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RE: Inyo National Forest Draft Land Management Plan and Draft Environmental Impact Statement for Region 5 Early Adopter Forests

Thank you for the opportunity to comment on the Inyo National Forest (INF) draft land management plan and the three Forest Draft Environmental Impact Statement (DEIS). Friends of the Inyo is a locally-based nonprofit conservation organization dedicated to the stewardship, exploration, and preservation of the Eastern Sierra's public lands and wildlife. Over our 30 year history, Friends of the Inyo has been an active partner with the Inyo National Forest, initially providing public comments on actions stemming from the Forest's 1988 forest planning process to today where staff, members, and volunteers have contributed well over a quarter of a million dollars in in-kind labor, interpretation and support across nearly every professional Forest discipline. We represent a collective voice of more than 700 local and regional members. We have engaged in the INF plan revision process since the development of the Forest Assessment in 2013.

These comments follow our comments submitted on Desired Conditions, Need to Change and Scoping comments. Our approach is to support and improve the preferred alternative; however, there are instances where we believe other alternatives better address a resource or issue and in these cases we ask the particular component be moved to the preferred alternative. We worked with a variety of species experts and collaborators on these comments and in some cases we use their language for our comments. In other cases, we use the same comments from scoping, where our previous comments were not addressed.

General comments

We continue to see a lack of plan components that create a robust and meaningful land management plan including the use of standards and guidelines and measurable objectives. There is a heavy focus on desired conditions throughout the plan, and we will speak to why this is problematic in context to topic areas. The one exception to this is the section on sage grouse, which contains an example of appropriate plan components, although we offer some recommended additions

below. Friends of the Inyo believes the Forest Service must detail enforceable, mandatory standards in forest plans to ensure Forest resources are adequately managed and protected throughout the life of the plan. NFMA requires that standards and guidelines be used to ensure the protection of various resources such as soil, watershed conditions, and wildlife diversity (16 USC §1604). Additionally, the 2012 planning regulations make clear that every forest plan must include standards as one of five plan components (36 C.F.R. §219.7). Standards are the only plan component that can ensure the planning mandates found in the 2012 NFMA regulations are satisfied.

While we recognize the role adaptive management will play in final forest plans, and because adaptive management means planning for uncertainties, the Forest should try to anticipate possible changes to standards and provide mechanisms for their adjustment. Enumerating and adopting meaningful standards will not hinder adaptive management, but rather form the foundation for it to work. We recommended the use of default standards or possible tiered standards to plan for uncertainty in our scoping comments; these suggestions appear to have been ignored. The fact that many sections of the draft plan are missing standards all together is of particular concern.

Plan components that follow desired conditions need to have metrics that tie back into them. One way to achieve desired conditions is through measurable objectives that trigger actions to meet a standard when a desired condition is not achieved. With this methodology, objectives and standards become part of an adaptive management cycle. A robust monitoring program must form a key piece of this adaptive management cycle. Although the chapter on monitoring is a good start, it does not detail how baseline data and then reoccurring monitoring will be implemented in order to achieve desired conditions. The final plan must have an effective way to track and guide project-specific and cumulative management actions.

Eastside terrestrial vegetation

Native seed is needed to support each and every restoration activity. Locally sourced, native seed will be the most resilient to climate change. This is especially critical for genetically variable, site-adapted species. We offer the following changes to the terrestrial ecosystems plan components:

TERR-XER-STD-01 (pg. 97)- Include sagebrush and pinyon-juniper habitats, which also contain fragile biological soil crusts.
TERR-FW-GDL-04 (pg. 101)- Where feasible, projects should exclusively use native seed species appropriate for the project area.

Old Forest and Complex Early Seral Habitats

During the 1988 planning process on the Inyo, stakeholders worked very hard to ensure the Land Management Plan included language on Old Forest Emphasis Area (OFEA) land allocations. We are disappointed to not see OFEAs carried over to the

new plan or even updated. Large diameter trees, downed woody debris, and snag retention and recruitment are critical metrics to guide forest management. New plan components need to detail complex seral stage requirements (e.g. 10% of each seral stage represented) and snag density and recruitment requirements. If it is the goal of the agency to protect at-risk species with the use of course filter plan components, managing for old forest and complex early seral habitats will aid in recovery of many forest plant and animal species currently on the Species of Conservation Concern list.

