen</td>
<td>10,300</td>
<td>36,154</td>
<td>13,120</td>
<td>13,120</td>
<td>13,120</td>
<td>13,120</td>
</tr>
<tr>
<td>Modoc</td>
<td>27,233</td>
<td>4,333</td>
<td>96,327</td>
<td>96,327</td>
<td>96,327</td>
<td>96,327</td>
</tr>
<tr>
<td>Plumas</td>
<td>61,562</td>
<td>17,331</td>
<td>9,293</td>
<td>9,293</td>
<td>9,293</td>
<td>9,293</td>
</tr>
<tr>
<td>Sierra</td>
<td>44,629</td>
<td>4,119</td>
<td>96,404</td>
<td>96,404</td>
<td>96,404</td>
<td>96,404</td>
</tr>
<tr>
<td>Stanislaus</td>
<td>559</td>
<td>3,479</td>
<td>61,744</td>
<td>61,744</td>
<td>61,744</td>
<td>61,744</td>
</tr>
<tr>
<td>Sequoia</td>
<td>27,233</td>
<td>4,333</td>
<td>96,327</td>
<td>96,327</td>
<td>96,327</td>
<td>96,327</td>
</tr>
<tr>
<td>Tahoe</td>
<td>60,900</td>
<td>3,060</td>
<td>60,900</td>
<td>60,900</td>
<td>60,900</td>
<td>60,900</td>
</tr>
<tr>
<td>Tahoe Basin MU</td>
<td>730</td>
<td>732</td>
<td>732</td>
<td>732</td>
<td>732</td>
<td>732</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>73,628</td>
<td>140,505</td>
<td>136,154</td>
<td>136,154</td>
<td>136,154</td>
<td>136,154</td>
</tr>
</tbody>
</table>

### Table 3.1d. Number of acres of conifer forest types occurring on each of the National Forests.

<table>
<thead>
<tr>
<th>National Forest</th>
<th>Subalpine Pine</th>
<th>Eastside Pine</th>
<th>Giant Sequoia</th>
<th>Pinyon Juniper</th>
<th>Knobcone Pine</th>
<th>Lodgepole Pine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eldorado</td>
<td>17,680</td>
<td>50,989</td>
<td>24,017</td>
<td>34,834</td>
<td>83,184</td>
<td></td>
</tr>
<tr>
<td>Humboldt-Toiyabe</td>
<td>149,734</td>
<td>100,464</td>
<td>339,999</td>
<td>613,737</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inyo</td>
<td>210,084</td>
<td>14,099</td>
<td>25,251</td>
<td>16,979</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lassen</td>
<td>345,376</td>
<td>279,537</td>
<td>16,979</td>
<td>6,183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modoc</td>
<td>130,818</td>
<td>1,063</td>
<td>17,327</td>
<td>25,746</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumas</td>
<td>216,207</td>
<td>35,245</td>
<td>1,592</td>
<td>1,160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sierra</td>
<td>16,157</td>
<td>584</td>
<td>61,375</td>
<td>12,792</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stanislaus</td>
<td>100,685</td>
<td>734</td>
<td>94,754</td>
<td>12,792</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequoia</td>
<td>2,417</td>
<td>53,985</td>
<td>16,979</td>
<td>6,183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tahoe</td>
<td>4,066</td>
<td>17,294</td>
<td>25,746</td>
<td>6,183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tahoe Basin MU</td>
<td>431,537</td>
<td>1,053,940</td>
<td>734</td>
<td>283,671</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>431,537</td>
<td>1,053,940</td>
<td>734</td>
<td>283,671</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 8.3.6. Number of acres of mixed conifer and giant sequoia types occurring on each of the National Forests.

<table>
<thead>
<tr>
<th>National Forest</th>
<th>Mixed Conifer</th>
<th>Giant Sequoia</th>
<th>Ponderosa Pine</th>
<th>Red Fir</th>
<th>Westside White Fir</th>
<th>Eastside White Fir</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eldorado</td>
<td>192,808</td>
<td>90,928</td>
<td>121,960</td>
<td>167,063</td>
<td>128,228</td>
<td>17,880</td>
<td></td>
</tr>
<tr>
<td>Humboldt-Toiyabe</td>
<td>2,495</td>
<td>85,715</td>
<td>167,063</td>
<td>128,228</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inyo</td>
<td>25,374</td>
<td>32,684</td>
<td>673,361</td>
<td>249,434</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lassen</td>
<td>52,279</td>
<td>369,042</td>
<td>53,181</td>
<td>249,434</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modoc</td>
<td>23,029</td>
<td>147,929</td>
<td>48,889</td>
<td>648,789</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumas</td>
<td>169,128</td>
<td>89,122</td>
<td>79,428</td>
<td>288,855</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sierra</td>
<td>148,999</td>
<td>148,999</td>
<td>167,983</td>
<td>270,779</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stanislaus</td>
<td>82,506</td>
<td>154,316</td>
<td>26,673</td>
<td>78,116</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequoia</td>
<td>137,157</td>
<td>174,788</td>
<td>63,161</td>
<td>268,065</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tahoe</td>
<td>127,366</td>
<td>174,455</td>
<td>63,161</td>
<td>268,065</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tahoe Basin MU</td>
<td>20,781</td>
<td>46,149</td>
<td>47,087</td>
<td>204,800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>928,359</td>
<td>17,279</td>
<td>491,900</td>
<td>1,785,950</td>
<td>204,380</td>
<td>2,524,511</td>
<td></td>
</tr>
</tbody>
</table>

---

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
Comparison of the amount of high severity burned forests in evergreen closed tree canopy vs. evergreen open tree canopy forests on non-wilderness Forest Service-managed lands for fires that burned greater than 20,000 acres (all ownerships) between 2008 and 2015 on the west-side Sierra Nevada bioregion and within the range of the California spotted owl.

<table>
<thead>
<tr>
<th>Fire Name</th>
<th>Year</th>
<th>Forest</th>
<th>Fire Size (Acre of All Ownerships)</th>
<th>Evergreen Closed Tree Canopy (Non-Wilderness FS Ownership Only)</th>
<th>Evergreen Open Tree Canopy (Non-Wilderness FS Ownership Only)</th>
<th>Closed % - Open %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cub Complex</td>
<td>2008</td>
<td>Lassen</td>
<td>20,860</td>
<td>1,830</td>
<td>11,984</td>
<td>15%</td>
</tr>
<tr>
<td>BTU Lightning Complex</td>
<td>2008</td>
<td>Plumas/Lassen</td>
<td>58,337</td>
<td>792</td>
<td>6,482</td>
<td>32%</td>
</tr>
<tr>
<td>Canyon Complex</td>
<td>2008</td>
<td>Plumas</td>
<td>39,793</td>
<td>2,808</td>
<td>16,709</td>
<td>26%</td>
</tr>
<tr>
<td>Puite</td>
<td>2008</td>
<td>Sequoia</td>
<td>37,258</td>
<td>981</td>
<td>3,064</td>
<td>32%</td>
</tr>
<tr>
<td>American River Complex</td>
<td>2008</td>
<td>Tahoe</td>
<td>21,284</td>
<td>2,721</td>
<td>10,622</td>
<td>26%</td>
</tr>
<tr>
<td>Chips</td>
<td>2012</td>
<td>Plumas</td>
<td>76,328</td>
<td>11,142</td>
<td>45,539</td>
<td>24%</td>
</tr>
<tr>
<td>Reading</td>
<td>2012</td>
<td>Lassen</td>
<td>28,055</td>
<td>3,530</td>
<td>7,748</td>
<td>46%</td>
</tr>
<tr>
<td>Rim</td>
<td>2013</td>
<td>Stanislaus</td>
<td>257,619</td>
<td>13,409</td>
<td>47,882</td>
<td>28%</td>
</tr>
<tr>
<td>American</td>
<td>2013</td>
<td>Tahoe</td>
<td>27,416</td>
<td>4,016</td>
<td>13,083</td>
<td>31%</td>
</tr>
<tr>
<td>Aspen</td>
<td>2013</td>
<td>Sierra</td>
<td>22,700</td>
<td>1,414</td>
<td>6,998</td>
<td>20%</td>
</tr>
<tr>
<td>King</td>
<td>2014</td>
<td>Eldorado</td>
<td>96,513</td>
<td>14,195</td>
<td>26,687</td>
<td>53%</td>
</tr>
<tr>
<td>Bald</td>
<td>2014</td>
<td>Lassen</td>
<td>39,828</td>
<td>415</td>
<td>631</td>
<td>66%</td>
</tr>
<tr>
<td>Eiler</td>
<td>2014</td>
<td>Lassen</td>
<td>33,157</td>
<td>3,254</td>
<td>4,368</td>
<td>74%</td>
</tr>
<tr>
<td>Rough</td>
<td>2015</td>
<td>Sequoia/Sierra</td>
<td>145,908</td>
<td>6,519</td>
<td>24,304</td>
<td>27%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>905,056</td>
<td>67,026</td>
<td>226,101</td>
<td>30%</td>
</tr>
</tbody>
</table>

Other Recent Fire of Note

<table>
<thead>
<tr>
<th>Fire Name</th>
<th>Year</th>
<th>Forest</th>
<th>Acres Burned</th>
<th>High Severity %</th>
<th>High Severity Acres Burned</th>
<th>High Severity Acres Burned %</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>2014</td>
<td>Sierra</td>
<td>13,819</td>
<td>37%</td>
<td>729</td>
<td>1,983</td>
</tr>
</tbody>
</table>

RAVG data was obtained from the USFS’s Post-Fire Vegetation Conditions webpage November 10, 2015:
http://www.fs.fed.us/postfirevegcondition/index.shtml
The following terms are defined in the RAVG glossary:
http://www.fs.fed.us/postfirevegcondition/glossary.shtml

**Closed Tree Canopy** - A class of vegetation that is dominated by trees with interlocking crowns (generally forming 60 to 100% crown cover).

**Evergreen Open Tree Canopy** - This vegetation group describes an open tree canopy condition dominated by evergreen tree species. Evergreen species contribute more than 75% of the total tree cover. Forest covers associated with this group are described in Forest Cover Types of the United States (Society of American Foresters, F.H. Eyre, Editor).

**Evergreen Closed Tree Canopy** - This vegetation group describes a closed tree canopy condition dominated by evergreen tree species. Evergreen species contribute more than 75% of the total tree cover. Forest covers associated with this group are described in Forest Cover Types of the United States (Society of American Foresters, F.H. Eyre, Editor).

Reginald H. Barrett, Ph.D.
August 6, 2016

I am the Goertz Distinguished Professor of Wildlife Management in the Department of Environmental Science, Policy and Management at the University of California, Berkeley. I have conducted research on the Pacific fisher, American marten, and other forest carnivores for over 20 years. I have done extensive research on forest carnivores in the Sierra Nevada, including research on fisher and marten distribution, demographics, and habitat selection in national forests in the Sierra Nevada. I served as principal investigator for the Sierra Nevada Adaptive Management Project from 2005 to 2011. This project was designed to evaluate the effects of mechanical treatments on fisher persistence and habitat quality at a study location in the northern portion of the Sierra National Forest. I have also participated in numerous workshops and meetings relating to forest carnivores.

This critique is based on a review of the draft plans and Draft Environmental Impact Statement (DEIS) for Revision of the Sequoia and Sierra National Forests Land Management Plans.

Summary of Conclusions

The population of the Pacific fisher in the southern Sierra Nevada is clearly imperiled. Based upon fairly intensive scientific monitoring efforts, the fisher appears to occupy less than half of its historic range in the Sierra Nevada. There is an apparent gap of approximately 250 miles between the small fisher population in the southern Sierra Nevada and the population in northwestern California (Zielinski et al. 2005). This combined with its small population size, and numerous threats establish the basis for the acute level of concern about fisher’s persistence in the plan areas.

The draft plans provide little protection for fishers and their habitat. First, the draft plans promote desired conditions for a significant portion of the landscape (and many areas now occupied by fishers) that are not consistent habitat conditions used by fishers today. Even when the stated desired conditions might provide suitable habitat conditions, there is no requirement that a given project must meet those conditions following treatment. Second, there are few to no standards or guidelines to protect large trees and dense canopy on which fishers depend for denning, resting and foraging. Third, by design the draft plans prioritize the most aggressive and permissive treatments (and waive the very few and weak “protection” measures included in the draft plans) in areas with suitable fisher habitat that are occupied by fishers. Thus, significant portions of the suitable habitat for fishers in the area governed by the plans could be degraded or rendered unsuitable.

The impact of the draft plans would be substantially greater than the current forest plans since a more extensive area with more aggressive habitat altering treatments are being proposed compared to the existing forest plans. To the best of my knowledge, there is no new information.
regarding the Pacific fisher that would justify increasing potential for adverse impacts on this species. Based on my review of the plan, I have concluded that the draft plans would not maintain viable populations of Pacific fisher in the areas governed by the Sequoia and Sierra national forests.

Lastly, the DEIS does not take a careful and thorough look at the draft plans’ potential adverse impacts on the Pacific fisher. For example, the DEIS fails to evaluate the magnitude of habitat degradation that could occur or to estimate the effect that such habitat loss could have on survivorship, reproduction, habitat distribution and connectivity, and other demographic attributes. As a result, the DEIS does not adequately disclose the environmental consequences of the draft plans, and the DEIS conclusion that the draft plans plan “would provide the ecological conditions to maintain a viable population” (DEIS, p. 397) of fishers on the Sequoia and Sierra national forests is not supportable.

Overview of the Fisher’s Status and Habitat Needs

The Pacific fisher is among the most habitat-specific mammals in North America. Changes in the quality, amount, and distribution of available habitat are likely to affect the fisher’s occupancy in the southern Sierra Nevada. There is now considerable research suggesting that the Pacific fisher is closely associated with late-successional forests. This research indicates that suitable habitat for the fisher consists of dense (greater than 60% canopy cover), multi-storied forests with ample large trees, large snags, and downed logs (Zielinski et al. 2004, Zielinski et al. 2006). In the southern Sierra, the mean canopy closure of known fisher rest sites was greater than 90%, and the mean diameter at breast height of the four largest trees surrounding the rest sites was approximately 36 inches (Truex et al. 1998). In another study in the southern Sierra Nevada, Purcell et al. found that fisher rest sites had “higher canopy cover, greater basal area of snags and hardwoods, and smaller and more variable tree sizes compared to random sites. Resting sites were also found on steeper slopes and closer to streams. Canopy cover was consistently the most important variable distinguishing rest and random sites.” (Purcell et al. 2009, p. 2696).

The population of the Pacific fisher in the southern Sierra Nevada is small and likely declining. Although there are no precise estimates of the population, its size is estimated to be less than 300 adult fishers (Spencer et al. 2011). A recent estimate of growth rate for the period 2008 through 2014 in the northern portion of the Sierra National Forest indicates a growth rate of 0.90 and a declining trend (Sweitzer et al. 2015). Survival rates for adult females are also lower (0.60) than elsewhere for a study on the Sequoia National Forest (0.60; Truex et al. 1998) and comparable to elsewhere for studies on the Sierra National Forest (0.74 to 0.77; Sweitzer et al. 2015). Spencer et al. (2011) developed a model to evaluate how demographic rates might affect equilibrium population sizes. They found that the model was most sensitive to adult female survival with a 5% decrease in survival resulting in an 18% decrease in population size within 40 years. The adult female survival rate used in this study was 0.90. The measured survival rate in the southern Sierra Nevada ranged from 0.60 to 0.77, lower by 33% and 14%, respectively, compared to values used in Spencer et al. (2011). Based on these studies, the evidence strongly suggests that the lower adult female survival rates apparent in the Southern Sierra Nevada could result in substantially lower population numbers in the future. Based upon the small population
size, the declining trend, the isolation of the population, and other aspects of fisher demography, the existing population in the southern Sierra is probably not viable over the long term in the absence of efforts to improve habitat quality within the existing range and to expand the range, especially to the North.

The fisher’s failure to recolonize the central and northern Sierra, despite a moratorium on fisher trapping since 1945, is likely due to a combination of insufficient denning habitat, poor quality and fragmented dispersal habitat, and the small size of the fisher’s population in the southern Sierra Nevada. “The most common opinion among scientists is that loss of structurally complex forest range wide, the loss of well-distributed large conifers and hardwoods, and the fragmentation of habitat by roads and residential development are responsible for the loss of fishers from the central and northern Sierra and the failure of dispersing animals to recolonize the area.” (USDA Forest Service 1998, p. 28). Therefore, it is incumbent upon the Forest Service to manage habitat in the national forests to sustain the fisher’s already precariously small population in the southern Sierra and to promote the fisher’s recolonization of the central and northern Sierra.

Critique of the Draft Plans for the Sequoia and Sierra National Forests

1. Failure to Protect Currently Occupied Habitat

Effective protection for currently occupied habitat in the southern Sierra Nevada is central to a defensible conservation and recovery strategy for the fisher in the Sierra Nevada. Improving the quality and extent habitat is one of the guiding principles in the recently completed Southern Sierra Nevada Fisher Conservation Strategy (Spencer et al. 2016) that was commissioned by the US Forest Service and other resource management agencies. The conservation strategy identifies habitat conditions that generally support reproductive females, sets a target number of hypothetical female home ranges for which to provide habitat that meets the described conditions, and recommends other conservation measures to reduce threats and increase the likelihood that the population will increase and expand to the north. Relative to the management direction in the existing forest plans for the Sierra and Sequoia national forests, the conservation strategy recommends protection of additional large trees and dense canopy cover to provide for habitat elements essential to successfully reproducing female fishers.

Based upon my review, the draft plans for the Sequoia and Sierra national forests fail to meet this objective. First, the draft plans would substantially weaken the existing forest plans by allowing the logging of trees of any size in Community and Wildfire protection zones that cover about 520,000 acres (DEIS, p. 47-48) on these two national forests. My review of the draft plans and maps indicates that there is significant overlap between the area modeled as core habitat for fishers (e.g., Sierra draft plan, p. 36) and these two protection zones (e.g., Sierra draft plan, p. 125). This means that a significant portion of the core habitat for fishers has no standards or guidelines to direct the retention of large trees – the very types of trees in low abundance across the landscape and required for resting and denning by fishers (Purcell et al. 2009). Diameter limits on the harvest of large trees have been instituted in the Sierra Nevada since 1992 to protect these uncommon elements. The DEIS makes claims that removal of trees greater than 30 inches in diameter is necessary to improve fire resiliency (DEIS, p. 364), yet these are baseless since it
is commonly recognized that the removal of smaller trees (12 inches to 16 inches in diameter) is sufficient to address fuels concerns (North et al. 2009, Collins et al. 2011). I took a fire ecology course from Professor Harold Biswell in 1967 in which he made it clear that the larger the tree the lower the likelihood it would succumb to fire; I believe this relationship still holds true.

The draft plans include desired conditions for a “dry forest type” that are so dissimilar from habitat conditions in occupied female home ranges that if logged to the reported tree densities and canopy covers (e.g., Sierra draft plan, p. 19) the area would be unlikely to provide habitat conditions to support denning females. For instance, desired conditions for “Ponderosa pine-Dry Mixed Conifer” for tree density are “mostly < 150” square feet basal area per acre and median canopy cover is 30%. In contrast, home range conditions in the fisher conservation strategy recommend “≥150 ft²/ac, ranging from ~100 ft²/ac to >400 ft²/ac at finer scales, depending on site conditions” and at “the home range scale, >50% of a target cell supports tree canopy cover >70% (as measured by EVEG), with dense stands patchily distributed in mosaic with patches of more open (<40% cover) and moderate (40-69%) canopy forest to provide habitat heterogeneity” (Spencer et al. 2016, p. 49). The DEIS does not disclose the amount of “dry forest type” that is presently suitable to fishers and that could be reduced to unsuitable habitat. Nonetheless, examination of the sample area provided in the DEIS (p. 180, Figure 33) indicates that there is extensive overlap of large areas that presently provide suitable habitat for fishers that would likely be rendered unsuitable given the direction in the draft plans.

Moderate to dense canopy cover is consistently cited as a key attribute for fisher rest and den sites (Lofroth et al. 2010) and dense canopy is a dominant feature of home ranges in the southern Sierra Nevada (Zielinski et al. 2004). Despite its importance, the draft plans provide only one guideline for the retention of dense, multi-storied canopy conditions:

SPEC-CSO-PF-SM-GDL 01: Within the California spotted owl home range core areas, fisher strategy areas and marten core habitat areas, retain some overtopping and multi-storied canopy conditions, including some shade-tolerant understory trees such as firs and cedars, especially in drainages, swales and canyon bottoms and on north and east-facing slopes. Retain a patchy mosaic of shrubs and understory vegetation, separated by more open areas, to reduce fuel continuity, increase habitat heterogeneity, support prey and provide hiding cover, with a goal of 10 to 20 percent shrub cover at the home range scale. (Sierra draft plan, p. 98-99). This guideline is vague and not specific with as little as 1-2% of a treatment area qualifying as “some.” The draft plans provide desired conditions for some forest types, e.g., “moist Mixed Conifer” (SNF draft plan, p. 19) that come closer to habitat conditions used by fishers, but there are no requirements to meet these desired conditions when designing projects.

The draft plans include an emphasis area called a “focus landscape.” These are large areas (10,000 to 80,000 acres) where 40% of the landscape would be “treated” to move aggressively toward the desired conditions that are stated in the draft forest plan (Sierra draft plan, p. 165). Presence of fisher and suitable habitat are among the criteria for selecting a focus landscape. In the focus landscapes, elements of the draft plans designed to provide “protection” for fisher (even if limited in benefit) are waived to allow logging and other management actions.
to occur without restriction (e.g., Sierra draft plan, p. 92 and 100). There is no limit on how many focus landscapes might be designated or little limit on their size. Thus, the minimal protections provided in the draft plans are waived in areas that are likely to be the focus of intensive alteration and degradation of habitat that is suitable and potentially occupied by fisher. And by design (i.e., the criteria used to select them), the focus landscapes are likely to be concentrated in areas with significant amounts of suitable fisher habitat. Lastly, the draft plans “estimate” that twice the area would be treated compared to the existing forest plans. Given the stated intent to focus treatments in landscapes used by fisher and containing suitable habitat, the adverse impact to fisher is likely to be much greater for the draft plans compared to the existing forest plans.

The draft plans would not provide for the ecological conditions necessary to maintain viable populations of Pacific fishers on the Sierra and Sequoia national forests. Given the fisher’s imperiled status in the southern Sierra, the loss of even a few individuals could contribute to a trend toward extinction. Therefore, the first step in a sound conservation strategy is to protect the fisher’s currently occupied habitat. The forest plans approved in 2001 addressed this objective, in part, by protecting medium and large diameter trees, by maintaining canopy cover at 50 percent and limiting reductions in canopy cover to 10-20 percent, by establishing a southern Sierra fisher conservation area within which large portions of each watershed would be managed for 60 percent canopy cover, and by protecting old forest emphasis areas and smaller old growth stands (USDA Forest Service 2001).

The draft plans include none of these important protections and would allow significant degradation of fisher denning, resting, and foraging habitat. With respect to denning and resting habitat, the best available research indicates that the fisher dens and rests in forests with high canopy closure, multiple canopy layers, and a predominance of large trees, snags, and down wood. By comparison, it appears the draft plans would allow logging, with little restriction on the size of a tree to be removed, to very low canopy levels as long as the action could be justified as moving the landscape toward the desired condition or at least not preventing its attainment in the future. In effect, the draft plan would allow removal of many if not all medium-large (12-30” in diameter) trees throughout the plan areas and no limit on the removal of trees larger than this on a large portion of the fisher’s range. These medium-large trees, in combination with larger trees and snags and dense canopy closure, comprise an important element of high quality fisher habitat, and their removal is likely to significantly degrade existing and potential fisher habitat.

2. Problems with the Draft Environmental Impact Statement

The DEIS has a number of important omissions and shortcomings that preclude a thorough and accurate assessment of the likely impacts of the draft plans on the Pacific fisher and its habitat.

Overall, the DEIS does not provide the kind of information that is necessary to make a careful evaluation of the plan’s impacts on the fisher. For example, how many acres of fisher habitat (broken down by denning/resting habitat and foraging/travel habitat) would potentially be degraded or rendered unsuitable in the short-term? How many fisher home ranges or “target cells” might potentially be affected? What might the impacts of such habitat loss be on fisher survival rates, which already appear to be of concern? What might the impacts be on fisher...
reproduction? What would be the impact of proposed logging on forest fragmentation and connectivity of habitat and remaining suitable fisher home ranges? Is it possible that logging might interrupt important habitat corridors and interfere with fisher movement? What might the cumulative effects be on the viability of the southern Sierra Nevada fisher population and the potential for this population to expand to the North? A cumulative effects analysis should consider time and space, but also other environmental factors. Given the small size, precarious status, and ecological significance of the southern fisher population, all of these questions should be explored in detail before adopting a revised forest plan for the Sequoia and Sierra national forests.

The harvest prescriptions allowed by the draft plans and the amount or area that can be treated annually are not clearly defined. Appendix E: Timber Suitability and Management refers to “projected” treatments by prescription, reporting that treatments will be “primarily” thinning and group selection (e.g., Sierra draft plan, p. 156). No definition of group selection is provided and no aspect of the draft plans specifically limits how much area can be treated using group selection. Similarly, the appendix refers to the use of even-aged management, e.g., clearcutting and shelterwood prescriptions, and leaves the use of these prescriptions to project-specific analysis. Practices that create forest openings in key fisher habitat can degrade its quality and render it unsuitable. This is likely to have profound effects on fisher viability depending on the intensity of their execution at a given site and across the landscape. Given that the draft plans state no limits on the application of these potentially damaging prescriptions, the analysis of impacts to fisher should include consideration of the maximum amount of these and other habitat degrading treatments that could be applied.

In Conclusion

Based upon the existing threats to fisher habitat and population persistence, the lack of a spatial and quantitative evaluation of potential impacts to fishers in the DEIS and the profound lack of consistency with the best available science and the fisher conservation strategy commissioned by the Forest Service, it is highly unlikely that the draft plans will maintain viable populations of fishers on the Sierra and Sequoia national forests.

DATED: August 6, 2016

Reginald H. Barrett, Ph.D.

References


Achieving Compliance with the Executive Order “Minimization Criteria” for Off-Road Vehicle Use on Federal Public Lands:

Background, Case Studies, and Recommendations

The Wilderness Society

May 2016
Executive Summary

In response to the growing use of dirt bikes, snowmobiles, all-terrain vehicles, and other off-road vehicles (ORVs) on federal public lands and corresponding environmental damage, social conflicts, and public safety concerns, Presidents Nixon and Carter issued Executive Orders 11644 and 11989 in 1972 and 1977, respectively, requiring federal land management agencies to plan for ORV use based on protecting resources and other recreational uses. Specifically, the executive orders require that areas and trails designated for ORV use be located to minimize: damage to soil, watershed, vegetation, and other public lands resources; harassment of wildlife and significant disruption of wildlife habitat; and conflicts between ORV use and other existing or proposed recreational uses. While the Bureau of Land Management (BLM) and U.S. Forest Service travel management regulations echo the executive order “minimization criteria,” they do not provide guidance to field managers on how to apply the criteria.

It has been over four decades since Presidents Nixon and Carter obligated federal agencies to designate a system of ORV areas and trails that minimize impacts. Yet the agencies consistently struggle to satisfy that obligation, resulting in unnecessary damage to water, fish, wildlife, and the experience of other visitors. This is evidenced by a series of court rulings finding agency failures to comply with the minimization criteria. Those cases confirm the agencies’ substantive obligation to meaningfully apply and implement – not just identify or consider – the minimization criteria when designating each area or trail, and to show in the record how they did so.

In this report, we provide the policy framework for designating ORV trails and areas on federal lands, along with a series of recommendations based on recent case law and ten case studies from the Forest Service, BLM, and National Park Service that demonstrate both agency failures to comply with the executive order minimization criteria and good planning practices that could be incorporated into a model for application of the criteria.

We recommend that agencies issue guidance to clarify their obligations under the Executive Orders. Specifically, when designating ORV trails and areas, agencies must:

1. Actually minimize impacts – not just identify or consider them – and show how they did so in the administrative record; and
2. Apply a transparent and common-sense methodology for meaningful application of the minimization criteria that provides opportunities for public participation, incorporates the best available scientific information and best management practices, addresses site-specific and larger-scale impacts, and accounts for monitoring and enforcement needs and available resources.

The substantive obligation to minimize impacts applies to both ORV area allocations (typically made in land management plans) and specific route designations (often made in travel plans). Guidance should

---

1 The Bureau of Land Management generally uses the term “off-highway vehicle” or “OHV,” which is synonymous with off-road vehicle. For consistency across agencies and with the governing executive orders, this white paper uses the term ORV.
also clarify that agency attempts to *mitigate* impacts associated with an existing ORV system are insufficient to fully satisfy the executive order minimization criteria, which requires areas and trails to be *located* to minimize impacts in the first instance.

There is an immediate need for agency leadership and direction to assist field managers with proper implementation of the executive order minimization criteria and to provide necessary and appropriate protection for our nation’s natural and cultural resources, ensure rewarding and safe recreational experiences for all, and cure legal vulnerabilities. Guidance will also assist with implementation of President Obama’s policy on mitigating impacts on natural resources, which complements and reinforces the minimization criteria by requiring agencies to prioritize avoidance and minimization of harmful effects to land, water, wildlife, and other ecological resources. The call for immediate action is acute given that the Forest Service is embarking on comprehensive winter-time travel management planning and the BLM hopes to complete hundreds of travel plans over the next five years.

Our hope is that this white paper serves to initiate a needed dialogue within and between land management agencies that will result in enhanced agency commitment to and application of the executive order minimization criteria. The Wilderness Society stands ready to collaborate to advance these objectives.
Overview

Presidents Nixon and Carter issued Executive Orders 11644 and 11989 in 1972 and 1977, respectively, requiring federal land management agencies to minimize environmental impacts and conflicts associated with the use of dirt bikes, snowmobiles, all-terrain vehicles, and other off-road vehicles (ORVs) on federal public lands. Forty years later, the agencies continue to struggle to comply with the executive order “minimization criteria,” as evidenced by a series of court rulings finding agency failures to satisfy those criteria.

This white paper provides: (1) pertinent background information on ORV impacts and the agencies’ legal obligations; (2) selected case studies from the U.S. Forest Service, Bureau of Land Management (BLM), and National Park Service (NPS) highlighting lessons-learned from instances where the agencies have failed to satisfy their duty to minimize impacts associated with ORV use, as well as instances of successful planning practices, approaches, or outcomes that could be incorporated into a model for application of the minimization criteria; and (3) recommendations for ensuring effective compliance in the future, including suggestions for crafting clarifying guidance on proper application of the minimization criteria.

It is important that the agencies address this issue as soon as possible to provide necessary and appropriate protection for our nation’s natural and cultural resources, ensure rewarding and safe recreational experiences for all, and cure legal vulnerabilities. The call for immediate action is acute given that the Forest Service is embarking on comprehensive winter-time travel management planning and the BLM hopes to complete hundreds of travel plans over the next five years.

The Wilderness Society is committed to identifying and implementing ways to advance land management strategies to better protect and inspire Americans to care for our public lands. With this white paper, we hope to initiate a needed dialogue within and between land management agencies that will result in enhanced agency commitment to and application of the executive order minimization criteria. As always, we stand ready to collaborate to advance these objectives.

I. Background

A. Impacts from ORV use

While ORVs can provide important access and recreational enjoyment, over four decades of research has documented significant adverse environmental and social impacts associated with their use on the public lands. As the Council on Environmental Quality recognized in a 1979 Report, “ORVs have damaged every kind of ecosystem found in the United States,” and “[f]ederal lands have borne a disproportionate share of the damage.”

---

2 The Bureau of Land Management generally uses the term “off-highway vehicle” or “OHV,” which is synonymous with off-road vehicle. For consistency across agencies and with the governing executive orders, this white paper uses the term ORV.
Impacts include physical resource damage such as soil and snow compaction, erosion, crushing of vegetation, spread of invasive species, stream sedimentation, and air pollution. ORV use also degrades and fragments wildlife habitat, diminishing resilience to climate change, while ORV noise, dust, emissions, and the presence of humans disrupt wildlife processes such as breeding, feeding, migration, and nesting. Damage to cultural and archaeological resources, including unintentional crushing of artifacts and increased vandalism and looting, is also associated with ORV use. Finally, ORV use poses public safety and user conflict concerns. In particular, the noise, dust, fumes, and physical resource damage associated with ORV use can seriously impair the experience of the majority of public lands visitors engaging in non-motorized forms of recreation.³

Advancements in ORV technology and changes in use patterns have exacerbated these impacts. In addition, climate change is making public lands resources increasingly vulnerable to ORV-related impacts, with changing and in many cases more intense storm events, altered wildlife habitat and migration patterns, and other stressors intensifying resource damage.

B. Legal obligation to minimize impacts and conflicts with other uses

In response to the growing use of ORVs and corresponding environmental damage and conflict, Presidents Nixon and Carter issued executive orders to “establish policies and provide for procedures that will ensure that the use of [ORVs] on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.”⁴ To that end, the orders require federal agencies to plan for motorized use based on protecting resources and other recreational uses.⁵ When designating areas or trails available for ORV use, agencies must locate them to:

1. minimize damage to soil, watershed, vegetation, or other resources of the public lands;
2. minimize harassment of wildlife or significant disruption of wildlife habitats; and

⁵ Id. § 3.
minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands.\(^6\)

The BLM and Forest Service travel management regulations echo these “minimization criteria” (although they do not provide guidance to field managers on how to apply the criteria).\(^7\) The plain language of the executive orders and agency regulations make clear that the criteria apply both to designations of areas available for cross-country ORV travel and to designations of specific routes open to ORV use.\(^8\)

Despite their long-standing legal obligation, the Forest Service, BLM, and NPS have struggled to properly apply and implement the minimization criteria in their ORV planning decisions, prompting a suite of federal court cases. Since 2009, federal courts have repeatedly invalidated travel management decisions for agency failure to correctly apply the criteria to minimize resource damage and conflicts with other recreational uses when designating ORV areas or trails:

- **Center for Biological Diversity v. BLM**, 746 F. Supp. 2d 1055, 1071-81 (N.D. Cal. 2009) (record provided no indication that BLM considered or applied the minimization criteria when designating ORV routes in the West Mojave Desert).


- **Defenders of Wildlife v. Salazar**, 877 F. Supp. 2d 1271, 1304 (M.D. Fla. 2012) (NPS failed to articulate or document whether or how it applied the minimization criteria to ORV route designations in Big Cypress Preserve).

- **Central Sierra Environmental Resource Center v. U.S. Forest Service**, 916 F. Supp. 2d 1078, 1094-98 (E.D. Cal. 2013) (Forest Service failed to show that it actually aimed to minimize environmental damage when designating ORV routes in the Stanislaus National Forest).


---

\(^6\) Id. § 3(a). Section 3(a) also provides that “[a]reas and trails shall not be located in officially designated Wilderness Areas or Primitive Areas” and “shall be located in areas of the National Park system, Natural Areas, or National Wildlife Refuges and Game Ranges only if the respective agency head determines that ORV use will not adversely affect their natural, aesthetic, or scenic values.”

\(^7\) 43 C.F.R. § 8342.1 (BLM); 36 C.F.R. § 212.55(b) (Forest Service). NPS regulations provide that “[r]outes and areas designated for off-road motor vehicle use [in national recreation areas, seashores, lakeshores, and preserves] shall be promulgated as special regulations” and “shall comply with . . . E.O. 11644.” 36 C.F.R. § 4.10(b).

\(^8\) Exec. Order 11644, § 3(a); 43 C.F.R. § 8342.1; 36 C.F.R. § 212.55(b); see also WildEarth Guardians v. U.S. Forest Serv., 790 F.3d 920, 932 (9th Cir. 2015) (agency must apply the criteria “with the objective of minimizing . . . the effects of each particularized area and trail designation”); BLM Manual 1626.06(A)(2)(a) & (B) (agency must pay “particular attention . . . to documentation of how the [minimization criteria] were considered in making [ORV] area designation decisions” and “in making individual road, primitive road, and trail designation decisions”).
• *Southern Utah Wilderness Alliance v. Burke*, 981 F. Supp. 2d 1099, 1104-06 (D. Utah 2013) (agency acknowledgment of the minimization criteria was insufficient where the record showed no analysis of specific impacts of designated ORV routes in BLM’s Richfield Field Office).


• *WildEarth Guardians v. U.S. Forest Service*, 790 F.3d 920, 929-32 (9th Cir. 2015) (Forest Service failed to “apply the minimization criteria to each area it designated for snowmobile use” on the Beaverhead-Deerlodge National Forest and to provide the “more granular analysis [necessary] to fulfill the objectives of Executive Order 11644”).

Collectively, these cases confirm the agencies’ substantive obligation to meaningfully apply and implement – not just identify or consider – the minimization criteria when designating each area or trail, and to show in the record how they did so.

President Obama’s November 2015 memorandum on mitigating impacts on natural resources complements and reinforces the minimization criteria. The memo articulates a policy for the Departments of Interior and Agriculture “to avoid and then minimize harmful effects to land, water, wildlife, and other ecological resources (natural resources) caused by land- or water-disturbing activities, and to ensure that any remaining harmful effects are effectively addressed, consistent with existing mission and legal authorities.” The memo requires each agency to develop and implement guidance that establishes “a clear and consistent approach for avoidance and minimization of, and compensatory mitigation for, the impacts of their activities and the projects they approve” that accomplishes a “net benefit goal” (or, at a minimum, a no net loss) for important, scarce, or sensitive natural resources.

**C. Immediate need for leadership and direction**

It has been over four decades since Presidents Nixon and Carter obligated federal agencies to designate a system of areas and trails that minimizes impacts from ORV use. Yet the agencies still struggle to satisfy that obligation. In 2004, then Forest Service Chief Dale Bosworth identified unmanaged recreation as one of the “*top four threats*” to the national forests, and the next year promulgated regulations requiring National Forest System units to restrict ORVs to a designated system of routes and areas. This prompted the Forest Service to move quickly to complete summer-time ORV planning on all but a handful of national forests; the agency is just now starting to tackle winter-time ORV planning.

---


10 Id. §§ 1, 3(b), 4.

11 In 2013, a federal court found that the Forest Service regulation allowing but not requiring designation of a system for over-snow vehicle use was inconsistent with the executive order requirement “to ensure that all [public] lands are designated for all off-road vehicles” in a way that minimizes resource damage and conflicts with
While the agency deserves kudos for expeditiously ending cross-country driving and, in certain instances, elevating resource protection needs in its ORV designation decisions, it has generally failed to apply and implement the minimization criteria. That failure has resulted in avoidable resource damage and conflicts with other recreational uses.

In the BLM’s case, the agency has yet to develop ORV travel management plans for the majority of its units. The agency, however, is embarking on an ambitious plan to complete nearly 500 travel plans by 2020. Like the Forest Service, the BLM has lost court challenges to early decisions based on its failure to apply the minimization criteria. While the agency has generally failed to apply and implement the minimization criteria, its ORV designation decisions in certain national monument units do appear to minimize impacts to monument objects including cultural and archaeological resources and provide examples of good planning practice that may be transferable.

On the Park Service side, dozens of national recreation areas, seashores, lakeshores, and preserves that permit ORV use have yet to comply with the requirement to promulgate special regulations designating areas and trails to minimize resource damage and recreational use conflicts, consistent with the executive orders. As with the Forest Service and BLM, NPS ORV management has not escaped litigation, and the agency’s special regulations often minimize impacts to park resources only where the agency is under significant legal and political pressure.

Despite the string of court losses, the agencies have generally declined to issue clarifying guidance to ensure that future ORV plans satisfy the substantive duty to minimize impacts and conflicts, as well as to reduce their legal vulnerability. In the meantime, mismanaged ORV use continues to degrade soil, air, and water quality, threaten imperiled wildlife species, impair climate change adaptation, and diminish the experience of the majority of public lands visitors who enjoy the natural landscape through quiet, non-motorized forms of recreation. The resulting resource damage, public safety concerns, and conflicts also diminish the experience of ORV recreationists who do not want their use to unnecessarily harm the other recreational uses. Winter Wildlands Alliance v. U.S. Forest Service, No. 1:11-CV-586-REB, 2013 U.S. Dist. LEXIS 47728, at *27-36 (D. Idaho, Mar. 29, 2013). In response, the Forest Service finalized a winter travel management rule in January 2015. The rule is codified at 36 C.F.R. part 212, subpart C and requires forests to designate a system of areas and trails for over-snow vehicle use that satisfies the minimization criteria.


36 C.F.R. § 4.10(b). On the winter-time side, NPS regulations prohibit snowmobile use except on designated routes and water surfaces that are used by motor vehicles during other seasons, and where those routes and water surfaces are designated for snowmobile use by special regulation. Id. § 2.18(c).

The agencies’ current directives governing travel management planning fail to provide any meaningful direction on application of the minimization criteria. For example, Forest Service Handbook 7709.55, ch. 10 does not address the minimization criteria, and Forest Service Manual 7715 lists “consider[ation of] the [minimization] criteria in 36 CFR 212.55” as one of seven “policy” objectives for travel management decisions, but then simply recites the language of the regulation. Forest Service Manual 7715.5(2). Similarly, BLM’s Travel and Transportation Management Manual 1626 simply cites 43 C.F.R. § 8342.1 [the minimization criteria] as providing the relevant criteria for designation of areas and routes and states that “the decision-making process must be thoroughly documented in the administrative record.” BLM Manual 1606.06(A)[2](a) & (B).
environment or others’ enjoyment, and are concerned about being unfairly blamed for problems resulting from mismanagement.

In this context, there is an immediate need for leadership and direction to assist field managers with proper implementation of the executive order minimization criteria. This need is particularly urgent given upcoming agency planning and policy initiatives. As mentioned above, the Forest Service is commencing winter travel management planning under a new rule and is currently revising its directives to reflect the mandate to plan for snowmobile use. It is important to make sure that the agency’s approach to summer-time ORV planning is not a harbinger for similar non-compliance in upcoming winter travel management planning. On the BLM side, the agency hopes to complete hundreds of new travel management plans over the next five years. BLM is also currently revising its Travel and Transportation Management Manual and Handbook and anticipates a 2016 rollout of its “Planning 2.0,” which likely will adopt the common practice of severing land use planning (where ORV areas generally are designated) from travel management planning (where ORV routes typically are designated).

These initiatives each provide an immediate need and important opportunity for additional agency guidance on application of the minimization criteria. More detailed guidance on how to apply the minimization criteria will lead to better environmental protection, more rewarding and safer recreational experiences for all, and more efficient and less expensive planning. Guidance will also assist with implementation of President Obama’s mitigation policy, which complements and is consistent with the executive order direction to minimize impacts. Agency guidance on application of the minimization criteria and on implementation of the mitigation policy should reflect and reinforce one another.

The following case studies – which highlight both successes and failures – and recommendations offer take-aways and next steps for correcting course and institutionalizing policies and practices to finally satisfy the legal obligation first articulated by President Nixon over forty years ago.

II. Case Studies

The following case studies from the Forest Service, BLM, and NPS highlight individual elements of selected travel or resource management plans that make ORV area and/or trail designations. The case studies are not intended to be comprehensive or representative either in the selection of plans or in the description of plan elements. Rather, they are intended to highlight: (1) problematic approaches that fail to comply with the ORV executive orders and must be avoided in the future, and (2) examples of good planning practices that could be incorporated into a model for application of the minimization criteria. Importantly, the case studies highlighting good planning practices are not the result of the agencies’ application of the minimization criteria. In fact, The Wilderness Society and partner organizations have struggled to identify any Forest Service or BLM ORV designation decisions that show effective application of the minimization criteria. Nevertheless, the case studies highlight some positive trends, practices, approaches, or outcomes that may be transferable to agency efforts to correct course and finally achieve compliance with the executive orders.
The case studies, which are attached as an appendix, are as follows:

**A. Forest Service**

2. Clearwater National Forest Travel Management Plan, pp. A-3 – A-4

**B. BLM**


**C. National Park Service**


**III. Recommendations**

There is an immediate need for agency leadership and direction to ensure that ongoing and future travel management planning efforts satisfy the executive order obligation to minimize resource damage and recreational use conflicts associated with ORV use. The most obvious and effective approach is for the agencies to issue guidance that clarifies their obligation to: (1) actually *minimize* impacts – not just identify or consider them – when designating areas and trails for ORV use, and show how they did so in the administrative record; and (2) apply a transparent and common-sense methodology for meaningful application of the minimization criteria that provides opportunities for public participation, incorporates the best available scientific information and best management practices, addresses site-specific and larger-scale impacts, and accounts for monitoring and enforcement needs and available resources. We address each of these elements below, capitalizing on the take-aways from the case studies.

**A. Substantive duty to minimize impacts and conflicts**

As a threshold matter, agency guidance should clarify that agencies must *minimize* impacts – not just identify or consider them – when designating areas or trails for ORV use, and demonstrate in the
administrative record how they did so.\textsuperscript{15} In other words, the record must show how the minimization criteria were “implemented into the decision process.”\textsuperscript{16} As the Ninth Circuit recently held, “[w]hat is required is that the [agency] document how it evaluated and applied [relevant] data on an area-by-area [or route-by-route] basis \textit{with the objective of minimizing impacts}.”\textsuperscript{17} This substantive obligation is consistent with President Obama’s mitigation policy requiring agencies to avoid and minimize harmful impacts to achieve no net loss of – and ideally a net benefit to – important natural resources.\textsuperscript{18}

As the case studies and litigation outcomes highlight, there are few examples of agency compliance with that substantive mandate – and numerous examples of agency failures. The NPS’s ORV designations and management in Yellowstone National Park and Cape Hatteras National Seashore, however, provide examples of what it might look like to minimize impacts to sensitive wildlife, air quality, and non-motorized uses. And while not an application of the minimization criteria, the BLM’s impacts analysis and designation of ORV routes to protect and enhance certain natural and cultural resources in the Sonoran Desert and Ironwood Forest National Monuments also provide examples of what compliance with the substantive duty to minimize impacts might look like. Finally, the Clearwater National Forest’s analysis and decision to close recommended wilderness areas to ORV use demonstrates minimization of impacts to the forest’s wilderness resources and associated values and uses.

\textbf{B. Mitigation of impacts}

Guidance should also clarify that agency attempts to \textit{mitigate} impacts associated with an existing ORV system are insufficient to fully satisfy the duty to \textit{minimize} impacts, as specified in the executive orders. The language of the executive orders makes this clear: “[a]reas and trails shall be \textit{located} to minimize” impacts and conflicts.\textsuperscript{19} Thus, application of the minimization criteria should be approached in two steps: first, the agency locates areas and routes to minimize impacts, and second, the agency establishes site-specific management actions to further reduce impacts. The best available science confirms this tiered approach, as does President Obama’s mitigation policy, which articulates a hierarchy of first

\begin{itemize}
\item \textsuperscript{15} As the courts have routinely held, agencies must document in the administrative record how their ORV designation decisions minimize resource damage and conflicts with other recreational uses. Importantly, that procedural duty – which is grounded in the Administrative Procedure Act – is both related and \textit{in addition} to the substantive duty to minimize impacts. In other words, agencies may not remedy substantive violations of the executive orders simply by providing additional explanation in the record to justify the same designation decisions. Unfortunately, that approach is something we have seen on remand from court decisions finding such violations, including in BLM’s Richfield Field Office, on the Minidoka Ranger District of the Sawtooth National Forest, and on the Beaverhead-Deerlodge National Forest.
\item \textsuperscript{16} \textit{Idaho Conservation League}, 766 F. Supp. 2d at 1072-74 (explaining that “[t]he whole goal or purpose of the exercise is to select routes in order to minimize impacts”); \textit{see also}, e.g., \textit{Center for Biological Diversity}, 746 F. Supp. 2d at 1080-81 (“BLM is required to place routes specifically to minimize” impacts).
\item \textsuperscript{17} \textit{WildEarth Guardians}, 790 F.3d at 931 (emphasis added); \textit{see also id.} at 932 (“consideration” of the minimization criteria is insufficient; rather, the agency “must apply the data it has compiled to show how it designed the areas open to snowmobile use ‘with the objective of minimizing’” impacts).
\item \textsuperscript{18} \textit{Presidential Mitigation Memorandum}, §§ 1, 3(b).
\item \textsuperscript{19} Exec. Order 11644, § 3(a); \textit{see also Center for Biological Diversity}, 746 F. Supp. 2d at 1080-81 (“‘Minimize’ as used in the regulation . . . refers to the \textit{effects} of route designations, i.e. the BLM is required to place routes specifically to minimize ‘damage’ to public resources, ‘harassment’ and ‘disruption’ of wildlife and its habitat, and minimize ‘conflicts’ of uses.” (footnote and citations omitted)).
\end{itemize}
avoiding and minimizing impacts through proper project siting and design, and only then considering additional measures to mitigate any remaining harmful effects.\textsuperscript{20}

The relative importance of the two steps may vary according to the specific circumstances of the land management unit. In some instances, the implementation of mitigation measures may be very important to the overall minimization effort, while in others the initial placement and designation of ORV areas and routes may dominate. Examples of the former include the Park Service’s science-based, adaptive management approaches at Yellowstone National Park and Cape Hatteras National Seashore. An example of the latter is the Clearwater National Forest, where the agency decided to remove ORVs from recommended wilderness altogether.