We offer the following changes to Terrestrial Ecosystems:

- TERR-FW-STD-01 (pg 97)- 30'' DBH limit should be changed to all 24'' DBH trees and most 20'' DBH trees given the drier climate and therefore slower growth rate on the INF. This would also be consistent with the DEIS discussion of how eastside vegetation and terrestrial habitats differ from the westside forests (volume 1 pg 235).

At-risk Species

Black-backed Woodpecker

We are disappointed to see the exclusion of Black-backed Woodpeckers (BBWO) as a Species of Conservation Concern despite our repeated comments and BAIS indicating the need for management of this species. The SCC rationale fails to mention that the BBWO 1) received a positive ESA 90-day finding; and 2) is currently designated as "imperiled" (S2) in California. This information alone strongly supports inclusion on the SCC list. In addition, a long list of reports and published papers exists regarding the status, the trends, habitat conditions, and threats to black-backed woodpecker, yet the most recent SCC tables fail to acknowledge this extensive literature. Of significant concern is the failure to note post-fire logging as a threat and the omission of BBWO from the SCC tables. This appears to be just a copy and paste error? Moreover, while we have been told that species experts have been consulted about the SCC list, inquiries to several BBWO experts indicate they were not contacted.

The BAIS provided in our SCC comments submitted in July 2015 and January 2016, and-our meetings with Forest staff, supported the inclusion of BBWO on the SCC list. We request the Forest and region review this information and include the BBWO as an SCC.

Northern Goshawk

We are also disappointed to see the SCC exclusion of Goshawk despite our repeated comments and BAIS indicating the need for management of this species. Northern Goshawk has been designated a Regional Forester's Sensitive Species in Region 5 since the mid-1980s. The species' status in the Sierra Nevada was recently reviewed and Region 5 confirmed in 2013 that it still belonged on the revised RFSS list (USDA Forest Service 2016). Furthermore, the California state wildlife action plan recently designated Goshawk as a California "species of greatest conservation need" for the

Sierra Nevada bioregion ('SWAP', CDFW 2015). This is in direct contradiction to the Forest Service's finding that Goshawk is "*secure in its range, except Nevada"*.

The Forest Service does not explain how BAIS was applied in the decision to not identify Goshawk as a Species of Conservation Concern, as required under the planning rule (36 CFR 219.3).

Bi-State DPS Greater Sage-Grouse
The use of fine filter plan components for sage grouse, especially the use of standards, are robust and should be used as a model for other at-risk species. A notable addition would be the key desired condition at the landscape scale regarding adequate nesting and brood rearing habitat. Objectives need to quantify how much nesting and brood rearing habitat is needed to provide for a population meeting the viability requirement of the 2012 Planning Rule. Plan components for sage grouse need to include wet meadow habitat, which are vital to the brood rearing life stage. Plan components should also assure sufficient grass cover height for not only brood-rearing habitat but also nesting habitat. Provisions for lek buffers are also needed. The draft plan contains no limit on the density of potential disturbance allowed in sage-grouse habitat, unlike every other federal sage-grouse conservation plan to date. We would also like to see stronger language on coordinating with the Bi-State Action Working Group to implement restoration and management projects that maintain and restore the bi-state sage grouse on Inyo National Forest lands. The Humbolt-Toiyabe National Forest (HTNF) applied its conservation measures to all occupied sage-grouse habitat, and we recommend the INF use the HTNF amendment as a model.

Examples of plan components to modify include (pg 97,98):

- SPEC-SG-STD-02- include "identifying meadows for restoration in brood rearing habitat."
- SPEC-SG-STD-08- We are still confused by what this standard actually means. Please clarify or reword. We recommend forest-wide range utilization standards be revised for critical habitat of grouse. Populations of grouse occurring within grazing allotments need to be monitored before and after periods of grazing.
- SPEC-SG-STD-09- change to include "when seeding, locally sourced native plant and seed material shall be used."
- SPEC-SG-STD-11- add "mark all existing fences in sage grouse habitat." This may be achievable through the use of partnerships or coordination with other agencies and agreements with permittees.