The distinction between mitigation and minimization has generally eluded the agencies. For example, the instruction memorandum from BLM’s Utah State Office appears to sanction an inappropriate mitigation approach, directing agency staff to identify “recommended mitigation measures to minimize user and resource conflicts for each alternative.”\textsuperscript{21} Similarly, on remand from a court decision overturning its 2008 travel plan, the Minidoka Ranger District of the Sawtooth National Forest – rather than revisiting its designation decisions – has focused exclusively on monitoring and maintenance of the designated system.\textsuperscript{22}

\section*{C. Application of minimization criteria to area allocations}

Guidance should also clarify that the agencies must satisfy their substantive duty to minimize impacts when making both ORV area allocations (typically made in land management plans) and specific route designations (often made in travel plans). The plain language of the executive orders and agency regulations clearly require this, yet we have seen the agencies make area allocations with even more disregard for the minimization criteria than in the route designation context.\textsuperscript{23} Minimization of impacts associated with area designations is particularly important in winter travel management planning, where snowmobiles are often permitted to travel freely throughout large open areas, rather than being confined to specific routes.\textsuperscript{24} In overturning the Forest Service’s land management plan decision to

\begin{itemize}
\item See \textit{Switalski and Jones, 2012} (cataloguing best management practices for: (1) siting/locating routes to minimize impacts; (2) implementation, including maintenance, restoration, adaptive management, and other mitigation measures; and (3) monitoring); \textit{Presidential Mitigation Memorandum}, §§ 1, 2(f).
\item See Richfield Field Office case study, pp. A-13 – A-15 of this report.
\item See Sawtooth National Forest, Minidoka Ranger District case study, pp. A-8 – A-10 of this report. BLM’s proposed route network in the West Mojave Desert is a particularly egregious example: it would designate a massive and damaging ORV route network and then attempt to mitigate the impacts associated with its over 10,000-mile network if and when a complicated set of triggers are met. See West Mojave case study, pp. A-16 – A-17 of this report.
\item For example, BLM’s 2011 \textit{Resource Management Plan} for the Little Snake Field Office designated as open to cross-country ORV travel nearly 20,000 acres in the South Sand Wash Basin Special Recreation Management Area despite the presence of significant cultural sites vulnerable to ORV damage and other sensitive resources including a wild horse herd.
\item The Forest Service’s winter travel management rule permits open area designations to be significantly larger than in the summer travel planning context, and it does not explicitly require analysis of individual routes within those large open areas. See 36 C.F.R. § 212.1 (definition of “area”).
\end{itemize}
allocate over 60% of the Beaverhead-Deerlodge National Forest to snowmobile use, the Ninth Circuit Court of Appeals recently confirmed that the agency is required “to apply the minimization criteria to each area it designate[s] for snowmobile use.”

We also understand that BLM’s upcoming Planning 2.0 likely will sever land use planning (and associated ORV area allocations) from travel management planning designed to designate specific routes – an approach that is already commonplace. With area allocation decisions made in land use plans setting the framework for where route designations will occur in travel plans (and often leaving large swaths of land open to cross-country motorized travel, with no future decision-making required to authorize that use), proper application of the minimization criteria at both scales is important and required.

**D. Key elements of recommended methodology**

In order to achieve compliance with the substantive duty to minimize impacts associated with area and trail designations, the agencies must apply a transparent and common-sense methodology for meaningful application of each minimization criterion. Federal court decisions and the case studies in this white paper highlight necessary elements of that methodology, which are described below and should be included in agency guidance.

First, application of the minimization criteria is not solely an office exercise. As the courts have repeatedly made clear, use of cryptic spreadsheets or matrices that favor ORV use and do not facilitate implementation of the substantive duty to minimize impacts is inadequate. Rather, agencies should get out on the ground, gather site- and resource-specific information, ground-truth desk-top analyses, and then utilize that data to actually apply the criteria to minimize resource damage and use conflicts associated with each designated area and route.

The Salmon-Challis National Forest provides a telling example. There, the court invalidated the agency’s route designations that failed to utilize monitoring and other site-specific data showing resource damage. On remand, however, the agency used existing data and gathered additional site-specific information to actually assess the impacts of each route, resulting in closures of routes causing resource damage. The story on the Sawtooth National Forest is not as promising. There, the agency has taken the troubling approach on remand that it need not apply each minimization criterion to each designated route and instead may rely on compliance with the governing land and resource management plan as a proxy for satisfying its obligations under the executive orders. A federal court recently invalidated that approach in a challenge to another travel management plan: “[m]erely concluding that the proposed action is consistent with the Forest Plan does not . . . satisfy the requirement that the Forest Service . . .

---

25 *WildEarth Guardians*, 790 F.3d at 930.
26 *See, e.g., Idaho Conservation League*, 766 F. Supp. 2d at 1071-74 (agency may not rely on “Route Designation Matrices” that fail to show if or how the agency selected routes with the objective of minimizing their impacts); *S. Utah Wilderness Alliance*, 981 F. Supp. 2d at 1105 (“cryptic spreadsheet for each route segment provides inadequate information . . . for someone other than the BLM to know why or how the routes were chosen”).
28 Land and resource management plans are designed to provide long-term, forest-wide management direction – not to satisfy the executive order minimization criteria. *See* 16 U.S.C. § 1604; 36 C.F.R. part 219, subpart A.
provide some explanation or analysis showing that it considered the minimizing criteria and took some action to minimize environmental damage when designating routes.” This is just one example where clear agency guidance could avoid duplicative mistakes.

The type of site-specific information will vary depending on the area and resources at stake. For example, at Cape Hatteras National Seashore, the National Park Service conducts daily monitoring of sea turtle and bird nesting sites along designated ORV routes, and implements temporary route closures as necessary to protect those resources. In the Ironwood Forest National Monument, BLM conducted on-the-ground inventories for archaeological and cultural resources along routes proposed for designation to gather the information necessary to determine which routes to designate as open and which to close. By contrast, a federal court invalidated BLM’s route designations in the Richfield Field Office in part because the agency failed to conduct such inventories. Absent inventory data, agencies lack the information necessary to locate designated routes to minimize impacts to cultural resources.

Second, effective application of the minimization criteria must include meaningful opportunities for public participation and input early in the planning process. In many cases, public lands users and other stakeholders are the best source of information for identifying resource and recreational use conflicts. As illustrated in the litigation over the Salmon-Challis National Forest travel plan, agencies disregard site-specific information submitted by the public at their peril. At the same time, it is important that agencies assess the reliability and accuracy of information they receive, and independently verify the information as needed. In certain circumstances, collaborative processes such as the Vail Pass Task Force on the White River National Forest may provide valuable recommendations or information.

Third, application of the minimization criteria should be informed by the best available scientific information and associated strategies and methodologies for minimizing impacts to particular resources. In 2012, the Journal of Conservation Planning published a literature review and best management practices (BMPs) for ORVs on national forest lands. The BMPs provide guidelines, based on peer-reviewed science, for ORV designation decisions, implementation actions, and monitoring activities that are intended to minimize impacts to soils, water quality, vegetation, and wildlife, and conflicts with other recreational uses. Winter Wildlands Alliance recently published a similar literature review and BMPs for winter travel planning on national forest system lands, which is currently undergoing peer review. Agency decision-making processes – and ideally agency guidance addressing

---

30 The court’s decision that BLM’s failure to conduct on-the-ground inventories violated the National Historic Preservation Act is currently on appeal.
31 See 36 C.F.R. § 212.52(a) (Forest Service); 43 C.F.R. § 8342.2(a) (BLM).
32 *See Friends of the Clearwater*, 2015 U.S. Dist. LEXIS 30671, at *24-30, 40-52 (agency failed to consider best available science on impacts of motorized routes on elk habitat effectiveness or to select routes with the objective of minimizing impacts to that habitat and other forest resources).
33 Switalski and Jones, 2012.
34 Switalski, 2014.
the minimization criteria – should reference and incorporate these BMPs. Although they were formulated for national forest lands, many of the BMPs may be applicable to ORV designation decisions on BLM and NPS lands as well.

In addition to generalized BMPs, application of the minimization criteria should incorporate any relevant site- or resource-specific scientific information or analysis. For example, Yellowstone National Park not only compiled and incorporated the best available scientific information related to snowmobile use and park resources – even convening a scientific advisory team to provide guidance on those efforts – but it also conducted additional scientific studies to fill information gaps on air quality, soundscapes, snowpack chemistry, and socioeconomic impacts. The ORV management plan for Cape Hatteras National Seashore incorporates management strategies to minimize impacts to imperiled sea turtles and birds based on standards contained in state and federal recovery plans and other peer-reviewed, scientific studies. And the White River National Forest conducted a detailed analysis of recreational use conflicts that assessed factors such as the quality of recreational experiences, average travel distances and terrain needs for motorized versus non-motorized users, crowding, user trends and demands, and locations and availability of access points and staging areas.

Fourth, proper application of the minimization criteria must address both site-specific and larger-scale impacts. For example, agencies should assess and minimize landscape-scale impacts such as habitat fragmentation, cumulative noise and air and water quality impacts, and degradation of wilderness-quality lands and associated opportunities for primitive forms of recreation. Even to the extent they have considered or applied the minimization criteria, the agencies have generally failed to assess and minimize these larger-scale impacts. The Clearwater National Forest’s analysis of ORV impacts on recommended wilderness areas, however, did address landscape-scale impacts such as disturbance of long-term ecological processes and sights and sounds that degrade the areas’ naturalness and opportunities for solitude. Similarly, Yellowstone National Park analyzed the effects of snowmobile use on park resources at the site-specific and landscape scales and in the short- and long-term, looking, for example, at long-term population dynamics and range-wide displacement of bison and elk, in addition to shorter-term behavioral and physiological responses.

Finally, proper application of the minimization criteria should take into account available resources for monitoring and enforcement, as well as any measures designed to further reduce and mitigate impacts. For example, the chaotic and damaging situation in the West Mojave Desert highlights the...
importance of designating an ORV system that the agency is capable of enforcing and maintaining. Conversely, the Park Service devotes significant resources to monitoring and enforcement at Cape Hatteras National Seashore – including daily patrols for nesting sea turtles and birds and associated temporary closures that are posted on-site and regularly updated on an interactive, online Google Earth map. To ease enforcement obligations and ensure user compliance in the first place, ORV designation decisions should establish clear boundaries and simple restrictions (posted on-site and depicted on a widely available ORV area and route map) designed to minimize resource damage and conflicts with other recreational uses, and should follow a consistent rubric that areas and routes are closed unless marked open on a map. The clear delineations between motorized and non-motorized areas and trails in the management plan for the Vail Pass Winter Recreation Area on the White River National Forest provide a good example. The clear management direction at Vail Pass is further reinforced by robust monitoring and enforcement by seasonal rangers funded through permit fees.

We recommend that the agencies explore and develop policies, guidance documents, and other tools that incorporate these recommendations and ensure future compliance with the executive orders. The Forest Service’s ongoing effort to update its directives to be consistent with the new winter travel management planning rule, BLM’s ongoing revision of its Travel and Transportation Management Manual and Handbook, the anticipated 2016 rollout of BLM’s Planning 2.0, and implementation of the presidential memorandum on mitigation each provide immediate opportunities for the agencies to incorporate useful guidance on the minimization criteria into their directives. In the short-term, it also makes sense for agency directors to issue instructive memoranda explaining the agencies’ responsibilities under the executive orders.

IV. Conclusion

It has been over four decades since President Nixon obligated the federal land management agencies to minimize resources damage and recreational use conflicts associated with ORV use. With the Forest Service embarking on winter travel planning and the BLM ramping up its travel planning efforts, it is time for the agencies to provide leadership and direction to guide those processes and avoid additional litigation. We look forward to assisting the agencies with that effort and hope that the recommendations in this white paper provide a solid starting point.

Please contact Alison Flint (303.802.1404, alison.flint@tws.org) with any questions.38

38 The following Wilderness Society staff and volunteer interns contributed substantially to the content and production of this white paper: Alison Flint, Vera Smith, Phil Hanceford, Nada Culver, Scott Miller, Barbara Young, Josh Hicks, Brad Brooks, and Louisa Eberle.
APPENDIX – Case Studies
Travel Management Plan
Salmon-Challis National Forest, Idaho
U.S. Forest Service

Idaho’s Salmon-Challis National Forest is one of the largest and most remote national forests in the West. Its large roadless areas provide outstanding fish and wildlife habitat and recreational opportunities. The remoteness of the forest’s trail network, however, has limited the agency’s ability to maintain, monitor, and enforce ORV use, resulting in significant damage to forest resources. The Forest Service’s 2009 travel plan ignored the agency’s duty to minimize those impacts and designated hundreds of miles of ORV trails causing resource damage and conflicts with non-motorized uses, prompting conservation groups to file – and ultimately win – a lawsuit in federal court. Fortunately, the Forest Service has since taken more seriously its duty to minimize impacts, leading to closure of certain damaging routes.

Timeline

- 2008: conservation groups submit site-specific comments and data documenting the condition and impacts of over 400 miles of ORV routes across the forest, including those in sensitive areas.
- September 2009: Forest Service finalizes travel plan, designating more than 3,500 miles of motorized roads and trails.
- January 2010: conservation groups file suit in federal court.
- February 2011: court rules that “the Administrative Record does not demonstrate whether or how [the Forest Service] implemented and incorporated the

“[A]gencies [are] bound by the plain language of the ORV Executive Orders . . . . Simply listing the criteria and noting that they were considered is not sufficient to meet this standard. Instead, the Forest Service must explain how the minimization criteria were applied in the route designation decisions.”

- November 2011: court enjoins ORV use on six routes causing irreparable resource damage.
- August 2014: Forest Service releases Final Supplemental EIS and Record of Decision, closing approximately 45 miles of routes due to resource impacts from ORV use and imposing certain seasonal restrictions to prohibit ORV use during snowmelt and run-off, when trails are most susceptible to damage.

**Take-Aways**

- Agency must do more than just identify or consider the minimization criteria; it must actually apply them on a route-by-route basis.
- Application of minimization criteria is not solely an office exercise: the Forest Service initially failed to utilize monitoring and other site-specific data submitted by conservation groups, but on remand used existing and gathered additional information to assess the impacts of each route, resulting in closures of routes causing resource damage.
Travel Management Plan
Clearwater National Forest, Idaho
U.S. Forest Service

The remote corners of Idaho’s Clearwater National Forest remained largely untouched until the advent of modern ORVs. Expanding use and increased technological capabilities of dirt bikes, four-wheelers, snowmobiles, and even mountain bikes enabled more and more people to access roadless and recommended wilderness areas. These trends have impacted opportunities for primitive, non-motorized recreation in those areas, threatened wildlife habitat security, and caused soil erosion and stream sedimentation. Although deficient in protecting the larger forest matrix, the Forest Service’s 2011 travel management plan considered impacts to recommended wilderness areas and took protective action to minimize them by restricting both summer and winter-time ORV use in those areas.

Timeline

- July 2005: Forest Service initiates travel planning process.
- August 2011: Forest Service releases Final EIS.
- November 2011: Forest Service finalizes travel plan closing 200,000 acres of recommended wilderness to ORVs, including snowmobiles, and leaving open only 2 miles of existing trail in the proposed Great Burn Wilderness Area.
- August 2012: Motorized user groups file lawsuit seeking to overturn ORV prohibitions in recommended wilderness areas.
- February 2015: Court approves a settlement agreement requiring the agency to conduct a supplemental NEPA analysis, but leaves

“Restricting almost all motorized (summer and winter) uses . . . would ensure that long-term ecological processes remain intact and operating because the areas would not be subject to current or potentially increased future ground disturbance associated with motorized vehicles in particular. The area would appear more undeveloped than at present because the sights and sounds associated with motorized use would not occur. The opportunity for solitude would be greater . . . because most of the area would be restricted from motorized use.” Final EIS, p. 3-137, describing impacts to recommended wilderness.

Bear grass within recommended wilderness (credit: John McCarthy)
prohibitions in recommended wilderness in place.39

Take-Aways

- Analysis demonstrated that motorized use was impairing wilderness character of recommended wilderness, resulting in closures. Forest Service recognized that designating motorized use in recommended wilderness impairs its wilderness suitability because Congress is unlikely to designate those areas after motorized uses become established.
- Forest Service took initiative to proactively address winter-time ORV use and minimize impacts associated with snowmobile use in recommended wilderness areas.

39 Another lawsuit challenging other, less protective elements of the forest’s 2011 travel plan resulted in a 2015 court decision invalidating the travel plan for failure to apply and implement the minimization criteria and to comply with governing forest plan standards designed to protect wildlife habitat. Friends of the Clearwater v. U.S. Forest Service, No. 3:13-CV-00515-EJL, 2015 U.S. Dist. LEXIS 30671 (D. Idaho Mar. 11, 2015). The entire plan is now back before the agency.
Travel Management Plan
White River National Forest, Colorado
U.S. Forest Service

With its spectacular scenery, amenities ranging from developed ski areas to vast roadless and other wild lands, and close proximity to the Denver metro area, the White River National Forest is one of the most visited national forests in the nation and a mecca for both motorized and non-motorized forms of recreation. On snow-abundant and easily accessible Vail Pass, conflicts between snowmobiles and skiers and snowshoers escalated in the 1990s, leading to the formation of a collaborative task force that worked for more than a decade to ameliorate those conflicts. The forest’s 2011 travel management plan adopted the task force’s recommended management plan for the Vail Pass Winter Recreation Area and generally balanced motorized access with protection of forest resources and quiet recreation opportunities.

Timeline

- Mid-1990s: Vail Pass Task Force organized, with voluntary members representing motorized and non-motorized users.
- March 2011: Forest Service releases Final EIS and travel management plan:
  - Designates summer and winter areas and routes available for motorized travel;
  - Identifies over 500 miles of system routes and nearly 700 miles of unauthorized routes for closure and decommissioning to reduce resource damage and wildlife fragmentation, concentrate use, remove unnecessary routes, and reflect budgetary constraints (FEIS, pp. 115-135);
  - Provides detailed analysis of recreational use conflicts and recreation planning for motorized and non-motorized uses (FEIS, pp. 115-135);

“[I]nstead of trying to provide all [recreational] opportunities in all locations possible, the forest will provide opportunities in appropriate locations and of sufficient quantity and quality to be sustainable, manageable, and remain as good visitor experiences.” Final EIS, p. 70.
Adopts Task Force’s recommended management plan for 55,000-acre Vail Pass Winter Recreation Area, dividing the area into motorized/multi-use and non-motorized zones, with designated trails for each, and establishing a permitting system whose funds go to grooming, education, enforcement, and monitoring.

**Take-Aways**

- Under the right circumstances, collaborative processes that provide motorized, non-motorized, and conservation stakeholders with a co-equal voice, well-defined goals, and shared decision-making can result in effective ORV management decisions.
- To minimize conflicts between uses, ORV designation decisions should establish clear boundaries and expectations and simple restrictions, and should be based on factors such as the quality of recreational experiences, terrain needs, crowding, user trends and demands, and locations and availability of access points and staging areas.
- Agencies should consider fiscal ability to adequately maintain and enforce the designated system to prevent resource damage and conflicts with other uses.

*Illegal ORV use beyond a Forest Service motorized trail closure, causing significant damage to alpine meadow ecosystem and detracting from hikers’ enjoyment of scenic Huntsman Ridge (credit: Will Roush)*

*A family enjoying the Vail Pass Winter Recreation Area (credit: www.summitpost.org)*
SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
Travel Management Plan
Minidoka Ranger District, Sawtooth National Forest, Idaho
U.S. Forest Service

The easily accessible Minidoka Ranger District of southern Idaho’s Sawtooth National Forest provides an abundance of recreational opportunities, including fishing, camping, pine nut gathering, hiking, and rock climbing. Despite the fact that less than 3% of recreation visits to the Sawtooth in 2005 were for ORV use, the Forest Service’s 2008 travel plan revision for the Minidoka District designated nearly 2,000 miles of ORV routes, including many previously illegal, user-created trails in sensitive and impaired watersheds, riparian areas, and wildlife habitat. The agency’s failure to minimize resource damage and comply with the Clean Water Act prompted conservation groups to file – and win – a lawsuit in federal court. Unfortunately, on remand, the Forest Service adopted an ill-conceived and troubling approach that compliance with the governing land and resource management plan necessarily satisfied its duty to minimize impacts associated with ORV use.

Timeline

- November 2007: Forest Service releases environmental assessment (EA) for travel plan revisions in three Sawtooth Ranger Districts.
- December 2007: EPA comments that “there is no alternative included that would reflect actual recreation uses and priorities of the public,” “[a]ll proposed route designations . . . appear to disproportionately favor motorized recreation,” and “the number of miles of roads and trails . . . could . . . have a substantial negative impact on wildlife.”

“It goes without saying that reducing ORV use is beneficial to resources. That conclusion, however, has already been reached by the laws and regulations requiring this action. What is required of the agency is an analysis comprised of something more than restating that conclusion.” The Wilderness Society v. U.S. Forest Service, 850 F. Supp. 2d 1144, 1168 (D. Idaho 2012).
February 2008: Forest Service finalizes travel plan revision for Minidoka Ranger District, designating nearly 2,000 miles of roads and trails for ORV use, including the addition of 76 miles of user-created trails.

August 2008: Conservation groups file suit in federal court.

February 2012: Court finds numerous deficiencies in travel plan and corresponding NEPA analysis, but reserves judgment on whether the agency satisfied its duty to minimize ORV impacts. The Wilderness Society v. U.S. Forest Service, 850 F. Supp. 2d 1144 (D. Idaho 2012).

February 2013: Sawtooth National Forest Supervisor issues a white paper directing that “the level of acceptable effects to demonstrate compliance with [the minimization criteria] is defined by the Sawtooth Forest Plan, which requires compliance with the Endangered Species Act (ESA), Clean Water Act (CWA), and other resource laws, regulations, and policy” (p. 3).


March 2014: Forest Service releases a supplement to the 2007 EA, highlighting monitoring and maintenance efforts, but adopting the white paper standard that 2008 route designations satisfy the minimization criteria because all action alternatives comply with the Forest Plan (pp. 50-52).

August 2014: Final decision notice confirms approach from supplemental EA.