Based on the BAIS and current management plans for sage grouse (SGNTT 2011, Aldridge et al. 2008; Doherty et al. 2010; Wisdom et al. 2011; Karl and Sadowski 2005; Doherty 2008; Connelly et al. 2000; Moynahan et al. 2007; Walker et al. 2007; Caudill et al. 2013) we recommend the following plan components as standards or guidelines:

- Manage or restore essential habitat so that at least 70 percent of the land cover is sagebrush steppe sufficient to support sage-grouse with 15 to 40 percent sagebrush canopy cover
- Identify and protect sage-grouse wintering areas.
- Prohibit renewable energy development in essential habitat.
- Limit surface disturbance to less than 3 percent per section in essential habitat.
- Prohibit noise levels associated with any anthropogenic activity to not exceed 10 dBA above scientifically established natural ambient noise levels at the periphery of sage-grouse mating, foraging, nesting, brood-rearing and winter habitat during each season of use by sage-grouse.
- Exclude new rights-of-way in essential habitat and manage valid existing rights-of-way in essential habitat in accordance with Sage-Grouse National Technical Team report prescriptions.
- Rangeland Utilization Standards should maintain at least 7 inches average grass height in nesting and brood-rearing habitat.
- Manage riparian habitat and wetlands to meet properly functioning condition; manage wet meadows to maintain native species diversity and cover to support sage-grouse brood-rearing.
- Facilitate voluntary grazing permit retirement in sage-grouse habitat (HTNF amendment pg. 16).
- Prohibit prescribed fire in sagebrush steppe with less than 12 inches annual precipitation or areas with moderate or high potential for cheatgrass incursion.
- Prohibit vegetation treatments that reduce sagebrush canopy cover to less than 15 percent.

Willow Flycatcher

Unfortunately the Inyo draft plan fails to identify and restore willow flycatcher (WIFL) habitat that has been degraded, as urged by wildlife biologists from the Forest Service, the California Department of Fish and Wildlife, and non-profit organizations in Loffland et al. (2014). The plan cannot provide for diversity because the habitat conditions required by willow flycatcher are not provided, and surprisingly no species-targeted plan components have been developed. The plan must provide for the ecological conditions necessary to maintain a viable population of each species of conservation concern in the plan area.

To address dramatic declines in the endangered species of WIFL, the new plan should manage current and historic breeding locations of meadows larger than 10 acres that have standing water on June 1 and a deciduous shrub component (predominantly willow and rose on the Inyo). These management areas must exclude grazing of sheep, cattle, and horses, redirect recreational activity, and restore or close roads adjacent to WIFL breeding sites. The goal of WIFL management, based on the Best Available Science, is to limit cowbird parasitism,

restore vertical gradients in shrubs, and restore hydrologic function to the meadow system. Restoration priorities for WIFL are Rush and Lee Vining Creeks. Willow flycatcher researchers recommend restoring meadow habitat within 12km of recent detections

Interagency agreements are part of how the Forest Service is required through NFMA to provide ecological conditions necessary for WIFL persistence.
Plan components should provide direction regarding an agreement between Los Angeles Department of Water and Power (LADWP) and INF in places such as Lee Vining and Rush Creek. The WTR-FW-GDL 01 says *"Cooperate with federal, tribal, state and local governments to secure in-stream flows needed to maintain, recover, and restore riparian resources, channel conditions, and aquatic habitat during all basic Federal Energy Regulatory Commission (FERC), state and other authorized water use planning, water rights, and relicensing on the national forests. Coordinate relicensing projects with the appropriate state and federal agencies. Provide written and timely license conditions to the Federal Energy Regulatory Commission."* Such language should also be used for supporting key habitats for WIFL. Protecting and monitoring populations of WIFL near Mono Lake is essential because the species here display monotypic habitat selection (McCreedy and Heath 2004; Green et al. 2003). Here, WIFL nest in tall riparian shrubs atypically located away from meadows. This population may represent a gene pool displaying persistence in environmentally extreme conditions that could favor survival in changing climate (McCreedy and Heath 2004).

Modify RCA-MEAD-OBJ-01 (pg 86): Take action to enhance or improve conditions on 5 to 10 meadows to address needs of species of conservation concern within 10 years following plan approval.

American Marten
"The marten is among the most habitat-specific mammals in North America, and changes in the quality, quantity, and distribution of available habitat could affect their distributional range in California." (Buskirk and Powell 1994). In the Sierra Nevada, "martens prefer coniferous forest habitat with large diameter trees and snags, large down logs, moderate-to-high canopy closure, and an interspersion of riparian areas and meadows." (USDA Forest Service 2001, Volume 3, Chapter 3, part 4.4, p. 19).

As is the case for most at-risk species, the draft plans rely on desired conditions with little additional direction to provide the ecological conditions to maintain marten persistence. Since thinning, group selection and other logging allowed by the draft plans are likely to result in simplification of habitat that is detrimental to marten persistence, the draft plans should include additional plan components to address this threat and improve the clarity of plan components that are identified.

The DEIS (p. 330-331) provides a brief account of status and threats for this species. The evaluation of threats refers specifically to "past timber harvest" as a threat and

does not address current and ongoing threats from timber harvest. This is inconsistent with the BAIS (Zielinski 2014). We are particularly concerned about timber and fuels treatment projects because the Timber Suitability Map in the preferred alternative appears to overlap with marten den sites as well as suitable habitat within the Red fir belt.

Although we acknowledge the Forest will be doing very little "timber harvest" in the future, the bulk of logging will likely take place through fuel projects. Additional information is now available on marten response to fuel treatments. Moriarty and Epps (2016) found that "Martens selected home ranges with fewer openings compared to the study area overall. Within home ranges, martens strongly selected complex stands over simple stands and openings." These and other findings lead them to conclude that "martens avoided stands with simplified structure, and the altered patterns of movement we observed in those stands suggested that such treatments may negatively affect the ability of martens to forage without increased risk of predation. Fuel treatments that simplify stand structure negatively affected marten movements and habitat connectivity." Current fuels treatment practices are now a scientifically known threat to marten and may be a threat on the Inyo National Forest. The DEIS needs to address this threat in the context of this current science and preform a quantitative analysis of the impact of proposed fuels treatments on this species and others. In addition, plan components to reduce this threat should be included in the revised plans.

The draft plan includes an area called "marten core habitat area" or "marten habitat core area," but these areas are not clearly defined. The spatial location of these areas is not included on a map nor are their locations clearly described in a manner that could be located on a map. This means those reviewing the draft plan and DEIS must rely on a previous knowledge base. Marten core habitat areas are headed in the right direction, but we suggest the application of Spencer and Rustigian-Romsos (2012) for further defining these areas. These core areas contain conditions that reflect the use of the areas by marten and should be the basis of desired habitat conditions for marten. Having established a core area in order to manage marten habitat, it is essential that additional plan components be designed to guide management in these areas. The draft plan includes three desired conditions (pg 34) and one guideline (pg 104) that refer to these areas or marten more generally.

These components provide little guidance about the actions that would be appropriate in the core habitat for marten. Desired conditions for marten should offer specific foraging, denning, and resting habitats and provide guidance for developing a project that may affect marten or its habitat. As a whole, these plan components provide no clear protections for forests with dense canopy, abundant large trees, large snags, and abundant down wood that are required for marten persistence. Such direction is needed because the logging, i.e., group selection, thinning, and other practices that are allowed can degrade or render unsuitable denning, resting, and foraging habitat required by the species.

Guidance about acceptable actions is necessary since the red fir and lodgepole pine types used by marten are largely within desired conditions for seral stage and other characteristics (Terrestrial Vegetation Ecology Supplemental Report, p. 24-25). Any projects to improve fire resilience should then be focused on removing surface and ladder fuels and making little change to dense canopy conditions.

We suggest the follow changes to draft plan components (pgs. 99, 104):

- SPEC-SM-GDL-01- Maintain or increase understory heterogeneity in marten denning habitat to promote "hiding cover" such as shrub patches, coarse woody debris, and slash piles following vegetation treatments. Design projects to have non-linear edges.
- SPEC-SM-GDL-02- Avoid or remediate habitat modifications that unnaturally increase marten susceptibility to predation.
- SPEC-SM-STD-01- Within marten core habitat, establish a limited operating period during denning periods.
- SPEC-SM-STD-02- Within marten core habitat, limit vegetation management to reducing surface and ladder fuels to reduce fire risk.
- SPEC-SM-STD-03- Where feasible, prohibit the removal of red fir and lodgepole over 24'' DBH within marten core habitat.