Take-Aways

- Making a planning decision that improves environmental conditions (for instance, by eliminating cross-country driving and restricting ORVs to designated routes) does not satisfy the agencies’ duty to minimize resource damage and conflicts with other recreational uses associated with the areas and routes that are designated.
- Efforts to mitigate impacts associated with the designated ORV system (e.g., through monitoring and maintenance efforts) is insufficient to fully satisfy the executive orders, which require that designated areas and trails be located to minimize impacts and conflicts in the first instance.
- Reliance on the forest plan as a proxy for application of the minimization criteria is inappropriate because it conflates separate and distinct legal obligations. Forest plans are not designed to satisfy...
the duty to minimize impacts under the executive orders, and compliance with plan direction does not necessarily mean impacts from ORV designations have been minimized.\footnote{A federal court explicitly rejected this approach in a March 2015 decision invalidating a different travel management plan. \textit{Friends of the Clearwater v. U.S. Forest Service}, No. 3:13-CV-00515-EJL, 2015 U.S. Dist. LEXIS 30671, at *46 (D. Idaho Mar. 11, 2015) ("Merely concluding that the proposed action is consistent with the Forest Plan does not, however, satisfy the requirement that the Forest Service provide some explanation or analysis showing that it considered the minimizing criteria and took some action to minimize environmental damage when designating routes.").}

Map depicting high density of motorized routes and seriously degraded watershed conditions (red = functioning at unacceptable risk; yellow = functioning at risk; green = functioning appropriately; gray = no data) in the Cassia Division of the Minidoka Ranger District, which includes nearly 500 miles of streams.
Land & Resource Management Plan
Beaverhead-Deerlodge National Forest, Montana
U.S. Forest Service

Southwestern Montana’s Beaverhead-Deerlodge National Forest is nationally renowned for its trout streams, large elk populations, and exceptional backcountry recreation opportunities. As the largest national forest in Montana, its island mountain ranges and diverse ecosystems provide key habitat linkages to the Greater Yellowstone Ecosystem for wide-ranging and imperiled species such as grizzly bear, Canada lynx, and wolverine. As a mecca for winter recreation, the forest has experienced an explosion in snowmobile use over the past decades, with more powerful modern machines able to travel further and faster into previously inaccessible areas. Catering to that use, the Forest Service’s 2009 revised forest plan permitted snowmobile travel across more than 2 million acres (or approximately 60% of the forest), including in sensitive wildlife habitat and favorite areas for skiers and snowshoers. Conservation groups successfully challenged that decision, leading to the first appeals court decision invalidating ORV designations that fail to satisfy the executive order duty to minimize resource damage and conflicts with other recreational uses. The seminal court opinion conclusively establishes the substantive nature of the agencies’ obligation to meaningfully apply and implement – not just consider – the executive order minimization criteria when designating each area and trail for ORV use.

Timeline
- 2002: Forest Service initiates forest plan revision.
- January 2009: Forest Service finalizes revised forest plan, acknowledging that “the unmanaged expansion of motorized uses[, including snowmobiles,] has resulted in resource damage, wildlife impacts, and competition and conflict between user groups,” yet still allocating over 60% of the forest to

“What is required is that the Forest Service document how it evaluated and applied the [relevant] data on an area-by-area [and route-by-route] basis with the objective of minimizing impacts . . . .” WildEarth Guardians v. U.S. Forest Service, 790 F.3d 920, 931 (9th Cir. 2015).
cross-country travel by snowmobiles. The plan did close recommended wilderness to motorized uses.  

- September 2010: Conservation groups file suit in federal court.  
- June 2015: Ninth Circuit Court of Appeals invalidates the 2009 decision, finding no evidence in the record that the agency applied and implemented the minimization criteria when designating areas for snowmobile use. The decision specifically adopts the rationales from earlier district court decisions also invalidating BLM and Forest Service travel management decisions.  
  
  *WildEarth Guardians v. U.S. Forest Service,* 790 F.3d 920, 929-32 (9th Cir. 2015).

**Take-Aways**

- Agencies must apply and implement – not just consider – the minimization criteria on an area-by-area and route-by-route basis, providing a “granular” analysis that applies relevant data to show how areas and trails are designed to minimize impacts.
- Agencies may not rely on forest-wide reductions in total open acreage or route mileage, or on plan-wide data or general decision-making principles. Rather, the minimization criteria are concerned with the *effects* of area and trail designations.
- The minimization criteria apply with force to area allocations made in land and resource management plans, as well as to area and trail designations made in specific travel management plans.

---

Resource Management Plan & Travel Management Plan
Richfield Field Office, Utah
Bureau of Land Management

BLM’s Richfield Field Office encompasses some of the Utah’s most iconic and remote natural landscapes, including the rugged Henry Mountains and the famed Dirty Devil River. The region’s fragile desert soils and vegetation, irreplaceable archaeological sites, and scarce water resources are particularly vulnerable to degradation caused by ORV use. A federal court recently overturned BLM’s 2008 travel plan designating over 4,000 miles of mostly user-created ORV routes – enough miles to drive from Atlanta, GA to Anchorage, AK – for its failure to minimize impacts to those resources. While BLM’s Utah State Office has shown leadership by issuing additional guidance to assist the agency with travel planning for ORVs, that guidance falls short in its interpretation of the legal duty to minimize impacts.

Timeline

- October 2008: BLM finalizes its resource management plan (RMP) and travel plan, designating over 4,000 miles of ORV routes, with approximately 400 stream crossings, and nearly 10,000 acres of areas open to cross-country ORV travel.
- November 2010: Conservation groups file suit in federal court challenging the RMP and travel plan.42
- August 2012: BLM’s Utah State Director issues an instruction memorandum (IM 2012-066) providing additional guidance for travel management planning.

“Acknowledging the minimization standards is not the same as applying them” and “[a]llowing [ORV] routes unless ‘significant, undue damage’ was ‘imminent’ is not the standard required by the minimization criteria.”

---

42 The groups also challenged five other RMPs and travel plans finalized in 2008 that cover most of southern, central, and eastern Utah. The parties litigated the merits of the Richfield plan first as part of a “test-case” approach in the consolidated lawsuit. The remaining five challenges remain pending and unresolved.
BLM applied the wrong standard by designating existing ORV routes “unless significant undue damage to or disturbance of [natural or cultural resources] or other authorized uses of the public lands is imminent.”

“[C]ryptic spreadsheet for each route segment” provided “no way to know how the BLM used or considered the information it listed” or “why or how the routes were chosen.”

BLM’s finding that ORV route designations did not damage archaeological and cultural resources was unsupported where the agency failed to conduct on-the-ground inventories for those resources along designated routes, in violation of the National Historic Preservation Act. This holding is being appealed.


**Take-Aways**

- Agencies may not establish a presumption in favor of designating existing, often user-created routes for ORV use. Instead, they must correctly apply the minimization criteria and document how they did so in the administrative record.

- Absent on-the-ground inventories for cultural resources along designated ORV routes, agencies cannot satisfy their duty under the National Historic Preservation Act to ensure travel planning decisions do not adversely affect cultural resources, and likely cannot satisfy their duty under the ORV executive orders to minimize impacts to those resources.

- While IM 2012-066 shows leadership by BLM’s Utah Office and properly recognizes the need to “clearly demonstrate that the agency’s decision-making process [is] documented as part of the administrative record,” it generally falls short in providing accurate and adequate direction for application of the minimization criteria:
  - The IM improperly treats the minimization criteria as part of a balancing test: BLM staff is “to use the best available data and their best professional judgment when weighing the purpose and need of a route against resource and user conflicts.”
  - The IM confuses the duty to minimize impacts with an approach that would mitigate impacts: BLM staff is to identify “recommended mitigation measures to minimize user and resource conflicts for each alternative.”
SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
Resource Management Plan Amendment & Route Designation Project
California Desert Conservation Area, West Mojave, California
Bureau of Land Management

Southern California’s Mojave Desert is home to iconic Joshua trees, imperiled desert tortoise and bighorn sheep, “cryptobiotic” soil crusts, and other unique and fragile resources. In its 1976 designation of the California Desert Conservation Area, Congress recognized that those resources are “extremely fragile, easily scarred, and slowly healed” and “seriously threatened” by growing and inadequately managed recreational use, including ORV use. 43 U.S.C. § 1781(a). BLM, however, has continued to sanction rampant and irresponsible ORV use and associated resource damage, leading to a 2009 court order requiring the agency to go back and designate ORV routes in a way that satisfies its legal obligation to minimize impacts to sensitive desert resources and conflicts with other uses. Unfortunately, the agency’s 2015 proposal to double the mileage of its route network to over 10,000 miles utterly fails to satisfy that obligation and blatantly disregards the court’s order.

Timeline

- March 2006: BLM finalizes West Mojave Plan, designating over 5,000 miles of ORV routes, including in sensitive wildlife habitat.
- September 2009: Court invalidates route designations where “there is nothing in the record to show that the minimization criteria were in fact applied when O[R]V routes were designated” and “[t]he essence of the BLM’s position is that the Court should find that the BLM complied with [the minimization criteria] when it designated thousands of miles of O[R]V routes . . .

“Minimize’ as used in the regulation does not refer to the number of routes, nor their overall mileage. It refers to the effects of route designations, i.e. the BLM is required to place routes specifically to minimize ‘damage’ to public resources, ‘harassment’ and ‘disruption’ of wildlife and its habitat, and minimize ‘conflicts’ of uses. Thus, simply because the BLM closed two-third of the routes evaluated does not, on its own, compel the conclusion that the minimization criteria were applied.” Center for Biological Diversity v. Bureau of Land Management, 746 F. Supp. 2d 1055, 1080-81 (N.D. Cal. 2009) (footnote and citations omitted).

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)


- December 2014: BLM field report documents areas overrun with tens of thousands of ORVs over the Thanksgiving holiday weekend, including illegal incursions into wilderness areas and other sensitive biological and cultural sites.

- March 2015: BLM’s preferred alternative in its draft supplemental EIS would designate over 10,000 miles of mostly user-created routes – twice the mileage in the invalid 2006 plan – and, according to the agency’s own impact analysis, have the “largest magnitude of adverse impacts” to fragile desert resources, which the agency would then attempt to mitigate.

**Take-Aways**

- Consideration or evaluation of impacts is not the same as minimizing those impacts, and agency methodology may not skew route designation decision-making in favor of ORV use.
- Minimizing resource damage and conflicts with other uses requires adequate enforcement and maintenance capability for the designated system.
- A strategy to mitigate impacts associated with an otherwise damaging route network does not satisfy the executive orders, which require the agency to locate designated routes to minimize impacts in the first instance.
National Monument Resource Management Plans
Sonoran Desert and Ironwood Forest National Monuments, AZ
Bureau of Land Management

As crown jewels of our federal public lands, national monuments are established and managed to protect and restore their outstanding cultural, ecological, and scientific values for the benefit of current and future generations. The Sonoran Desert and Ironwood Forest National Monuments (NM) in Arizona – both managed by BLM – contain extraordinary and fragile biological and archaeological resources (known as “monument objects”) that are particularly vulnerable to damage caused by ORV use. BLM’s recent resource management plans (RMPs) for the two monuments carefully analyzed those impacts and limited ORV use to safeguard monument objects. While BLM’s application of the executive order minimization criteria fell significantly short, its methodology for assessing and designating ORV routes to protect monument objects could potentially be carried forward to comply with the executive order duty to minimize impacts and conflicts.

Timeline

- June 2000: President Clinton establishes the Ironwood Forest NM to protect outstanding geological, biological, and archaeological resources, including 800-year-old ironwood forest habitat that supports nearly 700 plant and animal species.
- January 2001: President Clinton establishes the Sonoran Desert NM to protect “a magnificent example of untrammeled Sonoran desert landscape,” including extraordinary saguaro cactus forests, packrat middens, and archaeological resources.
- 2007-2008: BLM conducts on-the-ground inventories for archaeological and cultural resources along all motorized and some non-motorized routes within the monument.

“Motorized vehicle use off road has led to visible and persistent damage to the soils and vegetation of lands adjacent to primary access routes, to degradation of the natural and cultural resource objects for which the monument was designated . . . , and to degradation of the scenic values of the monument.”

BLM Decision Memorandum: Temporary Route Closure, Sonoran Desert National Monument.

Ironwood Forest National Monument (credit: Phil Hanceford)
Ironwood Forest NM.

- **August 2007:** BLM issues temporary closure of 88 miles of ORV routes in the Sonoran Desert NM to protect monument objects from “visible and persistent damage” and “degradation.”

- **September 2011:** BLM releases Proposed RMP and Final EIS for Ironwood Forest NM.

- **June 2012:** BLM releases Proposed RMP and Final EIS for Sonoran Desert NM, assessing the impact of each motorized route and route network alternative on monument objects and assigning a negligible, minor, moderate, or major impact, with “adequate protection” only where impacts are minor or negligible, or where moderate impacts can be mitigated to reduce them to minor (pp. 4-543 – 4-556, 4-561 – 4-568, 4-574 – 4-586, S-4 – S-5).

- **September 2012:** BLM finalizes RMP and associated travel plan for Sonoran Desert NM, which closes approximately 35% of existing routes to ORV use (travel plan, p. 4).

- **February 2013:** BLM finalizes RMP for the Ironwood Forest NM, which closes approximately 17 miles of existing routes and over 10,000 acres to ORV use to protect wildlife habitat and cultural resources (pp. 75-81).

**Take-Aways**

- Agencies should obtain necessary, site-specific information – including on-the-ground cultural resource inventories – early in the planning process to inform decision-making about area and trail designations to minimize resource damage and recreational use conflicts.

- Agencies should evaluate the impacts of each ORV route and route network alternative on each relevant resource, and designate only those routes that fall below a defined threshold of minimal impacts.
Winter Use Plan & Special Regulation
Yellowstone National Park, Wyoming, Montana, Idaho
National Park Service

Yellowstone, the nation’s first national park, is over 2.2 million acres and sees over 3 million visitors a year – the vast majority during the summer months. The Greater Yellowstone Ecosystem, with Yellowstone National Park at its core, is vaster still, largely intact, and provides critical habitat for grizzly bear, bison, wolverine, and myriad other species. Within the park, winter offers a unique opportunity to view wildlife, geysers, and Yellowstone’s other natural wonders by ski, snowshoe, snowmobile, and “snowcoach” on unplowed roads leading into the interior. In the six decades since over-snow vehicles (OSVs) first entered the park, visitation has rapidly expanded – to as high as 140,000, and on average about 90,000 per winter season – primarily via snowmobile and snowcoach. With increasing use came calls for better management to protect natural soundscapes and pristine landscapes, while minimizing impacts to quiet recreation use, wildlife, and other park resources. To inform its winter management plan, NPS conducted monitoring and a number of scientific studies on air quality, soundscape, snowpack chemistry, and socioeconomic impacts. The agency’s 2013 Special Regulation and Winter Use Plan represent over a decade of planning and public input and incorporate the best-available science to create a cleaner, quieter Yellowstone for the benefit of winter visitors and wildlife alike.

Timeline

- 1970s-1980s: Grooming begins, winter lodging opens, and visitation rockets, with original Master Plan encouraging OSV use and providing few restrictions.
- 1990s: Visitation continues to grow; ambient air quality issues become a major concern; and NPS completes first formal winter use plan (1990), with some new restrictions and a visitor use monitoring program to address concerns amid growing OSV use.

“Alternative 4 was identified as the preferred alternative due to its potential to make the park cleaner and quieter than what has been authorized in past winter seasons, while at the same time allowing for increases in park visitation. Rather than focusing solely on numbers of OSVs allowed in the park, alternative 4 focuses on the impacts that result from OSV use . . . . This management framework is impact-centric, rather than vehicle number-centric, and is more consistent with the science of winter use, particularly the science related to natural soundscape preservation and wildlife disturbance.” Yellowstone National Park Winter Use Plan/SEIS, p. 77.
• 2000: NPS attempts to drastically reduce OSV use in Yellowstone and Grand Teton National Parks amid growing concerns and evidence over safety, visitor enjoyment, air quality, natural soundscapes, and wildlife impacts.

• 2001-2010: Under public and litigation pressure, NPS develops a series of winter use plans implementing best-available technology standards and commercial guiding requirements for OSVs. Several plans are invalidated by the courts and remanded, with temporary plans put in place. NPS convenes a scientific advisory team to compile and conduct scientific studies on OSV use and park resources.

• 2013: NPS finalizes and publishes Winter Use Plan/SEIS and Special Regulation establishing:
  o Limits on OSV use – both snowmobiles and snowcoaches – based on number of “transportation events,” with adjustments to group size and vehicle type permitted based on impact (e.g., larger group size allowable if stricter, voluntary environmental performance standards met);
  o Restriction that OSV use be confined entirely to roads used by motor vehicles to minimize impacts to wildlife and other visitors;
  o 35mph speed limit to minimize noise and protect visitor safety;
  o Phased-in, performance-based best available technology standards for OSVs to reduce impacts while not being overly burdensome on operators; and
  o Adaptive management framework designed to maintain OSV impacts within permissible, identified range, and to gather additional data to inform future planning.

**Take-Aways**

• To inform plan decisions, agencies should collect and summarize best available science, as well as develop and implement scientific studies as needed to fill information gaps.

• In appropriate circumstances, agencies should consider adaptive management approaches that tie ORV plan designations and restrictions to technological innovations and other factors affecting the type and extent of resource impacts.

• Agencies should assess the effects of ORV use at the site-specific and landscape scales, as well as in the short- and long-term (e.g., analysis of impacts on bison and elk addresses long-term population dynamics and range-wide displacement, in addition to shorter-term displacement and behavioral and physiological responses, *SEIS, pp. 216-219*).
Noise simulation modeling depicting the distance snowmobile and snowcoach noise travels beyond groomed roads, and accounting for factors such as topography, vehicle speeds, vehicle group size, temperature, relative humidity, snow cover, and ambient sound levels (credit: NPS 2013)
ORV Management Plan & Special Regulation
Cape Hatteras National Seashore, North Carolina
National Park Service

Cape Hatteras, on North Carolina’s Outer Banks, was the nation’s first national seashore. The seashore’s dune, beach, and intertidal habitats provide both outstanding recreational opportunities and critically important nesting, breeding, feeding, and roosting sites for imperiled birds and sea turtles. Though ORV users account for less than 5% of seashore visitors, the demand for motorized access to Cape Hatteras beaches has skyrocketed over the past decades – with as many as 2,000 vehicles on the beaches each day during peak season. Growing ORV use has coincided with precipitous declines in bird species, damage to turtle nests and reduced hatchling survival, and public safety concerns. Following intense legal and political pressure to address these impacts, the Park Service promulgated a special regulation and ORV management plan based on the best available science and significant public input that is tailored to minimize impacts to wildlife, while preserving motorized beach access.

Timeline

- July 2007: In a criminal case finding a Cape Hatteras visitor guilty of operating a vehicle without due care, federal district court judge questions the legality of any ORV use absent a special regulation designating such use in accordance with executive order minimization criteria. United States v. Vasile, No. 2:07-M-1075-BO, 2007 U.S. Dist. LEXIS 52213 (E.D.N.C. July 17, 2007).
- October 2007: Conservation groups file a lawsuit in federal court challenging NPS’s failure to issue a long-term management plan and special regulation governing ORV use.
- December 2007: NPS publishes notice of establishment of negotiated rulemaking advisory committee to develop special regulation; after a dozen meetings, the committee of 30 representatives of stakeholder groups was unable to reach consensus, but provided insight for the development of the plan and special regulation.

“[A]reas of high resource sensitivity and high visitor use will generally be designated as [vehicle-free areas] year-round or as seasonal ORV routes, with restrictions based on seasonal resource and visitor use. . . . The year-round designation of [vehicle-free areas] and ORV routes, in conjunction with the species management strategies described in the final plan . . . , will provide for species protection during both the breeding season, using the standard set of buffers . . . , and the nonbreeding season.” ORV Management Plan, Record of Decision, pp. 4-5.

Vehicles on Cape Hatteras National Seashore (credit: outerbanks.org)
April 2008: Lawsuit resolved by consent decree establishing deadlines for completion of an ORV management plan and special regulation, and a revised interim management plan.

December 2010: NPS finalizes ORV management plan.

January-February 2012: NPS publishes special regulation designating ORV routes and implements 2010 management plan, establishing:

- Permit requirement and restrictions on permitted types and uses of ORVs;
- Seasonal and night-time driving restrictions for wildlife protection; and
- Temporary route closures to implement species management strategies including proactive pre-nesting closures and standard buffers around nesting and fledging sites, resulting in daily updates to an interactive beach access map on Google Earth and on-site signage.\(^{43}\)

2012-2013: Record-breaking numbers of sea turtle nests recorded.


Take-Aways

- Minimizing impacts to wildlife and other resources, while continuing to permit ORV use, may require significant agency resources in the form of monitoring, enforcement, and iterative processes to ensure resource protection.
- Agencies should utilize the best available scientific information to inform application of the minimization criteria (e.g., management strategies for imperiled species based on U.S. Fish & Wildlife Service recovery plans, U.S. Geological Survey studies, state wildlife agency recommendations, and other peer-reviewed information).
- Agencies should provide significant opportunity for stakeholder and public participation early in the ORV designation process to identify impacts and conflicts, and strategies to minimize them.

\(^{43}\) Pursuant to the National Defense Authorization Act for Fiscal Year 2015, Public Law No. 113-291, § 3057, the NPS recently adjusted wildlife buffers and is currently considering whether to make other modifications to the ORV management plan and special regulation. Due to this ongoing effort, the interactive map is not currently available, and the NPS is working to finalize a new format for delivering beach access information. See [https://www.nps.gov/caha/learn/management/2015ndaact.htm](https://www.nps.gov/caha/learn/management/2015ndaact.htm).
WINTER RECREATION ON NATIONAL FOREST LANDS

A COMPREHENSIVE ANALYSIS OF MOTORIZED AND NON-MOTORIZED OPPORTUNITY AND ACCESS

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
Winter Recreation on National Forest Lands
A Comprehensive Analysis of Motorized and Non-Motorized Opportunity and Access

June, 2015
By Hilary Eisen

ACKNOWLEDGEMENTS

This report is an update to the 2006 “Winter Recreation on Western National Forest Lands” report written by Kathleen Rivers and Mark Menlove. It is made possible by a generous contribution from the Mountaineers Foundation.

Winter Wildlands Alliance would like to thank the USDA Forest Service staff who compiled the information requested for, and used in, this report.

Thank you to Kris Erikson for photo contributions.

Cover photo: Kris Erikson
Layout and Design: Brittany Jones

Please contact Winter Wildlands Alliance for additional copies of this report. This report and related materials may also be downloaded from www.winterwildlands.org

Winter Wildlands Alliance
910 Main Street, Suite 235
Boise, Idaho 83702
208-336-4203
www.winterwildlands.org

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
The purpose of this report is to provide data on winter recreation use, opportunity and access on National Forest lands. The information presented here was collected from Forest Service offices across the country and is the most complete compilation of its kind. Presented on a forest-by-forest as well as Regional basis, the data is reported as use levels, miles of available motorized and non-motorized groomed trails, and acres open and closed to motorized use.

This is an update of a 2006 report titled Winter Recreation on Western National Forest Lands. It is expanded to include 77 forests - 19 that the original report did not cover - and uses the most up to date information available from the Forest Service, acquired through Freedom of Information Act (FOIA) requests in 2014. The need for this report is similar to the first, as winter recreation use and conflict on public lands – and National Forest lands in particular – has only escalated in the decade since the original report was issued.

Participation in winter recreation is steadily growing at both ends of the spectrum. The most recent government survey, conducted in 2010, estimates that participation in cross-country skiing, snowshoeing, and snowmobiling in the United States have more than doubled since 1982-83. See Figure 1, pg. 3.

Opportunity and access are central issues to all user groups. Citing the motorized impacts of noise, exhaust, safety concerns and snowmobile tracks, skiers and snowshoers assert that opportunities for quiet, quality recreation have been lost on many forests. Snowmobilers counter that their access to forest lands is being limited. Until the 1990s, there was little geographical overlap between motorized and non-motorized winter recreationists. Before that time, motorized use was generally limited to packed trails and roads as early snowmobiles would easily become bogged down in deep snow. Skiers and snowshoers wishing to avoid motorized impacts could go off-trail to areas unreachable by snowmobile. In the 1990s, however, the development of “powder sleds” designed for off-trail travel vastly increased the reach of snowmobiles allowing the newer, more powerful machines to dominate terrain previously accessible only by backcountry skis or snowshoes.

This report provides concrete data to Forest Service officials and public land users to help them better address the issue of equitable opportunity and access for quality winter recreation on National Forest lands. In 2014 Winter Wildlands Alliance submitted Freedom of Information Act (FOIA) requests to each National Forest receiving regular snowfall. See Table 1, pg. 11. The FOIA requests sought, from each individual National Forest, documentation of the following: number of acres open to snowmobiles; number of acres closed to snowmobiles, including Wilderness areas; miles of managed motorized snow trails, routes, or roads; miles of managed non-motorized snow trails, routes, or roads; GIS data related to winter recreation on National Forest lands.

In addition, using data from the National Visitor Use Monitoring Program (NVUM) conducted by the Forest Service, Winter Wildlands Alliance gathered annual visitor numbers for cross-country skiing, snowshoeing and snowmobiling for each forest. NVUM data shows that these forests receive 6.9 million cross-country skier and snowshoer visits annually and 4.0 million snowmobile visits annually. See Figure 2, pg. 3.

The FOIA responses show that, of the 176 million acres of National Forest land within the forests that receive regular snowfall, approximately 94 million acres, or 53%, is open to snowmobiles. See Figure 3, pg. 4.

Significantly, of the approximately 63.4 million acres officially designated as non-motorized, more than half lies within designated Wilderness areas. Motorized proponents often point out that non-motorized users have exclusive use of Wilderness areas. However, in winter, the distances from plowed parking areas and trailheads make the vast majority of designated Wilderness areas inaccessible to many skiers and snowshoers. Many acres of Wilderness that are included in this report do not support skiing or snowshoeing because of a lack of snow. Similarly, many of the acres that are technically open to snowmobiling do not have enough snow to support use. One much-needed element of further research is a better understanding of how designated Wilderness areas provide viable winter recreation opportunities by determining which Wilderness lands receive enough snowfall to support winter recreation and are sufficiently close to allow day-use access.

Despite the fact that the NVUM surveys show 58% more cross-country skier and snowshoer visits than snowmobile visits, more than one and a half times as many acres are open to motorized use than designated as non-motorized in winter. When difficult-to-access Wilderness areas are taken out of the equation the disparity becomes more severe, with three times as much designated motorized acreage as there is non-motorized, non-Wilderness acreage.

As for managed winter trails, the FOIA responses show an estimated 26,728 miles of managed snow trails in these National Forests. Just 5,746 miles, or 22%, are designated as non-motorized. See Figure 4, pg. 5.

The trails data provided in this report, while the best available at the moment, do not reflect the complete inventory of trails on National Forest lands. As it is, however, the data show that there are 4 times more winter trails open to snowmobiles than there are trails designated as non-motorized. There are several reasons why snowmobile trail miles vastly outnumber non-motorized trail miles. For one, snowmobiles cover much greater distances in a day than skiers or snowshoers do and therefore desire a more expansive trail system. However, this discrepancy in distance traveled is the very reason that there is a need for more non-motorized areas outside of Wilderness – areas near plowed parking areas should be prioritized for non-motorized use in order to remedy this inequity.

Local snowmobile clubs often pay to groom motorized trails, which are generally funded at least in part through snowmobile registrations. These trails are often also funded through...
WINTER RECREATION ON NATIONAL FOREST LANDS

Recreational Trails Program (RTP) dollars, which are derived from the federal fuel tax. Anybody who buys gas for a vehicle pays into this fund. Both motorized and non-motorized users rely on Sno-Parks in states such as California, Idaho, Oregon, and Washington, which are funded through user fees. Nordic ski grooming operating costs are usually covered through a variety of means as well, such as use fees, although there is no mandatory state registration fee for skiing. Both motorized and non-motorized users share a variety of funding sources and funding is a challenge for all user groups.

The disparity between motorized and non-motorized opportunity and access is repeated on a forest-by-forest and Region-by-Region basis across the nation. As a result it is difficult for skiers and snowshoers to find a quality recreation experience, and with increasing use levels there is escalating conflict between motorized and non-motorized users on National Forest lands.

Multiple-use is defined as the “management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people.”2 This does not mean that all activities should or need to occur in all places. In fact the Multiple Use and Sustained Yield Act states that multiple use management specifically allows for land to be used for “less than all of the resources; and harmonious and coordinated management of the various resources”.2 Winter Wildlands Alliance and our constituents contend that in many cases the designation “multiple-use” is a misnomer and is de facto single use: motorized. In other words, while skiers and snowshoers have access to multiple-use areas, because of the motorized impacts listed above and elaborated in this report, the opportunity for a quality human-powered recreation experience is lost on many of the forest lands designated as multiple-use because those lands see high levels of snowmobile use often diminishing the skiing and snowshoeing experience.

Executive Order 11644, signed by President Nixon in 1972, requires the Forest Service “to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.” The order continues, stating that, “areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.”

In 2005, the Forest Service released new regulations to better manage and address the impacts associated with off-road vehicle use on National Forest lands and comply with Executive Order 11644. The 2005 Travel Management Rule marked a fundamental shift in how the Forest Service manages motorized recreation but it left management of over-snow vehicles (OSVs) as optional.4 Following a challenge by Winter Wildlands Alliance, a Federal Court ruled that the OSV exemption in the 2005 Rule was unlawful and ordered the Forest Service to write a new rule to address this issue. The new Over-Snow Vehicle Rule was published in January 2015 and requires all National Forest Units that receive adequate snow to designate routes and areas where OSV use is allowed. Once these designations are published on an OSV Use Map, OSV use that is not in accordance with the map is prohibited. Some forests have already begun this process, and many more will do so in the coming years.

The data in this report provide a baseline understanding of winter travel management on National Forest lands at the start of this winter travel planning era. Through winter travel planning we hope that, in every applicable National Forest Unit, sizeable and accessible areas will be managed for non-motorized use to ensure a quality recreation experience for human-powered winter recreationists. All snow recreation should be managed to protect the safety and enjoyment of all users, natural resources and wildlife. Furthermore, Winter Wildlands Alliance believes that winter travel planning should prioritize protection of wintering wildlife and critical winter habitat over all recreation use, whether motorized or non-motorized.

HISTORICAL OVERVIEW

Skiing and snowshoeing have a long and rich tradition on Western forests. Early European trappers, hunters, explorers and surveyors adopted snowshoes from Native Americans as their primary mode of winter travel.5 Scandinavian miners brought their skiing tradition with them to the Western mining camps of the mid-1800s and skiing quickly caught on both as recreation and for more utilitarian purposes such as mail delivery during long isolated winters.6 Skiers and snowshoers have ventured into the backcountry ever since. The first ski race in the United States took place in 1860 in California.7 The first backcountry ski huts were developed in Idaho and Colorado in the 1930s and 1940s. Archeological findings, including skis preserved in bogs and prehistoric rock art, date the use of skis and snowshoes to 5,000 years ago.8

As to historical snowmobile use, attempts to build over-the-snow machines date back to the 1920s.9 In 1935 a utilitarian snowmobile that could carry twelve people was developed for emergency transport10 and the timber industry also made use of an early snowmobile.11 Not until the 1950s, however, with the invention of small gas engines, did snowmobiles come into use for recreational purposes. By the 1970s, a number of small manufacturers were building snowmobiles. Honda made a prototype machine in 1973 called the White Fox that had a 178 cc two-stroke engine and weighed 227 pounds. It could be carried in the back of a station wagon.12 The specifications for the Sno-Jet (a company purchased by Kawasaki) made in 1976 show a 355-pound machine with a 338 cc engine.13

Until the 1990s, however, snowmobiles were generally restricted to packed trails and roads as the earlier machines would easily become bogged down in deep snow. In the mid-1990s, the development of the “powder sled” vastly changed the pattern of snowmobile use. As stated by the International Snowmobile Manufacturers Association, “today's snowmobiles
bear little resemblance to earlier models.”

For example, the Snowmobile.com “Mountain Snowmobile of the Year” for 2015, the Ski-Doo 800 Summit with T3, weighs 467 pounds and has a 799.5cc engine that reaches up to 7,900 RPMs.

These advances in technology have expanded the terrain used by snowmobiles, leading to conflicts with skiers and snowshoers. The National Survey on Recreation and the Environment, a collaborative study co-sponsored by the Forest Service, concludes, “new technologies and better modes of accessing backcountry will continue to shift the nature of the demand for outdoor recreation.”

The newest modes of backcountry winter travel include “snow bikes” – modified motorcycles with tracks instead of wheels – and “fat bikes” – bicycles with large, low-pressured tires designed for over-snow use – and have brought an even broader diversity of winter users into the backcountry.

INCREASING NUMBERS OF PARTICIPANTS

Participation in winter recreation is steadily growing. Government surveys put the number of snowmobile participants in the U.S. in 1982-83 at 5.3 million. Prior to that time, snowmobiling was not even included in the surveys, the first of which was conducted in 1960. The most recent survey, conducted in 2010, estimates that in the United States 10.7 million people snowmobile annually. In 2014 there were 1,397,262 snowmobiles registered in the United States.

Figure 1: National Participation in Cross-Country Skiing, Snowshoeing, and Snowmobiling

Source: U.S. Government, National Outdoor Recreation Survey
*The 1983 and 1995 surveys did not track snowshoeing

As to human powered winter sports, the same government surveys show that in 1960, 2.6 million people in the U.S. participated in snow skiing, including cross-country skiing. By the winter of 1982-83 there were an estimated 5.3 million cross-country skiers (the survey did not track snowshoeing or telemark/alpine touring ski participation). The most recent government surveys show that in the United States 10.2 million people cross-country ski or snowshoe annually. See Figure 1. Forest Service surveys show that National Forests receive almost 7 million cross-country ski or snowshoe visits each year. It is difficult to compare individuals and user days but these numbers both serve to indicate that Nordic skiing and snowshoeing are increasingly popular activities across the nation.

The Outdoor Foundation reports that 8.12 million people participated in cross-country skiing, snowshoeing, or telemark skiing in the 2012-2013 winter season. By comparison, the Outdoor Industry Association reported that there were 2.98 million people who participated in snowmobiling during the 2012-2013 season. Participation in backcountry, or “undeveloped”, skiing is projected to be one of the fastest growing forms of outdoor recreation through 2060 while participation motorized snowsports is projected to be among the slowest growing activities. At the same time, hybrid skiing – using snowmobiles to access backcountry ski terrain – has grown in popularity although there are no hard numbers for how many people pursue this activity each year.

In recent years, the National Forest Service has conducted a National Visitor Use Monitoring Program (NVUM) to gain more detailed participation data for each forest. This program includes visitor use surveys that are designed to measure the reasons why people visit a particular forest and the amount of participation in each activity in that forest. The results of the surveys from the National Forests in this report show that these forests receive 6.9 million cross-country skier and snowshoer visits annually and 4.0 million snowmobile visits annually. Backcountry skiing is usually classified as cross-country skiing in NVUM surveys. See Table 1 for forests studied and Figure 2 for NVUM visitation estimates.

In their study of recreation trends, the Forest Service concludes, “there will likely be more conflicts among recreationists who will be competing at the same times for use of some of the same areas and sites for different forms of outdoor recreation.” These “continued increases in visits to most federal and state forests and parks will put added pressures on public managers to adopt new management policies and practices.”

As to human powered winter sports, the same government surveys show that in 1960, 2.6 million people in the U.S. participated in snow skiing, including cross-country skiing. By the winter of 1982-83 there were an estimated 5.3 million cross-country skiers (the survey did not track snowshoeing or telemark/alpine touring ski participation). The most recent government surveys show that in the United States 10.2 million people cross-country ski or snowshoe annually. See Figure 1. Forest Service surveys show that National Forests receive almost 7 million cross-country ski or snowshoe visits each year. It is difficult to compare individuals and user days but these numbers both serve to indicate that Nordic skiing and snowshoeing are increasingly popular activities across the nation.

The Outdoor Foundation reports that 8.12 million people participated in cross-country skiing, snowshoeing, or telemark skiing in the 2012-2013 winter season. By comparison, the Outdoor Industry Association reported that there were 2.98 million people who participated in snowmobiling during the 2012-2013 season. Participation in backcountry, or “undeveloped”, skiing is projected to be one of the fastest growing forms of outdoor recreation through 2060 while participation motorized snowsports is projected to be among the slowest growing activities. At the same time, hybrid skiing – using snowmobiles to access backcountry ski terrain – has grown in popularity although there are no hard numbers for how many people pursue this activity each year.

In recent years, the National Forest Service has conducted a National Visitor Use Monitoring Program (NVUM) to gain more detailed participation data for each forest. This program includes visitor use surveys that are designed to measure the reasons why people visit a particular forest and the amount of participation in each activity in that forest. The results of the surveys from the National Forests in this report show that these forests receive 6.9 million cross-country skier and snowshoer visits annually and 4.0 million snowmobile visits annually. Backcountry skiing is usually classified as cross-country skiing in NVUM surveys. See Table 1 for forests studied and Figure 2 for NVUM visitation estimates.

In their study of recreation trends, the Forest Service concludes, “there will likely be more conflicts among recreationists who will be competing at the same times for use of some of the same areas and sites for different forms of outdoor recreation.” These “continued increases in visits to most federal and state forests and parks will put added pressures on public managers to adopt new management policies and practices.”

As to human powered winter sports, the same government surveys show that in 1960, 2.6 million people in the U.S. participated in snow skiing, including cross-country skiing. By the winter of 1982-83 there were an estimated 5.3 million cross-country skiers (the survey did not track snowshoeing or telemark/alpine touring ski participation). The most recent government surveys show that in the United States 10.2 million people cross-country ski or snowshoe annually. See Figure 1. Forest Service surveys show that National Forests receive almost 7 million cross-country ski or snowshoe visits each year. It is difficult to compare individuals and user days but these numbers both serve to indicate that Nordic skiing and snowshoeing are increasingly popular activities across the nation.
COMPETING RECREATION USES ON A FINITE RESOURCE

The National Forests identified in Table 1 encompass a total of 176 million acres and include all of the forests that receive regular snowfall and manage for winter recreation.

This report focuses on the National Forest lands as these lands are generally at higher elevations and receive more reliable snow than most BLM and state-owned public lands. In addition, new Forest Service regulations that mandate winter travel planning provide context and an opportunity to revisit winter recreation management and address inequities on Forest Service lands.

These forests also represent escalating conflict zones, with cross-country skiers and snowshoers asserting that on many forests it is nearly impossible to find the quiet, peaceful recreation experience they seek, and snowmobilers countering that the forest lands are increasingly being closed off to them.

In an effort to shed more light on these competing assertions, in 2014, Winter Wildlands Alliance submitted Freedom of Information Act (FOIA) requests to each of these National Forests. The FOIA requests sought, from each individual National Forest, documentation of the following:

1. Number of acres open to snowmobiles.
2. Number of acres designated as non-motorized in the winter, including Wilderness areas
3. Miles of trail or road managed for motorized over-snow use
4. Miles of trail or road managed for non-motorized winter recreation
5. Forest closure orders, travel management plan documents, or other decisions and supporting documents governing the use of over-snow vehicles
6. Surveys of public use, attitudes, preferences, or opinions concerning winter recreation
7. Reports detailing the economic impact of winter recreation
8. GIS data showing winter recreation management

The majority of forests responded and the data were refined after many hours of follow up calls and submission of amended requests.

The responses received from the forests show that approximately 94 million acres, or 60%, of the forest land within the Snow Belt (forests that receive regular snowfall) are open to snowmobiles. See Figure 3.

It bears mention that, of the approximately 63 million acres officially designated as non-motorized, more than half of the acreage lies within remote Wilderness areas. In winter the distances from plowed parking areas and trailheads make the vast majority of designated Wilderness areas inaccessible to skiers and snowshoers. Interagency recreation planners in the state of Washington accurately noted in their state plan that “only the most hardy and determined mountaineers will undertake a winter visit to the tens of thousands of acres of rugged wilderness backcountry” and that “simply getting into undeveloped areas of a National Forest in winter can be difficult, sometimes impossible.” This isn’t to say that Wilderness areas do not provide backcountry skiing opportunities – indeed, Wilderness areas are an important part of the backcountry skiing experience – but these more remote destinations need to be supplemented by areas with easier access to provide a broader range of non-motorized opportunities.

Figure 3: National Forest Acres, by Region Open and Closed to Snowmobiles

<table>
<thead>
<tr>
<th>Region</th>
<th>Acres Open to Snowmobiles</th>
<th>Designated Wilderness Acres, Closed to Snowmobiles</th>
<th>Non-Wilderness Acres Closed to Snowmobiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>22,000,000</td>
<td>5,000,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Eastern</td>
<td>25,000,000</td>
<td>5,000,000</td>
<td>6,000,000</td>
</tr>
<tr>
<td>Intermountain</td>
<td>25,000,000</td>
<td>5,000,000</td>
<td>6,000,000</td>
</tr>
<tr>
<td>Northern</td>
<td>20,000,000</td>
<td>5,000,000</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Pacific North</td>
<td>15,000,000</td>
<td>5,000,000</td>
<td>9,000,000</td>
</tr>
<tr>
<td>Pacific South</td>
<td>10,000,000</td>
<td>4,000,000</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Rocky Mountain</td>
<td>20,000,000</td>
<td>5,000,000</td>
<td>6,000,000</td>
</tr>
<tr>
<td>Southwestern</td>
<td>25,000,000</td>
<td>5,000,000</td>
<td>6,000,000</td>
</tr>
</tbody>
</table>

As for trails, the FOIA responses show there are an estimated 26,728 miles of managed snow trails in these National Forests. Five percent of these trails are designated as non-motorized. See Figure 4.

NVUM surveys show that cross-country skier and snowshoer visits to National Forest lands are nearly double the number of snowmobile visits. In that light, the fact that there are more than one and a half times the number of forest acres designated motorized as non-motorized in winter is inequitable.

The consequence of this disparate situation is unequal opportunity for skiers, snowshoers and other quiet winter recreationists when compared to OSV users and escalating conflict between motorized and non-motorized uses on National Forest land.

Public land managers at the highest levels noted conflict between motorized and non-motorized use as early as the 1970s. In 1972 President Nixon signed Executive Order 11644 which requires the Forest Service “to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.” The order continues, stating that, “areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.”

Winter recreation in its myriad forms is a popular use of National Forest lands. Locals and visitors alike spend a significant amount of time and money skiing, snowshoeing, and snowmobiling on our National Forests. However, very few of the forests that receive enough snow to support winter recreation have done any form of comprehensive planning to determine how best to manage these uses. In the absence of deliberate planning, snowmobile use is primarily limited only by the constraints of terrain and technical capability. As snowmobiles have become more powerful and new over-snow vehicles, such as snowbikes, have appeared, the amount of terrain that is inaccessible to motor vehicles continues to shrink. While over-snow vehicles certainly have a place on our nation’s forests, it has become more important than ever for Forest managers to institute restrictions on motorized over-snow use in order to protect sensitive winter ecosystems and non-motorized winter recreation opportunities.

Winter travel management planning is a huge opportunity to bring balance to our National Forests. By stepping back and reassessing where on the landscape motorized use is truly appropriate, the Forest Service and those who participate in the winter travel planning process will be able to take steps to reduce user conflicts and ensure that high quality winter recreation opportunities exist for all users. For example, while there are abundant opportunities for quiet and solitude deep in the backcountry, fewer opportunities exist for non-motorized winter recreation closer to home. Creation of sizable and accessible winter non-motorized areas on each National Forest, with enforceable common sense boundaries, will go a long way toward meeting the public’s desire in this regard and reducing user conflict.

Figure 4: Total Miles of Managed Snow Trails on National Forest Lands by Region
This report explores the current on-the-ground management situation for winter recreation across all of the National Forests that have significant snow-based recreation opportunities and is presented to assist in the winter travel planning process. In many instances there was previously no cohesive record of how winter recreation was managed on a specific forest. However, with the implementation of the new Over-Snow Vehicle Travel Management Rule, it is important to understand the current state of winter recreation in order to properly plan for the future.

In reviewing the following data and the call for equitable access and opportunity, it is important to bear in mind the elements that constitute a quality recreation experience for skiers, snowboarders, snowshoers and other quiet winter recreationists. Human-powered recreationists venture into the winter backcountry in search of peace and solitude: to connect with nature. At the very core of this experience are the natural sounds, sights and beauty of pristine snowscapes.

**IMPACTS OF SNOWMOBILE USE ON NON-MOTORIZED USERS**

While it is possible for backcountry skiing and snowshoeing to occur alongside motorized recreation, OSV activity impacts human-powered winter recreation in a number of ways. These impacts often diminish the human-powered recreation experience and drive skiers and snowshoers away from trails or areas that are frequented by OSVs. These impacts fall into three categories: pollution, safety, and footprint.

OSV pollution comes in two forms – noise and exhaust. Noise has a significant impact on the cross-country skiing and snowshoeing experience and in multiple-use backcountry areas, snowmobile noise can be difficult to escape. Snowmobile noise can travel up to 10 miles depending on speed, type of machine, and wind – further than most non-motorized recreationists travel in a day. Likewise, snowmobile exhaust is another major detriment to a quality experience for skiers and snowshoers. Emissions from snowmobiles emit many carcinogens and can pose dangers to human health.

While most of the acute toxic effects of snowmobiles are limited to staging areas and parking lots, the smoke and fumes from snowmobiles on trails can dramatically reduce the quality of the experiences of non-motorized users along the trail as well. Newer, unmodified, machines emit less noise and exhaust pollution than older snowmobiles but they are still not entirely clean or quiet. In addition, many of the machines used on National Forest lands today are older 2-stroke sleds and/or have after-market modifications that increase noise and exhaust levels.

OSVs pose a safety concern for backcountry skiers and snowshoers just as wheeled motorized vehicles can be a safety issue for pedestrians. Avalanches aside, excessive speed, reckless driving, alcohol, and inexperience are the most commonly issued citations and causes of accidents involving snowmobiles. Most winter backcountry trails have no posted speed limit and the most powerful snowmobiles today have from 125- to 177-horsepower engines, allowing them to travel at very high rates of speed. Snowmobiles weigh up to 600 pounds, and many can travel at speeds in excess of 50 miles per hour. At such speeds, a snowmobile will travel almost 200 feet before being able to come to a stop. The tremendous power and weight of snowmobiles are incompatible with skiers, snowshoers and other pedestrian users on winter trails and backcountry terrain.

Both skiers and snowmobilers travel into backcountry areas in search of untracked snow. However, the quality of cross-country and backcountry skiers’ experience on National Forest lands across the nation is rapidly eroding due to the ever-increasing reach of snowmobiles. Improvements in power, maneuverability and fuel tank capacities enable snowmobiles to climb the steepest mountain slopes to access places previously reachable only by skiers using climbing skins. Before these advances, most snowmobile riders stayed on groomed trails because the machines would become easily stuck in soft powder snow. One study reports that the average distance traveled by a snowmobiler in a day ranges between 127 and 367 miles. By comparison, a skier or snowshoer will be hard pressed to cover more than five to 10 miles on ungroomed snow in a day. It can take less than an hour for a single snowmobile to completely track up a slope that multiple skiers could otherwise enjoy for days. Due to snowmobilers traveling freely on the vast majority of National Forest lands, pristine terrain for skiers and snowshoers is rapidly disappearing under the tracks of snowmobiles.

For more information on how over-snow vehicles impact non-motorized users and the environment, and management recommendations for how to minimize these impacts, please see the recently published Winter Wildlands Alliance paper "Best Management Practices for Forest Service Travel Planning.

**SUMMARY OF RESULTS**

The 77 National Forests covered in this report include approximately:

- 176,008,137 acres of land (18,559,178 acres of land are unclassified, where designation status is uncertain)
- 94,025,989 acres of land open to snowmobiles
- 29,975,829 acres of non-wilderness land closed to snowmobiles
- 33,447,141 acres of designated Wilderness land, also closed to snowmobiles

See Figure 5.

These forests contain:

- 5,746 miles of cross-country ski and snowshoe trails
- 20,590 miles of snowmobile trails

See Figure 6.