Bighorn Sheep
Unfortunately, fine filter plan components are not specific to Sierra Nevada or Desert Bighorn Sheep. Under Vision (p 34) of the draft plan the final sentence is: "The risk of disease transmission from domestic sheep or goats to bighorn sheep is low." We do not consider this to be consistent with the above criterion because the term "low" is imprecise and undefined. The intent of that criterion in the Recovery Plan was to prevent another disease epizootic. While it is not possible to reduce this risk to zero, the intent of downlisting criterion A2 was to achieve a near zero risk of contact. As such, for the draft plan to be internally consistent, the term "low" needs to be replaced with "near zero". For Sierra Nevada Bighorn, the risk of disease contact is not near zero. In addition to the Mattley/Conway grazing allotments under Mono County management at Conway Ranch there is the "petting zoo" at the entrance to McGee Creek that has sheep and goats. In addition, there are (or have been in the past) hobby domestic sheep at De La Cour Ranch on Horseshoe Meadow Road. The research for the buffer zone between domestics and bighorn varies from a few miles to 10-12 miles. We recommend contacting species experts at CDFW for maps showing the necessary buffer zones for some of these locations. Somewhere in the plan please include language on partnering with other local and federal agencies to implement and enforce buffer zones.

- SPEC-SHP-GDL-01 (pg 104)- Within in the recovery plan for Sierra Nevada bighorn, downlisting criterion A2 (p 43) states: "The measures to prevent contact between domestic sheep/goats and bighorn sheep have been implemented and are successful." Instead of simply referencing the

recovery plan, relevant actions from the recovery plan should be listed as guidelines and standards. This will ensure the USFS is contributing to the recovery of the species, even after it is downlisted or downgraded. The population is currently increasing and could be at recovery levels during the life of the plan. The USFWS will want to see appropriate management direction in place before making a decision on delisting.

- SPEC-SHP-STD-01 (pg 99)- Revise this standard to: "Eliminate livestock use in areas likely to be potential sources of disease for Bighorn Sheep."

The vision statement for bighorn sheep on page 34 of the draft plan is based on false premises about this species, notably that they never enter forested habitat. In fact, they frequently utilize sparse forests on steeper slopes. Recently a pregnant ewe was documented to descend into forested habitat to give birth (CDFW personal communication). We suggest the following edits to SPEC-SHP-DC:

"Adequate amount of suitable habitat from the highest peaks to the base of the mountains supports viable populations of bighorn sheep. These habitat patches include productive plant communities with a variety of forage species in and near adequate steep rocky escape terrain throughout the elevational range within mountain ranges to meet different seasonal needs of each sex for feeding, night beds, birthing sites, lamb rearing habitat, and migration routes between suitable habitat patches. The risk of disease transmission from domestic sheep or goats to bighorn sheep is near zero."

The Recovery Plan citation in Appendix G is incorrect. The date should be 2007.

<u>Desert Bighorn</u>
In the DEIS (pg 326) regarding desert bighorn sheep, it is stated: "… the Nelson's desert bighorn sheep is not imperiled and is considered common and secure throughout its range. The focus in this planning effort is whether the local population of bighorn that occurs on the Inyo National Forest within the White Mountains can be maintained on the planning unit through Forest Service actions."

While this statement is correct on the subspecies level, it is incorrect for the species as a whole. Sheep over a large geographic region are included within this subspecies because there are no evident discontinuities (geographic breaks) in their variation that might be used to delineate separate subspecies. However, this does not imply that such variation is lacking. Ramey (1995) described desert bighorn as a polytypic subspecies. In fact, desert bighorn sheep once ranged from southern hot deserts to cold northern deserts as far as the Columbia River (Wehausen and Ramey 2000). There is considerable variation in life history from essentially year round lambing in the most southern hot desert to very restricted lambing in the late spring in the north (Wehausen 1991, 2005). Almost all native populations in the northern portion of that range in cold desert habitats that would have represented that most extreme life history are extinct. Those in the White Mountains are one of a few such remaining populations. The White Mountains support the only such population that

has not received translocated bighorn sheep from more southern desert habitats with different life histories. This means bighorn sheep in the White Mountains are genetically important to conservation of the species as a whole and it is vital for the plan to address this.