The NVUM surveys show that in forests that manage for winter recreation, the number of cross-country skier and snowshoer annual visits far exceed the number of snowmobile annual visits. The NVUM surveys show that in these forests, there are an estimated:

- 6,878,106 cross-country ski and snowshoe visits annually
- 4,002,136 snowmobile visits annually

See Figure 7.
This report shows that snow-based recreation opportunities for motorized uses on National Forest lands far exceed those for non-motorized use. 53% of the lands across the forests within the Snow Belt are open to motorized use in winter despite the fact that winter non-motorized use in these forests makes up almost two-thirds of the use (63%).

The imbalance in the acres and trail miles of forest open to snowmobiles versus those managed for winter non-motorized recreation has to be addressed. The adverse impacts that snowmobiles have on human-powered recreation, including noise, exhaust, safety concerns, and tracks create a disparate situation where the activities of one user group disproportionally affect the ability of another to use and enjoy public lands.

By implementing the Over-Snow Vehicle Rule, National Forests have the opportunity to bring management of forest lands back into balance. Through travel planning land managers have an obligation to “promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands” as directed by Executive Order 11644.

Forests that have proactively created winter travel plans set an example for possible ways to zone the backcountry and bring balance to the winter recreation landscape. For example, the White River National Forest completed a travel management plan in 2011 which addressed motorized recreation across all seasons. When drafting the plan forest managers took non-motorized recreation and other activities into account, creating a plan that reduces conflict, protects natural resources, and allows for the continuation of high-quality motorized recreation.

Winter travel planning presents an opportunity to think proactively about how to balance various types of winter recreation across a forest, especially with the ever-growing popularity of snowsports. Winter travel plans should provide space for non-motorized recreation and other activities into account, creating a plan that reduces conflict, protects natural resources, and allows for the continuation of high-quality motorized recreation.
NOTES ON DATA AND SOURCES

The numbers in this report should be understood to be imperfect. Because very few National Forests have completed comprehensive winter travel planning many forests could not provide accurate data in all cases concerning the miles of trails managed for various forms of winter recreation or the total number of acres open to motorized winter recreation. This report reflects the best-available data as provided by the Forest Service. Trail mileage data were obtained from the Forest Service’s national trails database, INFRA Trails, for FY 2014. This database is standardized and consistent across all forests and is the agency’s official record for this type of information. However, INFRA Trail mileages are not accurate for all forests because the database is still in the process of being updated. In many cases the Forest Service provided acreage data in terms of total acres open and closed to OSVs. When the Forest Service did not provide an exact number of acres that are open or closed to OSVs on a particular forest we calculated these figures using GIS data when available. GIS analysis was done using a NAD 1983 Contiguous USA Albers projected coordinate system. When GIS data was not available this information was determined by sifting through Forest Plans, other planning documents, and special orders.

Several forests in Region 6 either did not respond to our FOIA request prior to publication or provided an incomplete response. For these – the Umpqua - Rouge River-Siskiyou, and Okanagan-Wenatchee – we have calculated approximate acres open and closed using the best information available.

The number of acres open and closed to OSVs as documented in this report does not necessarily reflect the number of acres that are actually suitable for winter recreation. This is true for both motorized and non-motorized winter recreation as we did not account for variability in terrain and snow accumulation. Some forests have snow depth requirements wherein there must be a set amount of snow before OSV use is allowed in a given area. We did not include this variable into our analysis.

FOIA REQUESTS

During 2014, Winter Wildlands Alliance submitted Freedom of Information Act (FOIA) requests to all of the forests listed in Table 2 and compiled the data presented in this report. These FOIA requests are available in Appendix 1 and 2 at the end of this report.

It is important to note the following with respect to the data:

1. Some minor discrepancies appear between the total of forest acres, open and closed acres, and Wilderness acres. This is because some forests administer lands technically within other forests and because forest land and boundaries are routinely modified.

2. Trail mileage data were obtained from the Forest Service INFRA Trails database, and while this data may not be completely accurate, it is the best available data that the Forest Service has.

3. All numbers are best estimates based on the information obtained.

4. The data, ratios and percentages presented in this report apply only to National Forest land. The number of trails or acreages of National Park Service lands, BLM lands, state lands, or other public lands are not included in this report.

5. A copy of the original FOIA request is attached as Appendix 1 to this Report. Appendix 2 is a second request that was submitted when it was believed that the data obtained was incomplete.

6. Where there was any doubt about the estimate of “acres closed to snowmobiles,” if the exact figure was not provided in the FOIA response, the estimate is purposely generous to avoid any claim that the figure is underreported.

   a. If the estimate was based upon the travel maps provided, areas on the travel maps shown as “closed to snowmobiles except on designated routes” were entirely included in “acres closed to snowmobiles.” This means that even though the acreage is counted as closed to snowmobiles, that acreage may have a web of snowmobile trails through it. This procedure was justified on the basis these snowmobile routes would usually be counted in the “miles of snowmobile routes”.

   b. If the estimate was based upon a forest plan, the acreage was calculated based upon the total number of acres in all of the management areas that are closed to motorized vehicles. These areas are generally the Wilderness areas, research natural areas, and those areas classified as semi-primitive non-motorized. Several forests, however, allow snowmobiles in semi-primitive non-motorized areas while not stating so in the forest plan. Thus, it is believed that the estimates for “acres closed to snowmobiles” are generous, and that the acreage available for snowmobiles is even greater than shown.

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
NVUM DATA

Existing National Forest plans and other agency needs mandate visitor use monitoring. Therefore, the Forest Service instituted the National Visitor Use Monitoring program in 2000. NVUM was developed to provide statistically reliable estimates of visitor use on National Forests throughout the United States.

Among other measures, NVUM reports visitation estimates using a standard definition for a “National Forest visit” in order to provide comparable estimates of visitor use. A “National Forest visit” is: “The entry of one person to a National Forest to participate in recreation activities for an unspecified period of time. A National Forest visit can be composed of multiple site visits.”

In addition to estimating the numbers of visits, the NVUM program obtains descriptive information about National Forest visitors, including the activity in which the visitor participated. Included in the list of activities are snowmobiling and cross-country skiing/snowshoeing. Skate skiing and other forms of groomed Nordic skiing, ungroomed Nordic skiing, backcountry ski/snowboard touring, and snowshoeing are all considered “cross-country skiing” in the NVUM surveys. However, it is likely that some backcountry skiers report their activity as “downhill skiing” (which the Forest Service considers mainly to be resort-based skiing). Therefore, the visitation numbers for human-powered activities are likely higher than reported in the NVUM surveys.

It is important to keep in mind that NVUM estimates of visitor use are estimates and may not capture the true extent of a particular activity on a forest. NVUM survey sites are selected “using a stratified random sample of the times and locations where recreational visitors can be counted.” However, the places that people choose to recreate, particularly for activities like skiing, snowshoeing, and snowmobiling are not distributed across Forest Service sites such that a random sampling is likely to capture them. Outdoor recreationists seek out particular experiences that can only be found in specific locations, and without weighting the site selection process to ensure that these favorite locations are included, the sample will result in an underrepresentation of these activities.

Additionally, data sampling at NVUM sites occurs on randomly selected days without adequately taking into account the variables that make any particular day optimal for a particular activity. NVUM sampling is unlikely to produce accurate data on winter recreational use because it fails to account for variables like whether there is enough snow for an activity to occur or differences in weather conditions that may encourage, or discourage, winter recreation on a particular day.

In reporting the amount of visitation to a forest for a particular activity, the NVUM surveys report visitation estimates only down to .01% of total forest visits. Thus, some forests show visitation rates of zero percent for the activities of snowmobiling or cross-country skiing/snowshoeing. This is usually the case in forests that do not have any groomed trails. For purposes of this report, it was assumed that a NVUM report of 0% visitation means less than .005% visitation and a NVUM report of .01% visitation means greater than or equal to .005% visitation.

NVUM data are provided in terms of percent participation. In order to obtain numbers of actual visits we multiplied the percent participation for a given activity on a given forest by the visitation estimate for that forest. This approach was recommended by the Forest Service NVUM program.

Forests that are jointly administered, like the Medicine Bow-Routt National Forest have NVUM data for each forest. Thus, to arrive at the users per mile and per acre for the jointly administered forest, the user numbers for each activity were calculated for each forest and then totaled and a new joint percent calculated for the combined forests.

SCORP DATA

The Land and Water Conservation Fund was created by Congress in 1964 to provide funds for, among other things, matching grants to states for outdoor recreation projects. Under the program, state recreation agencies are required to determine statewide outdoor recreation trends and demands. The data used in these reports comes from many sources including academic, NGO, and government surveys and GIS analysis. This data are then compiled into a Statewide Comprehensive Outdoor Recreation Plan, (SCORP), based on a planning horizon of 10 years.

The format of the plans varies from state to state but most include data about the number of people participating in the state annually in snowmobiling, cross-country skiing and snowshoeing. SCORP reports are used in this study as a supplement to NVUM data to gain a better understanding of snowsports participation.
The Forest Service manages forests by Region with each Region encompassing several states or portions of states, as shown in Figure 8. While a National Forest may fall in more than one state, each Forest is located in a single Region. In general, states are fully within a single Region but some, such as Wyoming and Idaho, are split between multiple Regions.

Not all of the National Forests within every Region are included in this report. Certain National Forests have not been included, either because they do not receive regular or any snow, or there is little, if any, snowmobile or cross-country ski or snowshoe use in that forest. Only the forests that receive regular snow are included in this report.

Several National Forests prohibit snowmobile use unless there is minimum snow depth. For example, the Umpqua National Forest prohibits snowmobile use in areas with less than a foot of snow cover. Therefore, in these cases, it is difficult, if not impossible, to estimate acres open and closed to snowmobiles under those circumstances and this report makes no attempt to do so.

Figure 8: Forest Service Regions.
Source: USFS, ESRI.
Map created 2/2015 by Winter Wildlands Alliance.
### TABLE 1: NATIONAL FORESTS STUDIED

**Region 1 (Northern):** Beaverhead-Deerlodge, Bitterroot, Custer-Gallatin, Flathead, Helena, Idaho-Panhandle, Kootenai, Lewis and Clark, Lolo

**Region 2 (Rocky Mountain):** Arapaho-Roosevelt, Bighorn, Black Hills, Grand Mesa-Uncompahgre-Gunnison, Medicine Bow-Routt, Pike-San Isabel, Rio Grande, San Juan, Shoshone, White River

**Region 3 (Southwestern):** Carson, Cibola, Coconino, Coronado, Kaibab, Lincoln, Santa Fe

**Region 4 (Intermountain):** Ashley, Boise, Bridger-Teton, Caribou-Targhee, Dixie, Fishlake, Humboldt-Toiyabe, Manti-LaSal, Payette, Salmon-Challis, Sawtooth, Uinta-Wasatch-Cache

**Region 5 (Pacific Southwest):** Eldorado, Inyo, Klamath, Lake Tahoe Basin, Lassen, Modoc, Plumas, Sequoia, Shasta-Trinity, Sierra, Stanislaus, Tahoe


**Region 9 (Eastern):** Allegheny, Chequamegon-Nicolet, Chippewa, Green Mountain and Finger Lakes, Hiawatha, Huron-Manistee, Monongahela, Ottawa, Superior, White Mountain

**Region 10 (Alaska):** Chugach, Tongass

---

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
The NVUM surveys for Region 1 forests show there are an estimated:

- 678,332 cross-country ski and snowshoe visits annually
- 506,524 snowmobile visits annually

See Figure A.

Region 1 National Forests contain:

- 24,148,297 acres of land
- 13,998,700 acres of land open to snowmobiles
- 4,999,097 acres of non-wilderness land closed to snowmobiles
- 4,987,877 acres of designated Wilderness land, also closed to snowmobiles

See Figure B.

Region 1 National Forests contain:

- 475 miles of ski trails
- 4,100 miles of snowmobile trails

See Figure C.

Cross-country ski and snowshoe visits outnumber snowmobile visits on almost every National Forest in Region 1 yet there are almost 4 million more acres of land open to snowmobiles than there are designated as non-motorized and more than 10 times the number of miles of snowmobile trails versus ski trails in the Northern Region.

Across Region 1 there is an inequitable balance between the number of non-motorized winter recreationists visiting a forest and the number of acres on that forest that are managed for non-motorized use.

For example, on the Beaverhead-Deerlodge National Forest there are 7.2 times as many annual cross-country ski or snowshoe visits as there are snowmobile visits yet 1.3 times as many acres of the forest are open to over-snow vehicle use. Likewise, on the Kootenai National Forest cross-country ski and snowshoe visits outnumber snowmobile visits 30 to 1 yet there are 7 times as many acres on the forest that are managed for winter motorized use.

However, Region 1 is also unique in that it is home to several forests that have completed comprehensive winter travel management plans under the 2005 Travel Planning Rule. On these forests - the Gallatin, Lewis and Clark, and Helena - we see a much more equitable allocation of land for motorized and non-motorized winter use.49
The Custer-Gallatin National Forest sees almost the same number of cross-country skier visits as snowmobile visits and has almost equal amounts of non-motorized and motorized lands. Thirty-five percent of this forest is Wilderness and an additional 19% is designated as non-motorized while 43% of the forest is open to OSVs.

There are almost 5 times as many cross-country ski and snowshoe visits to the Lewis and Clark National Forest as there are snowmobile visits and a large proportion of the non-wilderness lands on this forest are closed to OSVs. Under the Lewis and Clark winter travel plan OSV use is concentrated in the more developed parts of the forest. The result is a management plan that protects winter wildlands while also providing for high quality snowmobile opportunities.

National trends in snow sport activities are reflected across Region 1. More people participate in non-motorized snowsports than motorized, even though Montana and Idaho are among the top ten states for motorized recreation participation. A University of Montana Institute for Tourism and Recreation Research survey of over 4,000 Montana households found that 21% of survey respondents used ski or snowshoe trails and 18% used snowmobile trails. Likewise, 48% of survey respondents would like to see an increase in the amount of cross-country ski and snowshoe trails and 30% felt there should be more snowmobile trails.
The NVUM surveys for Region 2 forests show there are an estimated:

- 2,198,604 cross-country ski and snowshoe visits annually
- 1,170,669 snowmobile visits annually

See Figure A.

**Region 2 National Forests contain:**

- 20,479,545 acres of land
- 11,799,009 acres of land open to snowmobiles
- 3,322,569 acres of non-wilderness land closed to snowmobiles
- 4,795,424 acres of designated Wilderness land, also closed to snowmobiles

See Figure B.

**Region 2 National Forests contain:**

- 1,374 miles of ski trails
- 2,387 miles of snowmobile trails

See Figure C.

Wyoming forests in Region 2 receive more snowmobile visits than cross-country ski or snowshoe visits annually while all of the Colorado forests in Region 2 receive more non-motorized recreationists each winter. These numbers reflect general statewide recreation trends. In 2013 17% of Coloradans participated in cross-country skiing or snowshoeing, 7.5% participated in backcountry skiing, and 5% participated in snowmobiling. In contrast, snowmobiling is a much more popular activity in Wyoming, where 15% of households participated in snowmobile-based recreation during the winter of 2011-2012.

Overall Region 2 sees almost twice as many cross-country ski and snowshoe visits as snowmobile visits annually yet there are one and a half times more acres of land available for motorized use than are designated for non-motorized activities across the Region. This is most striking on the Pike-San Isabel National Forest, where non-motorized winter visits outnumber snowmobile visits 70:1 yet there are almost three times the number of acres open to snowmobiles as there are designated for non-motorized use. Even more striking, when Wilderness acres are excluded the number of non-motorized acres on the Pike-San Isabel drops to only one tenth of the number of motorized acres.

Winter visitors to National Forest lands have different needs depending on their preferred type of recreation. A 2005 study of winter recreationists on the Medicine Bow-Routt National Forest...
outlined the experiences and access sought by each user group. Skiers and snowshoers desired areas that were free from the noise, smell, and sight of snowmobiles and untracked powder to ski downhill. In addition, hybrid skiers also sought out motorized access points to skiable terrain. Snowmobilers desired groomed and marked trails alongside open play areas and hills but also wanted more acres because they generally travel further than a skier in a day. On this forest there are approximately twice as many acres available for snowmobilers as compared to non-motorized acres where skiers can find the experiences they seek.

The White River National Forest is the only forest in Region 2 to undergo forest-wide winter travel planning prior to the OSV Rule. On this forest we see a much more equitable balance of opportunity. There are almost 9 times as many non-motorized winter visits to the forest and slightly more than twice as many non-motorized acres. If designated Wilderness is excluded then the number of motorized and non-motorized acres on the White River National Forest are approximately equal.
The NVUM surveys for Region 3 forests show there are an estimated:

- 251,712 cross-country ski and snowshoe visits annually
- 38,878 snowmobile visits annually

See Figure A.

Region 3 National Forests contain:

- 11,143,430 acres of land
- 8,411,389 acres of land open to snowmobiles
- 1,484,699 acres of non-wilderness land closed to snowmobiles
- 1,247,342 acres of designated Wilderness land, also closed to snowmobiles

See Figure B.

Region 3 National Forests contain:

- 67 miles of ski trails
- 7 miles of snowmobile trails

See Figure C.

Snow-based recreation is low for forests in Region 3, which is unsurprising given the climate in the desert Southwest. However, high elevation mountainous areas do provide winter recreation opportunities across Region 3. Approximately 7% of New Mexicans take part in non-motorized snow-sports and 9% of Arizona residents reported moderate participation in cross-country skiing or snowshoeing in 2012.

None of the forests in Region 3 that receive enough snow to support winter recreation currently have winter travel management plans and there are few trails or areas designated for backcountry snow-based recreation. Although the numbers in this report are somewhat misleading given that snow-based recreation is only feasible in limited areas on these forests, they provide a good example of why winter travel planning is needed. Winter travel plans can ensure that snowmobiling is allowed on those areas of the forest where it truly makes sense, as opposed to being allowed anywhere where there might be snow.
For example, the Kaibab National Forest receives approximately 791 snowmobile visits annually (and 38 cross-country ski or snowshoe visits) but there is virtually no guidance on how OSVs should be managed in any forest planning documents. By default snowmobiles are technically allowed everywhere on the forest except within designated Wilderness. While there are few places on the forest snowy enough to support winter recreation, there has been no analysis of how snowmobiles impact wildlife, natural resources, or other uses on the forest.

With the exception of the Kaibab, cross-country skiing and snowshoeing are far more prevalent across Region 3 forests than is snowmobiling. There are twice as many ski visits versus snowmobile visits on the Carson and Lincoln National Forests, 37 times more cross-country ski and snowshoe visits on the Coconino, and over 3,000 times more cross-country ski and snowshoe visits on the Santa Fe National Forest. No snowmobile visits were recorded during the NVUM surveys for the Coronado and Cibola National Forests and snowmobiles are not allowed off of designated routes on the Coronado.
The NVUM surveys for Region 4 forests show there are an estimated:

- 893,975 cross-country ski and snowshoe visits annually
- 594,487 snowmobile visits annually

See Figure A.

Region 4 National Forests contain:

- 31,759,620 acres of land
- 22,469,720 acres of land open to snowmobiles
- 3,779,999 acres of non-wilderness land closed to snowmobiles
- 5,750,811 acres of designated Wilderness land, also closed to snowmobiles

See Figure B.

Region 4 National Forests contain:

- 839 miles of ski trails
- 3,363 miles of snowmobile trails

See Figure C.

Overall, National Forests in the Intermountain Region see approximately 1.5 times as many cross-country ski and snowshoe visits as snowmobile visits yet there are almost 2.5 times the number of acres available for over-snow vehicle travel than are closed to motorized use in the winter, over half of which is designated Wilderness. When Wilderness is excluded this difference jumps up to almost six times the number of motorized versus non-motorized acres across Region 4.

Non-motorized winter visits (cross-country skiing, backcountry skiing and snowshoeing) outnumber snowmobile visits on the majority of forests in Region 4. Snowmobile visits outnumber cross-country ski and snowshoe visits on the Ashley, Caribou-Targhee, Dixie, and Payette National Forests. With the exception of the Payette, there are far more acres available for motorized use than are designated non-motorized on these forests. When designated Wilderness is excluded motorized acres far outnumber non-motorized acres across these forests just as with every other forest in Region 4.
Although there are almost six times more cross-country ski and snowshoe visits than snowmobile visits on the Boise National Forest, only one fifth of the forest is designated non-motorized. There are 11 times more cross-country ski and snowshoe visits than snowmobile visits to the Sawtooth National Forest but only a quarter of the forest is designated as non-motorized. Cross-country ski and snowshoe visits outnumber snowmobile visits on the Manti-La Sal as well, yet only one seventh of this forest is designated as non-motorized.

Most forests in Region 4 manage OSVs through a combination of special orders and Forest Plans. In some cases forests have developed winter travel management plans for certain areas of the forest where OSV recreation conflicts with other types of recreation or management objectives. For example, the Sawtooth National Forest developed a winter travel plan for the Wood River Valley in order to reduce conflict between motorized and non-motorized users. This travel plan is implemented through a special order. Similarly, the Bridger-Teton National Forest developed a winter travel management plan for the northern portion of the forest in order to reduce OSV impacts on wildlife. Both of these travel plans are over a decade old. Only one forest in Region 4 has a winter plan done under the Travel Management Rule and it does not cover the entire forest. The 2005 Caribou Travel Plan encompassed winter use but does not include the Targhee portion of the Caribou-Targhee National Forest.

![Figure B: National Forest Acres Open and Closed to Snowmobiles](image)

![Figure C: Total Miles of Managed Snow Trails on National Forest Land Open and Closed to Snowmobiles](image)
The NVUM surveys for Region 5 forests show there are an estimated:

- 1,170,761 cross-country ski and snowshoe visits annually
- 488,783 snowmobile visits annually

See Figure A.

Region 5 National Forests contain:

- 14,571,103 acres of land
- 10,519,174 acres of land open to snowmobiles
- 525,440 acres of non-wilderness land closed to snowmobiles
- 3,216,652 acres of designated Wilderness land, also closed to snowmobiles

See Figure B

Region 5 National Forests contain:

- 334 miles of ski trails
- 1,391 miles of snowmobile trails

See Figure C.

Forests in the Pacific Southwest Region receive approximately 1.2 million cross-country ski and snowshoe visits annually, 2.4 times the number of snowmobile visits. In contrast, there is almost three times the amount of land open to snowmobiles as there is designated for non-motorized use. On three forests – the Klamath, Modoc, and Shasta-Trinity – the only lands that are off-limits to snowmobiles are those within designated Wilderness.

The Klamath National Forest receives approximately 4 times more cross-country ski and snowshoe visits than snowmobile visits and the Modoc receives 10 times more cross-country ski and snowshoe visits. The Shasta-Trinity National Forest did not record any snowmobile visits during the most recent NVUM survey period but did record approximately 47,000 cross-country ski or snowshoe visits. These three forests coordinate snowmobile management through the TriForest Snowmobile Trail System but there is no such program for non-motorized winter recreationists. The TriForest Snowmobile Trails are open to skiers and snowshoers as well but, with the exception of 14 miles of ski trails on the Klamath, there are not any winter trails on these forests where non-motorized users can distance themselves from OSVs.

The Inyo National Forest receives approximately five times more cross-country ski and snowshoe visits than snowmobile visits. While the number of acres open to OSVs versus designated non-motorized are approximately equal, there are over six times more winter trails managed for motorized recreation. In 2005 the Mammoth Lakes Region of the Inyo surveyed visitors to better understand what is important to winter recreationists in the Mammoth area. The survey found that the most common activity pursued by winter recreationists was cross-country or backcountry skiing. Snowmobiling was the third most common activity. Of those surveyed, cross-country skiers were the most
dissatisfied, with over 20% reporting their experience was below their expectations. In comparison, snowmobilers were the second most satisfied, with over 90% of participants stating that their expectations were met or exceeded.

OSV activity on the Sierra National Forest is guided by the 1991 Land and Resource Management Plan and the 1977 Sierra OHV Plan. Under these documents, approximately 58% of the Sierra National Forest is open to snowmobiles. However, the Forest Service estimates that only 5% of the Sierra National Forest is actually available for OSV recreation in a given winter because there is generally no snow below 7,000 feet.

Five of the forests in Region 5 have taken the lead in implementing the OSV Rule. The Lassen, Tahoe, Eldorado, Stanislaus, and Plumas National Forests began winter travel management planning in early 2015. Each of these forests will go through a public process to identify routes and areas for OSV use. Once these routes and areas are identified and published on a map OSV activity outside of these designated locations will be prohibited. Snowmobilers, skiers, and others interested in how these forests are managed in winter have written comments, attended meetings, and otherwise been involved in the creation of these travel plans which are expected to be completed in 2017.

---

**Figure B:** National Forest Acres Open and Closed to Snowmobiles

- Acres Open to Snowmobiles
- Designated Wilderness Acres, Closed to Snowmobiles
- Non-Wilderness Acres, Closed to Snowmobiles

**Figure C:** Total Miles of Managed Snow Trails on National Forest Land Open and Closed to Snowmobiles

- Miles of Snowmobile Trails
- Miles of Cross-country Ski and Snowshoe Trails

---

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
The NVUM surveys for Region 6 forests show there are an estimated:

- 830,639 cross-country ski and snowshoe visits annually
- 243,286 snowmobile visits annually

See Figure A.

Region 6 National Forests contain:

- 23,764,614 acres of land
- 14,354,742 acres of land open to snowmobiles
- 4,531,285 acres of non-wilderness land closed to snowmobiles
- 4,909,037 acres of designated Wilderness land, also closed to snowmobiles

See Figure B.

Please note that acreage figures for Region 6 are approximate. Several forests in this Region were unable to provide concrete numbers to help answer the question of how many acres are open or closed to OSVs. As a result, this report relies on Forest Plan management areas and Recreation Opportunity Spectrum designations to arrive at a general idea of how many acres on a particular forest are open or closed to OSVs.

Region 6 National Forests contain:

- 1,223 miles of ski trails
- 5,157 miles of snowmobile trails

See Figure C.

National Forests across the Pacific Northwest Region manage OSVs through motor vehicle designations made during forest planning and special orders that protect sensitive watersheds, wildlife habitat, or, occasionally, to reduce conflict between user groups. Overall, 60% of Region 6 is open to cross-country snowmobile travel and 76% of snow trail miles in Region 6 are open to motorized recreation.

On the Colville National Forest, where the 1988 Forest Plan is the only document dictating OSV management, 66% of the forest is open to cross-country snowmobile travel. On this forest snowmobile visits outnumber cross-country ski or snowshoe visits 3:1.

There are approximately twice as many cross-country ski and snowshoe visits annually to the Deschutes National Forest as there are snowmobile visits. Despite this, 74% of the forest is open to cross-country snowmobile travel and 80% of the trails are managed for motorized or shared use. In the early 2000's, the Deschutes National Forest underwent a winter recreation suitability analysis to assess how best to provide quality winter
recreation opportunities and protect natural resources. This analysis pointed towards a need for backcountry zoning, increased educational efforts, and improvements to trail and parking facilities, among other recommendations. However, little has been done to date to implement the recommendations from this report.60

The Mount Hood National Forest is a major destination for winter recreationists and 94% of the 264,000 cross-country ski, snowshoe, and snowmobile visits to this forest are by human-powered recreationists. However, the forest does not have an official management plan for over-snow vehicle travel or winter recreation. The 1999 Travel and Access Management Guide is the closest thing to a management plan for motorized use on this forest. However, this document was intended for analysis purposes only and provides goals, objectives, strategies, processes, guidelines and general direction to manage forest routes. It is not a decision document and offers no site-specific recommendations.

These three forests are examples of how OSVs are managed across Region 6. Of the Regions analyzed in this report Region 6 proved to be the most difficult insofar as calculating acres open and closed to snowmobiles. This was because, Region-wide, there are no recent management plans for winter motorized recreation or decision documents outlining where snowmobiles are and are not allowed to travel. Given that a significant percentage of Oregonians and Washingtonians participate in winter recreation61 it is time for the National Forests in the Pacific Northwest to undergo comprehensive winter travel planning.
The NVUM surveys for Region 9 forests show there are an estimated:

- 934,964 cross-country ski and snowshoe visits annually
- 969,098 snowmobile visits annually

See Figure A.

Region 9 National Forests contain:

- 9,904,649 of land
- 4,116,444 acres of land open to snowmobiles
- 4,170,030 acres of non-wilderness land closed to snowmobiles
- 1,615,577 acres of designated Wilderness land, also closed to snowmobiles

See Figure B.

Region 9 National Forests contain:

- 1,342 miles of ski trails
- 4,087 miles of snowmobile trails

See Figure C.

There are slightly more snowmobile visits to Region 9 overall than cross-country ski or snowshoe visits, making it the only Region in the country where NVUM surveys show more snowmobile visits to National Forests than cross-country ski or snowshoe visits. However, ski and snowshoe visits are more common on the Green Mountain and Finger Lakes, Monongahela, Superior, and White Mountain National Forests.

The Eastern Region is unique because most of the National Forests in this Region restrict snowmobiles to designated routes. Therefore, while at first glance it may appear that snowmobile travel is extremely limited in Region 9, it is important to consider how many miles of trails and roads are available for OSV use. 80%, or 4,087 miles, of the managed snow trails across all forests in the Eastern Region are open to snowmobiles.

Snowmobiles are restricted to designated routes on the Alleghany, Chequamegon-Nicolet, Chippewa, Green Mountain and Finger Lakes, Huron Manistee, Monongahela, Superior, and White Mountain National Forests. There are over 4,000 miles of designated snowmobile trails on Forest Service lands in the Eastern Region. In most cases National Forest snowmobile trails are connected to trail systems on state and private lands as well, further increasing opportunities for snowmobiling. For

---

**Figure A**: National Forest Annual Visits per Activity

*Source: U.S. Government, National Visitor Use Monitoring Data*
example, there are 62,000 miles of interconnected snowmobile trails stretching across the state of Michigan. Well over half of the winter trail miles on every forest in Region 9 are open to or designated for snowmobile travel.

Cross-country snowmobile use is generally permitted on the Hiawatha and Ottawa National Forests. 94% of the Hiawatha is open to cross-country snowmobiling and 85% of winter trail miles are motorized. 40% of winter recreation visits (cross-country skiing, snowshoeing, or snowmobiling) to the Hiawatha National Forest are cross-country skiers or snowshoers yet there are very few areas on this forest where skiers and snowshoers can be guaranteed a non-motorized experience.

95% of winter recreation visits to the Superior National Forest are cross-country skiers or snowshoers yet there are 35 times more non-wilderness acres open to snowmobiles than there are designated as non-motorized on the Superior. The White Mountain National Forest sees almost 4 times as many ski and snowshoe visits as it does snowmobile visits yet 79% of the winter trail miles on this forest are motorized.
The NVUM surveys for Region 10 forests show there are an estimated:

- 33,261 cross-country ski and snowshoe visits annually
- 1,960 snowmobile visits annually

See Figure A.

**Region 10 National Forests contain:**

- 40,236,879 acres of land
- 8,574,599 acres of land open to recreational snowmobile use
- 6,954,788 acres of non-wilderness land closed to recreational snowmobile use
- 6,924,421 acres of designated Wilderness land, also closed to recreational snowmobile use

See Figure B.

**Region 10 National Forests contain:**

- 91 miles of ski trails
- 98 miles of snowmobile trails

See Figure C.

Section 811 of the Alaska National Interest Lands Conservation Act (ANICLA) allows rural residents engaged in subsistence uses to use snowmobiles to access subsistence resources on public lands regardless of other laws. Likewise, section 1110 of ANICLA allows for the use of snowmobiles on conservation system units, National Recreation Areas, National Conservation Areas, and Wilderness Study Areas for traditional activities (where such activities are permitted) and for travel to and from villages and homesites. Section 1110 allows for snowmobile use across 5.8 million acres of conservation system units on the Tongass National Forest.

Notwithstanding the exceptions permitted because of ANICLA, this report focuses on where recreational snowmobile activity is and is not allowed in Region 10.
The Chugach National Forest manages OSVs through its Forest Plan, amended to include the Kenai Winter Access Plan. The Kenai Winter Access Plan zones the Seward Ranger District into non-motorized and motorized areas. Because there are some areas on the Kenai that are highly valued by both skiers and snowmobilers 18% of the Kenai is managed under a Season A/Season B scenario wherein certain areas are motorized one year and non-motorized the following. This type of zoning is not new to the Chugach National Forest. For many years the Forest Service has managed Turnagain Pass to reduce conflicts between skiers and snowmobilers. The pass is divided by the Seward Highway and lands south of the highway are designated for non-motorized use. Overall, 72% of the Chugach is non-motorized in the winter.

On the Tongass National Forest 23% of land is off-limits to recreational snowmobile use although much more of this forest is functionally off-limits to snowmobiles due to terrain, snowpack, and access. In areas of the forest that are near towns the Tongass has delineated OSV use areas. These areas are depicted on the forest Motor Vehicle Use Maps. The Forest Plan and additional forest orders are the guiding documents behind these designations.

Much of Alaska is too rugged or remote for snowmobile access, however, only 34% of the National Forest lands in Region 10 are officially closed to recreational snowmobile use. This includes designated Wilderness areas. Cross-country ski and snowshoe visits outnumber recreational snowmobile visits to the Chugach by a factor of almost 16 to 1. Likewise, cross-country ski and snowshoe visits to the Tongass outnumber recreational snowmobile visits 18 to 1.
Winter Wildlands Alliance  
PO Box 631 • Bozeman, MT 59771 • 208.336.4203  
www.winterwildlands.org

(Submitted via email)  
April 24, 2014

Region 1 FOIA Coordinator  
*

Freedom of Information Act Request  
Re: Winter Recreation Planning and Management

Dear *,

Pursuant to the Freedom of Information Act, 5 U.S.C. Part 552, and implementing regulations, 36 C.F.R. Part 200, Winter Wildlands Alliance, a 501(c)(3) national non-profit organization, is filing this request for information. We request the following items for all National Forests in Region 1, except the Dakota Prairie Grasslands:

1) Any and all records that summarize the length of all cross-country ski and snowshoe trails on the National Forests specified above
2) Any and all records that summarize the length of all snowmobile trails, including roads, on the National Forests specified above
3) Any and all records that summarize the length of all trails that are designated shared use for motorized and non-motorized winter recreational activities on the National Forests specified above
4) Any and all records that detail the total acreage in the National Forests specified above that is open to or available for snowmobile operation
5) Any and all records that detail the total acreage in the National Forests specified above that is closed to snowmobile operation
6) Any and all Forest Closure Orders, Travel Management Plan documentation, or other decisions and supporting documents governing the use of over-snow vehicles on the National Forests specified above
7) Any and all surveys of public use, attitudes, preferences or opinions that concern, in whole or in part, snowmobiling, cross-country skiing, backcountry skiing or snowshoeing, including summaries and drafts for the National Forests specified above. You do not need to include documentation related to National Visitor Use Monitoring surveys.
8) Any reports detailing the economic impact of winter recreation on National Forest system lands published since 2000 for the National Forests specified above
9) Electronic copies of any and all GIS files related to winter recreation trails and areas, including sno-parks, designated non-motorized areas outside Wilderness and the boundaries of any Special Use Permits if applicable (ski areas, cat ski, etc.) for the National Forests specified above

We respectfully request electronic copies of this information to the extent possible.

If you determine that any of the requested materials are exempt from disclosure, please separate the exempt portions from the non-exempt portions and provide us with copies of the non-exempt portions. For any exempt portions, please include a specific description of the record and the reasons, defined in the terms of the Freedom of Information Act, for which the record is deemed exempt from disclosure. Winter Wildlands Alliance (WWA) reserves the right to appeal a decision to withhold any records.

To our knowledge, the above-requested information is not available from any other federal, state, or other public agency required to provide the information. Furthermore, the release of the information will not provide WWA, its affiliates, and any other individual, group, or organization with any financial benefits.

Winter Wildlands Alliance is a national, non-profit, human-powered winter recreation and wildlands advocacy organization. Spanning the nation, WWA is affiliated with local, state, and national recreation and conservation organizations, including 34 grassroots groups in 10 states. WWA and its partners, who represent cross-country skiers and snowshoers, focus primarily on public land management and winter recreation opportunities.

Currently, WWA is working with grassroots groups in 12 states, including Alaska, California, Colorado, Idaho, Minnesota, Montana, Nevada, Oregon, Utah, Vermont, Washington and Wyoming. The information contained within this FOIA request will benefit these groups, their members, and other public partners by educating them about USFS management practices, specifically how the needs of recreational user groups are addressed through current trail designation and funding. In addition to these groups, WWA will make all requested information available to the general public, its members, and other recreation and conservation groups, who will all benefit as they pursue winter recreation opportunities on our national forests.

Winter Wildlands Alliance makes information concerning USFS management practices available to all interested parties through public meetings, electronic and printed action alerts, newsletters, press releases, magazine articles, phone calls, and other means. The requested information will also assist WWA in responding to opportunities for public comment on proposed actions concerning winter recreation planning on national forest lands, in addition to allowing WWA to assist others in the preparation of such comments. The requested information will better educate the public, allowing them to be more active participants in Forest Service forums on winter recreation planning and management. Many opportunities are presently available for such involvement, as many Forest Plans are or soon will be in the process of revision.

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
For reasons of public interest and education, WWA requests that you grant a waiver of fees pursuant to 5 U.S.C. Part 522 (a)(4)(A) and 43 C.F.R. Part and Section 2.21. We expect that such a waiver will be granted. However, if a waiver is not granted, please inform WWA immediately of the price of disclosing the above-described records if such fees exceed $15.00.

We respectfully request that you will respond to our FOIA request within 20 working days. Please feel free to call me at (208) 629-1986 or email me at heisen@winterwildlands.org if you have any questions. Thank you for your immediate attention to this matter.

Sincerely,

*

Recreation Planning Coordinator
Pursuant to the Freedom of Information Act, 5 U.S.C. Part 552, and implementing regulations, 36 C.F.R. Part 200, Winter Wildlands Alliance, a 501(c)(3) national non-profit organization, is filing this request for information. We request the following items for all National Forests in Region 1, except the Dakota Prairie Grasslands; all National Forests in Region 2, except the Nebraska National Forest; the Carson, Cibola, Coconino, Coronado, Kaibab, Lincoln, and Santa Fe National Forests in Region 3; all National Forests in Region 4; the Eldorado, Inyo, Klamath, Lassen, Modoc, Plumas, Sequoia, Shasta-Trinity, Sierra, Stanislaus, and Tahoe National Forests as well as the Lake Tahoe Basin Management Area in Region 5; all National Forests in Region 6; the Alleghany, Hiawatha, Huron-Manistee, Ottawa, Chippewa, Superior, White Mountain, Green Mountain/Finger Lakes, Chequamegon-Nicolet, and Monongahela National Forests in Region 9; and all National Forests in Region 10:

1) Total existing NFST miles with Managed Use of cross-country ski and total existing NFST miles with Managed Use of snowshoe (as recorded in the current, FY14, INFRA database).

2) Total existing NFST miles with Managed Use of snowmobile (as recorded in the current, FY14, INFRA database).

In addition, we request the following items for the Alleghany National Forest:

1) Any and all records that detail the total acreage in the National Forests specified above that is open to or available for snowmobile operation. Specifically, we are requesting total NFS designated areas, in acres, open to motorized over-snow vehicle use such as cross country travel, play areas, etc. Do not include linear features such as trails, trail mileage or associated acres for National Forest System trails.

2) Any and all records that detail the total acreage in the National Forests specified above that is closed to snowmobile operation. Specifically, we are requesting total NFS designated areas, in acres, specifically closed to motorized over-snow vehicle use such as cross country travel, play areas, etc. Do not include linear features such as trails, trail mileage or associated acres for National Forest System trails. Include wilderness acres that are closed to over-snow vehicle use.

3) Any and all Forest Closure Orders, Travel Management Plan documentation, or other decisions and supporting documents governing the use of over-snow vehicles on the National Forests specified above. Specifically, we are requesting all Forest Closure Orders, Travel Management Plans or other means of closure and the supporting NEPA documents and/or Forest Plans for the closure. Specify the district, forest, and region. If documentation is within a Forest Plan, state the information is within a Forest Plan and supply the forest name, plan date, and a direct link. If supporting NEPA documents are available via the internet, provide the direct link to the document.

4) Any and all surveys of public use, attitudes, preferences or opinions that concern, in whole or in part, snowmobiling, cross-country skiing, backcountry skiing or snowshoeing, including summaries and drafts for the National Forests specified above. You do not need to include documentation related to National Visitor Use Monitoring surveys.

5) Any reports detailing the economic impact of winter recreation on National Forest system lands published since 2000 for the National Forests specified above

6) Electronic copies of any and all GIS files related to winter recreation trails and areas, including sno-parks, designated non-motorized areas outside Wilderness and the boundaries of any Special Use Permits if applicable (ski areas, cat ski, etc.) for the National Forests specified above

Finally, we request the following in regards to forests in Region 6:

SFL et al. Comments on the DEIS for draft forest plans on the Inyo, Sequoia, and Sierra national forests (August 25, 2016)
1) Okanogan-Wenatchee

We request any and all GIS files that depict motorized vehicle restrictions and were used to create the 2005 Methow Valley and Tonasket Ranger District travel plan maps.

2) Willamette

We request electronic copies of any and all GIS files related to winter recreation trails and areas, including sno-parks, designated non-motorized areas outside Wilderness and the boundaries of any Special Use Permits if applicable (ski areas, cat ski, etc.).

We request the Motorized Access and Travel Management Plans prepared for each Ranger District as per the 1990 Forest Plan unless these documents have been superseded by other Forest Orders or other management guidelines pertaining to OSVs.

We request any and all Travel Management Area shapefiles that reflect Forest Plan Management Areas (or similar) for the Willamette National Forest.

We respectfully request electronic copies of this information to the extent possible.

If you determine that any of the requested materials are exempt from disclosure, please separate the exempt portions from the non-exempt portions and provide us with copies of the non-exempt portions. For any exempt portions, please include a specific description of the record and the reasons, defined in the terms of the Freedom of Information Act, for which the record is deemed exempt from disclosure. Winter Wildlands Alliance (WWA) reserves the right to appeal a decision to withhold any records.

To our knowledge, the above-requested information is not available from any other federal, state, or other public agency required to provide the information. Furthermore, the release of the information will not provide WWA, its affiliates, and any other individual, group, or organization with any financial benefits.

Winter Wildlands Alliance is a national, non-profit, human-powered winter recreation and wildlands advocacy organization. Spanning the nation, WWA is affiliated with local, state, and national recreation and conservation organizations, including 34 grassroots groups in 10 states. WWA and its partners, who represent cross-country skiers and snowshoers, focus primarily on public land management and winter recreation opportunities.

Currently, WWA is working with grassroots groups in 11 states, including Alaska, California, Colorado, Idaho, Minnesota, Montana, Nevada, New Mexico Oregon, Utah, Vermont, Washington and Wyoming. The information contained within this FOIA request will benefit these groups, their members, and other public partners by educating them about

USFS management practices, specifically how the needs of recreational user groups are addressed through current trail designation and funding. In addition to these groups, WWA will make all requested information available to the general public, its members, and other recreation and conservation groups, who will all benefit as they pursue winter recreation opportunities on our national forests.

Winter Wildlands Alliance makes information concerning USFS management practices available to all interested parties through public meetings, electronic and printed action alerts, newsletters, press releases, magazine articles, phone calls, and other means. The requested information will also assist WWA in responding to opportunities for public comment on proposed actions concerning winter recreation planning on national forest lands, in addition to allowing WWA to assist others in the preparation of such comments. The requested information will better educate the public, allowing them to be more active participants in Forest Service forums on winter recreation planning and management. Many opportunities are presently available for such involvement, as many Forest Plans are or soon will be in the process of revision.

For reasons of public interest and education, WWA requests that you grant a waiver of fees pursuant to 5 U.S.C. Part 522 (a)(4)(A) and 43 C.F.R. Part and Section 2.21. We expect that such a waiver will be granted. However, if a waiver is not granted, please inform WWA immediately of the price of disclosing the above-described records if such fees exceed $15.00.

We respectfully request that you will respond to our FOIA request within 20 working days. Please feel free to call me at (208) 629-1986 or email me at heisen@winterwildlands.org if you have any questions. Thank you for your immediate attention to this matter.

Sincerely,

*

Recreation Planning Coordinator
## Appendix C. Table of All Forests

<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
<th>Forest</th>
<th>Annual Cross-country Ski and Snowshoe visits</th>
<th>Annual Snowmobile Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northern (1)</strong></td>
<td>Idaho</td>
<td>Idaho Panhandle</td>
<td>8,133</td>
<td>70,562</td>
</tr>
<tr>
<td></td>
<td>Idaho</td>
<td>Nez Perce-Clearwater</td>
<td>14,802</td>
<td>17,045</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Beaverhead-Deerlodge</td>
<td>70,863</td>
<td>9,860</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Bitterroot</td>
<td>2,672</td>
<td>863</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Custer-Gallatin</td>
<td>282,961</td>
<td>252,496</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Flathead</td>
<td>15,524</td>
<td>26,275</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Helena</td>
<td>49,105</td>
<td>30,033</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Kootenai</td>
<td>32,882</td>
<td>1,079</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Lewis and Clark</td>
<td>7,079</td>
<td>1,479</td>
</tr>
<tr>
<td></td>
<td>Montana</td>
<td>Lolo</td>
<td>194,310</td>
<td>96,832</td>
</tr>
<tr>
<td></td>
<td><strong>(R1) Total</strong></td>
<td></td>
<td><strong>678,332</strong></td>
<td><strong>506,524</strong></td>
</tr>
<tr>
<td><strong>Rocky Mountain (2)</strong></td>
<td>Colorado</td>
<td>Arapaho-Roosevelt</td>
<td>593,937</td>
<td>495,386</td>
</tr>
<tr>
<td></td>
<td>Colorado</td>
<td>Grand Mesa, Uncompahgre, &amp; Gunnison</td>
<td>295,730</td>
<td>236,025</td>
</tr>
<tr>
<td></td>
<td>Colorado</td>
<td>Pike-San Isabel</td>
<td>45,445</td>
<td>646</td>
</tr>
<tr>
<td></td>
<td>Colorado</td>
<td>Rio Grande</td>
<td>40,683</td>
<td>23,662</td>
</tr>
<tr>
<td></td>
<td>Colorado</td>
<td>San Juan</td>
<td>10,778</td>
<td>2,624</td>
</tr>
<tr>
<td></td>
<td>Colorado</td>
<td>White River</td>
<td>735,699</td>
<td>82,223</td>
</tr>
<tr>
<td></td>
<td>Colorado &amp; Wyoming</td>
<td>Medicine Bow-Routt</td>
<td>373,044</td>
<td>113,158</td>
</tr>
<tr>
<td></td>
<td>South Dakota</td>
<td>Black Hills</td>
<td>56,101</td>
<td>86,712</td>
</tr>
<tr>
<td></td>
<td>Wyoming</td>
<td>Bighorn</td>
<td>27,925</td>
<td>38,144</td>
</tr>
<tr>
<td></td>
<td>Wyoming</td>
<td>Shoshone</td>
<td>19,260</td>
<td>92,088</td>
</tr>
<tr>
<td></td>
<td><strong>(R2) Total</strong></td>
<td></td>
<td><strong>2,198,604</strong></td>
<td><strong>1,170,669</strong></td>
</tr>
<tr>
<td><strong>Southwestern (3)</strong></td>
<td>Arizona</td>
<td>Cibola</td>
<td>11,367</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Arizona</td>
<td>Coconino</td>
<td>35,039</td>
<td>950</td>
</tr>
<tr>
<td></td>
<td>Arizona</td>
<td>Coronado</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Arizona</td>
<td>Kaibab</td>
<td>38</td>
<td>791</td>
</tr>
<tr>
<td></td>
<td>New Mexico</td>
<td>Carson</td>
<td>73,782</td>
<td>36,377</td>
</tr>
<tr>
<td></td>
<td>New Mexico</td>
<td>Lincoln</td>
<td>1,257</td>
<td>718</td>
</tr>
<tr>
<td></td>
<td>New Mexico</td>
<td>Santa Fe</td>
<td>130,229</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td><strong>(R3) Total</strong></td>
<td></td>
<td><strong>251,712</strong></td>
<td><strong>38,878</strong></td>
</tr>
<tr>
<td><strong>Intermountain (4)</strong></td>
<td>Idaho</td>
<td>Boise</td>
<td>237,220</td>
<td>41,747</td>
</tr>
<tr>
<td></td>
<td>Idaho</td>
<td>Caribou-Targhee</td>
<td>134,172</td>
<td>181,530</td>
</tr>
<tr>
<td></td>
<td>Idaho</td>
<td>Payette</td>
<td>51,954</td>
<td>79,016</td>
</tr>
<tr>
<td></td>
<td>Idaho</td>
<td>Salmon-Challis</td>
<td>13,918</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Idaho</td>
<td>Sawtooth</td>
<td>85,387</td>
<td>7,735</td>
</tr>
<tr>
<td></td>
<td>Nevada</td>
<td>Humboldt-Toiyabe</td>
<td>12,034</td>
<td>467</td>
</tr>
<tr>
<td></td>
<td>Utah</td>
<td>Ashley</td>
<td>177</td>
<td>317</td>
</tr>
<tr>
<td></td>
<td>Utah</td>
<td>Dixie</td>
<td>799</td>
<td>1,328</td>
</tr>
<tr>
<td></td>
<td>Utah</td>
<td>Fishlake</td>
<td>0</td>
<td>2,638</td>
</tr>
<tr>
<td></td>
<td>Utah</td>
<td>Manti-LaSal</td>
<td>4,104</td>
<td>3,418</td>
</tr>
<tr>
<td></td>
<td>Utah</td>
<td>Uinta-Wasatch-Cache</td>
<td>152,629</td>
<td>139,980</td>
</tr>
<tr>
<td></td>
<td>Wyoming</td>
<td>Bridger-Teton</td>
<td>201,581</td>
<td>136,311</td>
</tr>
<tr>
<td></td>
<td><strong>(R4) Total</strong></td>
<td></td>
<td><strong>893,975</strong></td>
<td><strong>594,487</strong></td>
</tr>
<tr>
<td>Total Acres</td>
<td>Acres Open to Snowmobiles</td>
<td>Acres of Non-Wilderness, Closed to Snowmobiles</td>
<td>Acres of Designated Wilderness, Closed to Snowmobiles</td>
<td>Miles of Cross-Country Ski and Snowshoe Trails</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>2,498,020</td>
<td>2,047,586</td>
<td>440,568</td>
<td>9,866</td>
<td>47</td>
</tr>
<tr>
<td>3,935,460</td>
<td>2,729,835</td>
<td>66,382</td>
<td>1,139,243</td>
<td>79</td>
</tr>
<tr>
<td>3,392,010</td>
<td>2,023,011</td>
<td>1,115,517</td>
<td>221,518</td>
<td>102</td>
</tr>
<tr>
<td>1,594,580</td>
<td>543,840</td>
<td>300,397</td>
<td>750,343</td>
<td>0</td>
</tr>
<tr>
<td>3,039,170</td>
<td>1,308,346</td>
<td>583,476</td>
<td>1,051,301</td>
<td>111</td>
</tr>
<tr>
<td>2,411,910</td>
<td>717,901</td>
<td>627,739</td>
<td>1,075,558</td>
<td>41</td>
</tr>
<tr>
<td>980,757</td>
<td>338,130</td>
<td>483,357</td>
<td>112,023</td>
<td>23</td>
</tr>
<tr>
<td>2,243,330</td>
<td>1,961,260</td>
<td>188,304</td>
<td>93,766</td>
<td>46</td>
</tr>
<tr>
<td>1,869,610</td>
<td>570,200</td>
<td>906,696</td>
<td>386,197</td>
<td>0</td>
</tr>
<tr>
<td>2,183,450</td>
<td>1,540,803</td>
<td>494,585</td>
<td>148,062</td>
<td>25</td>
</tr>
<tr>
<td>24,148,297</td>
<td>13,780,911</td>
<td>5,207,020</td>
<td>4,987,877</td>
<td>475</td>
</tr>
<tr>
<td>1,596,970</td>
<td>1,251,297</td>
<td>19,252</td>
<td>326,421</td>
<td>114</td>
</tr>
<tr>
<td>2,965,960</td>
<td>2,349,684</td>
<td>60,934</td>
<td>553,680</td>
<td>706</td>
</tr>
<tr>
<td>163,039</td>
<td>1,631,237</td>
<td>163,039</td>
<td>445,339</td>
<td>82</td>
</tr>
<tr>
<td>1,837,770</td>
<td>1,429,477</td>
<td>14,784</td>
<td>392,407</td>
<td>18</td>
</tr>
<tr>
<td>1,864,290</td>
<td>798,599</td>
<td>640,170</td>
<td>424,281</td>
<td>47</td>
</tr>
<tr>
<td>2,287,150</td>
<td>682,429</td>
<td>853,315</td>
<td>750,947</td>
<td>101</td>
</tr>
<tr>
<td>2,892,400</td>
<td>1,627,216</td>
<td>380,959</td>
<td>331,247</td>
<td>216</td>
</tr>
<tr>
<td>1,250,960</td>
<td>672,399</td>
<td>560,889</td>
<td>13,548</td>
<td>24</td>
</tr>
<tr>
<td>1,105,090</td>
<td>812,113</td>
<td>100,935</td>
<td>191,911</td>
<td>40</td>
</tr>
<tr>
<td>2,439,340</td>
<td>544,558</td>
<td>528,291</td>
<td>1,365,643</td>
<td>25</td>
</tr>
<tr>
<td>18,402,969</td>
<td>11,799,009</td>
<td>3,322,569</td>
<td>4,795,424</td>
<td>1,374</td>
</tr>
<tr>
<td>1,879,340</td>
<td>1,719,621</td>
<td>21,586</td>
<td>138,133</td>
<td>10</td>
</tr>
<tr>
<td>1,852,300</td>
<td>1,649,664</td>
<td>45,982</td>
<td>156,654</td>
<td>16</td>
</tr>
<tr>
<td>1,718,950</td>
<td>0</td>
<td>1,380,466</td>
<td>338,484</td>
<td>0</td>
</tr>
<tr>
<td>1,561,270</td>
<td>1,446,379</td>
<td>0</td>
<td>114,891</td>
<td>8</td>
</tr>
<tr>
<td>1,490,110</td>
<td>1,344,953</td>
<td>15,753</td>
<td>129,404</td>
<td>20</td>
</tr>
<tr>
<td>1,095,470</td>
<td>991,153</td>
<td>20,912</td>
<td>83,405</td>
<td>3</td>
</tr>
<tr>
<td>1,545,990</td>
<td>1,259,619</td>
<td>0</td>
<td>286,371</td>
<td>11</td>
</tr>
<tr>
<td>11,143,430</td>
<td>8,411,389</td>
<td>1,484,699</td>
<td>1,247,342</td>
<td>67</td>
</tr>
<tr>
<td>2,203,710</td>
<td>1,996,133</td>
<td>416,719</td>
<td>249</td>
<td>31</td>
</tr>
<tr>
<td>2,898,500</td>
<td>2,167,359</td>
<td>579,096</td>
<td>134,566</td>
<td>39</td>
</tr>
<tr>
<td>2,309,420</td>
<td>1,063,092</td>
<td>465,122</td>
<td>781,206</td>
<td>0</td>
</tr>
<tr>
<td>4,353,900</td>
<td>2,437,931</td>
<td>693,941</td>
<td>1,273,428</td>
<td>34</td>
</tr>
<tr>
<td>2,110,410</td>
<td>1,604,899</td>
<td>287,810</td>
<td>217,701</td>
<td>129</td>
</tr>
<tr>
<td>6,251,680</td>
<td>4,948,373</td>
<td>30,000</td>
<td>1,273,307</td>
<td>0</td>
</tr>
<tr>
<td>1,378,350</td>
<td>994,196</td>
<td>110,000</td>
<td>274,154</td>
<td>45</td>
</tr>
<tr>
<td>1,631,930</td>
<td>1,544,929</td>
<td>1,378</td>
<td>85,623</td>
<td>0</td>
</tr>
<tr>
<td>1,704,880</td>
<td>1,407,178</td>
<td>297,702</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>1,340,370</td>
<td>1,139,568</td>
<td>154,445</td>
<td>46,357</td>
<td>0</td>
</tr>
<tr>
<td>2,155,920</td>
<td>1,223,142</td>
<td>511,040</td>
<td>367,069</td>
<td>164</td>
</tr>
<tr>
<td>3,420,550</td>
<td>1,942,920</td>
<td>232,747</td>
<td>1,297,151</td>
<td>365</td>
</tr>
<tr>
<td>31,759,620</td>
<td>22,469,720</td>
<td>3,779,999</td>
<td>5,750,811</td>
<td>839</td>
</tr>
<tr>
<td>Region</td>
<td>State</td>
<td>Forest</td>
<td>Annual Cross-country Ski and Snowshoe visits</td>
<td>Annual Snowmobile Visits</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
<td>----------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Pacific Southwest (5)</td>
<td>California</td>
<td>Eldorado</td>
<td>19,069</td>
<td>3,641</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Inyo</td>
<td>169,238</td>
<td>27,268</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Lake Tahoe Basin</td>
<td>565,843</td>
<td>360,790</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Lassen</td>
<td>5,506</td>
<td>28,938</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Modoc</td>
<td>49,830</td>
<td>4,994</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Plumas</td>
<td>3,026</td>
<td>905</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Sequoia</td>
<td>533</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Shasta Trinity</td>
<td>47,450</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Sierra *</td>
<td>4,141</td>
<td>4,750</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Stanislaus</td>
<td>10,139</td>
<td>2,928</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Tahoe</td>
<td>247,317</td>
<td>42,078</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Klamath</td>
<td>48,670</td>
<td>12,491</td>
</tr>
<tr>
<td>(R5) Total</td>
<td></td>
<td></td>
<td>1,170,761</td>
<td>488,783</td>
</tr>
<tr>
<td>Pacific Northwest (6)</td>
<td>Oregon</td>
<td>Deschutes</td>
<td>139,953</td>
<td>65,180</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Fremont-Winema</td>
<td>0</td>
<td>3,909</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Gifford Pinchot</td>
<td>16,111</td>
<td>11,827</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Malheur</td>
<td>0</td>
<td>20,906</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Mt Hood</td>
<td>251,703</td>
<td>17,419</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Ochoco</td>
<td>12,747</td>
<td>38,241</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Rogue River-Siskiyou *</td>
<td>84,926</td>
<td>6,529</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Umatilla</td>
<td>12,568</td>
<td>11,274</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Umpqua *</td>
<td>3,039</td>
<td>12,997</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Wallowa Whitman</td>
<td>12,298</td>
<td>3,726</td>
</tr>
<tr>
<td></td>
<td>Oregon</td>
<td>Willamette</td>
<td>46,896</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Washington</td>
<td>Colville</td>
<td>8,619</td>
<td>25,870</td>
</tr>
<tr>
<td></td>
<td>Washington</td>
<td>Mt Baker-Snoqualmie</td>
<td>86,100</td>
<td>5,768</td>
</tr>
<tr>
<td></td>
<td>Washington</td>
<td>Okanogan-Wenatchee *</td>
<td>155,679</td>
<td>19,642</td>
</tr>
<tr>
<td>(R6) Total</td>
<td></td>
<td></td>
<td>830,639</td>
<td>243,286</td>
</tr>
<tr>
<td>Eastern (9)</td>
<td>Michigan</td>
<td>Hiawatha</td>
<td>46,393</td>
<td>68,171</td>
</tr>
<tr>
<td></td>
<td>Michigan</td>
<td>Huron Manistee</td>
<td>10,855</td>
<td>499,329</td>
</tr>
<tr>
<td></td>
<td>Michigan</td>
<td>Ottawa</td>
<td>1,041</td>
<td>49,355</td>
</tr>
<tr>
<td></td>
<td>Michigan</td>
<td>Superior</td>
<td>220,542</td>
<td>10,524</td>
</tr>
<tr>
<td></td>
<td>Minnesota</td>
<td>Chippewa</td>
<td>7,364</td>
<td>28,713</td>
</tr>
<tr>
<td></td>
<td>New Hampshire</td>
<td>White Mountain</td>
<td>382,424</td>
<td>101,046</td>
</tr>
<tr>
<td></td>
<td>Pennsylvania</td>
<td>Alleghany</td>
<td>0</td>
<td>31,123</td>
</tr>
<tr>
<td></td>
<td>Vermont &amp; New York</td>
<td>Green Mountain and Finger Lakes</td>
<td>232,194</td>
<td>71,019</td>
</tr>
<tr>
<td></td>
<td>West Virginia</td>
<td>Monongahela</td>
<td>3,458</td>
<td>1,037</td>
</tr>
<tr>
<td></td>
<td>Wisconsin</td>
<td>Chequamegon-Nicolet</td>
<td>30,693</td>
<td>108,779</td>
</tr>
<tr>
<td>(R9) Total</td>
<td></td>
<td></td>
<td>934,964</td>
<td>969,098</td>
</tr>
<tr>
<td>Alaska (10)</td>
<td>Alaska</td>
<td>Chugach</td>
<td>15,140</td>
<td>959</td>
</tr>
<tr>
<td></td>
<td>Alaska</td>
<td>Tongass</td>
<td>18,121</td>
<td>1,000</td>
</tr>
<tr>
<td>(R10) Total</td>
<td></td>
<td></td>
<td>33,261</td>
<td>1,960</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td>6,878,106</td>
<td>4,002,135</td>
</tr>
<tr>
<td>Total Acres</td>
<td>Acres Open to Snowmobiles</td>
<td>Acres of Non-Wilderness, Closed to Snowmobiles</td>
<td>Acres of Designated Wilderness, Closed to Snowmobiles</td>
<td>Miles of Cross-Country Ski and Snowshoe Trails</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>604,790</td>
<td>452,140</td>
<td>50,657</td>
<td>103,463</td>
<td>123</td>
</tr>
<tr>
<td>1,983,940</td>
<td>972,954</td>
<td>43,947</td>
<td>967,039</td>
<td>33</td>
</tr>
<tr>
<td>151,927</td>
<td>58,882</td>
<td>68,388</td>
<td>24,657</td>
<td>0</td>
</tr>
<tr>
<td>1,153,220</td>
<td>976,760</td>
<td>93,422</td>
<td>79,838</td>
<td>91</td>
</tr>
<tr>
<td>1,679,300</td>
<td>1,608,912</td>
<td>0</td>
<td>70,388</td>
<td>0</td>
</tr>
<tr>
<td>1,203,600</td>
<td>1,163,046</td>
<td>11,078</td>
<td>23,777</td>
<td>0</td>
</tr>
<tr>
<td>1,114,770</td>
<td>450,228</td>
<td>42,381</td>
<td>319,753</td>
<td>5</td>
</tr>
<tr>
<td>2,121,020</td>
<td>1,618,440</td>
<td>0</td>
<td>502,580</td>
<td>0</td>
</tr>
<tr>
<td>1,316,340</td>
<td>760,657</td>
<td>2,000</td>
<td>553,683</td>
<td>13</td>
</tr>
<tr>
<td>898,352</td>
<td>539,885</td>
<td>142,714</td>
<td>215,753</td>
<td>0</td>
</tr>
<tr>
<td>839,714</td>
<td>743,646</td>
<td>70,854</td>
<td>25,214</td>
<td>55</td>
</tr>
<tr>
<td>1,504,130</td>
<td>1,173,623</td>
<td>0</td>
<td>330,507</td>
<td>14</td>
</tr>
<tr>
<td>14,571,103</td>
<td>10,519,174</td>
<td>525,440</td>
<td>3,216,652</td>
<td>334</td>
</tr>
<tr>
<td>1,612,180</td>
<td>1,193,514</td>
<td>283,727</td>
<td>182,469</td>
<td>164</td>
</tr>
<tr>
<td>2,253,700</td>
<td>1,653,864</td>
<td>484,211</td>
<td>115,625</td>
<td>145</td>
</tr>
<tr>
<td>1,368,300</td>
<td>1,093,568</td>
<td>95,167</td>
<td>179,565</td>
<td>5</td>
</tr>
<tr>
<td>1,721,410</td>
<td>1,386,770</td>
<td>252,086</td>
<td>82,554</td>
<td>56</td>
</tr>
<tr>
<td>1,024,360</td>
<td>168,177</td>
<td>570,343</td>
<td>285,840</td>
<td>81</td>
</tr>
<tr>
<td>725,702</td>
<td>388,078</td>
<td>301,816</td>
<td>35,598</td>
<td>28</td>
</tr>
<tr>
<td>1,722,780</td>
<td>506,130</td>
<td>877,002</td>
<td>339,648</td>
<td>76</td>
</tr>
<tr>
<td>1,404,200</td>
<td>732,518</td>
<td>367,510</td>
<td>304,172</td>
<td>4</td>
</tr>
<tr>
<td>985,352</td>
<td>875,713</td>
<td>37,900</td>
<td>71,739</td>
<td>61</td>
</tr>
<tr>
<td>2,402,600</td>
<td>1,567,524</td>
<td>241,534</td>
<td>593,542</td>
<td>86</td>
</tr>
<tr>
<td>1,682,850</td>
<td>1,218,583</td>
<td>59,685</td>
<td>390,581</td>
<td>153</td>
</tr>
<tr>
<td>1,103,190</td>
<td>730,949</td>
<td>337,930</td>
<td>31,441</td>
<td>40</td>
</tr>
<tr>
<td>1,761,430</td>
<td>690,959</td>
<td>248,553</td>
<td>821,918</td>
<td>126</td>
</tr>
<tr>
<td>3,996,560</td>
<td>2,148,395</td>
<td>373,820</td>
<td>1,474,345</td>
<td>199</td>
</tr>
<tr>
<td>23,764,614</td>
<td>14,354,742</td>
<td>4,531,285</td>
<td>4,909,037</td>
<td>1,223</td>
</tr>
<tr>
<td>898,479</td>
<td>845,463</td>
<td>14,368</td>
<td>38,648</td>
<td>54</td>
</tr>
<tr>
<td>978,880</td>
<td>0</td>
<td>975,609</td>
<td>3,271</td>
<td>147</td>
</tr>
<tr>
<td>996,538</td>
<td>877,055</td>
<td>64,443</td>
<td>52,442</td>
<td>41</td>
</tr>
<tr>
<td>2,172,520</td>
<td>1,043,922</td>
<td>29,809</td>
<td>1,098,789</td>
<td>363</td>
</tr>
<tr>
<td>671,952</td>
<td>0</td>
<td>671,952</td>
<td>0</td>
<td>49</td>
</tr>
<tr>
<td>802,249</td>
<td>0</td>
<td>652,608</td>
<td>149,641</td>
<td>105</td>
</tr>
<tr>
<td>513,794</td>
<td>0</td>
<td>504,815</td>
<td>8,979</td>
<td>41</td>
</tr>
<tr>
<td>425,943</td>
<td>0</td>
<td>325,069</td>
<td>100,874</td>
<td>319</td>
</tr>
<tr>
<td>1,523,710</td>
<td>1,350,004</td>
<td>126,863</td>
<td>46,843</td>
<td>224</td>
</tr>
<tr>
<td>920,584</td>
<td>0</td>
<td>804,494</td>
<td>116,090</td>
<td>0</td>
</tr>
<tr>
<td>9,904,649</td>
<td>4,116,444</td>
<td>4,170,030</td>
<td>1,615,577</td>
<td>1,342</td>
</tr>
<tr>
<td>9,602,314</td>
<td>2,657,278</td>
<td>6,945,036</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>30,634,565</td>
<td>5,917,321</td>
<td>9,752</td>
<td>6,924,421</td>
<td>40</td>
</tr>
<tr>
<td>40,236,879</td>
<td>8,574,599</td>
<td>6,954,788</td>
<td>6,924,421</td>
<td>91</td>
</tr>
<tr>
<td>176,008,137</td>
<td>97,025,989</td>
<td>29,975,829</td>
<td>33,447,141</td>
<td>5,746</td>
</tr>
</tbody>
</table>

*Acres figures are approximate based on best available data*
2. Multiple-Use and Sustained Yield Act of 1960, Public Law 86-517, 86th Congress (June 12, 1960), § 4(a)
3. Id.
4. An "Over-Snow Vehicle" is defined by the Forest Service as: "a motor vehicle that is designed for use over snow and that runs on a track and/or a ski or skis, while used over snow."
11. Id.; For photos of early machines see www.snowmobilehistory.com/page6.html.
12. See photo posted by the Snowmobile Canada website at www.snowmobile-canada.com/his3.htm
13. From: users.accesscomm.ca/r/read/76spcs.JPG
17. Id.
22. See fn. 13.
24. The most recent National Visitor Use Monitoring data give an estimate of 6,878,106 cross-country ski or snowshoe visits annually and 4,002,135 annual snowmobile visits to all of the forests in this report
26. Id.
28. See fn. 19, at p. 302.
29. Id.
30. Available in Appendix 1 and 2
31. Three forests in Region 6 – the Umpqua, Rogue River-Siskiyou, and Okanogan-Wenatchee failed to provide a full response to our FOIA request. Acreage calculations for these forests are approximate based on the information available.
33. Id., at p. 48
34. Exec. Order No. 11644, 37 FR 2877, 1972 WL 19410 (Pres.)
36. "A telephone survey undertaken in 1998 for Teton County, Wyoming (Morey and Associates, Inc.) collected information on local resident winter participation and attitudes. The study found that 21% of households snowmobiled and 15% cross-country skied in Yellowstone in the winter of 1997-1998. In their usage of GTNP, 12% of residents snowmobiled, 46% cross-country or backcountry skied, and 10% used snowshoes. A total of 52% of Yellowstone users and 56% of non-users felt snowmobiles negatively impact Yellowstone in the winter. Of these, 66% felt they are too noisy, 44% felt they affect air quality, 39% felt they disturb wild life, and 25% feel there are too many." From: Yellowstone SEIS, Chapter 3, Affected Environment, at www.nps.gov/grte/winteruse/fseis/vol1/6-chap3.pdf
Also: "In 1975, Glacier [National Park’s] officials decided to ban snowmobiles from the park, primarily because they disrupted the solitude of the national park in winter; ‘Over 90% of the comments opposed to snowmobile use related that concern to silence, tranquility, or in other words, aesthetics’; Yochim, ‘The Development of Snowmobile Policy in Yellowstone National Park,” Yellowstone Science, Spring, 1999, Vol. 7, No. 2, p. 7-9. **End Notes**


41. See http://snowmobiles.axlegeeks.com/ for a complete list of current year snowmobile specifications


43. Id. Other data suggest that it will take a snowmobiler operating at a speed of only 50 mph, at least 220 feet to come to a stop. See Gilmour and Bowe, “High Speeds at Night A Recipe for Disaster,” The Forum, at www.in-forum.com/specials/snowmobiles/articles2.shtml

44. See Powers, supra, at fn. 44. See also www.seagrant.umn.edu/tourism/snow.html#6.


46. Id

47. The NVUM homepage is at www.fs.fed.us/recreation/programs/nvum/

48. Personal communication with Don English, Visitor Use Monitoring Program Manager, Feb. 13, 2015

49. In April 2015 the Bitterroot National Forest released a draft Record of Decision regarding a new travel plan. Because this plan was not finalized at the time of report publication the numbers from the new plan are not included in this report. However, the new plan outlines a much more equitable balance of land allocation for motorized and non-motorized users similar to other National Forest winter travel plans in Region 1.


52. Id.


58. Id.


Winter Wildlands Alliance is a national nonprofit organization promoting and preserving winter wildlands and a quality human-powered snowsports experience on public lands.