On page 353 of the DEIS the following is stated: "While many plan components will benefit Nelson's desert bighorn sheep, none address the one factor that could result in the loss of persistence on the national forest. The Forest Service does not have authority over the threat of sheep or goat contact outside of the national forest. Therefore, the Forest Service cannot ensure that viability will be maintained for populations on the Inyo National Forest from actions that may occur on other lands."

On page 397 under Wildlife Species of Conservation Concern the following is stated: "Adjustments to emerging ecosystem plan components, additional species-specific plan components, or both, when carried out, would provide the necessary ecological conditions to maintain a viable population of ALL species of concern in the plan areas with the exception of Nelson's desert bighorn sheep. …Due to circumstances that are neither within the authority of the Forest Service nor consistent within the inherent capability of the land, the plan area is unable to provide the ecological conditions necessary to maintain a viable population of the Nelson's desert bighorn sheep. The reasons for this are that there is no authorized livestock grazing or permitting of uncontrolled domestic goats or sheep that are known to be in contact with the White Mountain bighorn sheep herd. The California Department of Fish and Wildlife has documented co-mingling of stray domestic goats with this bighorn population on private property (CDFW personal communication). Because of this, the potential for population die-off is not caused by actions and cannot be addressed under Forest Service authority."

This is an unfortunate situation, but the co-mingling referred to was not on private land; it was on INF land. Stray, unauthorized livestock potentially capable of transmitting respiratory disease to bighorn sheep have been documented on INF lands in the White Mountains multiple times (CDFW personal communication). Regardless of whether these livestock were authorized, disease transmission to bighorn sheep is most likely to take place on INF land. This is a serious INF management issue that needs to be corrected in the Draft plan and DEIS.

By their nature, plans such as this INF Land Management Plan should be pro-active through clear identification and analysis of issues that lead to proposals of how solutions might be found. We find that the approach to bighorn sheep conservation in this draft plan does not exhibit a proactive approach. Instead it appears to look for excuses to not to become directly engaged in solving these resource management issues. Firstly, it attempts to shunt responsibility to the Recovery Plan rather than drafting appropriate language needed for long term conservation of SNBS and the requirement for the agency to *contribute* to the species recovery. Secondly, for sheep in the White Mountains, the DEIS states this is beyond the

USFS's control because it involves activities on adjacent lands. Interacting with other agencies and landowners of adjacent lands is a fundamental aspect of resource management. The Forest has interacted with federal agencies that administer adjacent lands for many decades, as well as other public and private entities. We see no reason why INF should not do the same to eliminate trespass of livestock on their lands in the White Mountains. Given the potentially severe consequences for an important native wildlife species inhabiting its land, this would seem to be an important responsibility of INF, which might be achieved through an interagency effort, including a public education program with partnership work with organizations such as the Eastern Sierra Land Trust. Bighorn sheep are yet another example of a need to redraft this plan and DEIS and provide another public comment period.

Invasive Species

Given the depth and breadth of Cheatgrass invasion on the Inyo, the forest should add an objective to create a Cheatgrass management plan. Objectives should include post-treatment plans and post-project monitoring and restoration that would be incorporated in every Forest action. Cheatgrass rapidly invades disturbed areas, so all approved project work done, particularly when looking at restoration activities, mechanical treatment, logging, road construction, livestock grazing, and other development, should require and fund post-project management strategies. Developing cost-recovery strategies will allow project proponents to be responsible for the cost of invasive species management. The hoped-for restoration of 300 acres over 10 years (INV-FW-OBJ) is inadequate and ineffective in comparison to the thousands of acres already infested with invasive such as cheatgrass and current rates of expansion.

We appreciate the forestwide guidelines for weed-free hay and mulching materials (INV-FW-GDL-03/04). Livestock rest purging periods should be added as a guideline, as well as the relationship of invasive species to commercial pack stock operations. Although McGee Canyon is not an active grazing allotment, cheatgrass and tumble mustard are well established along the trail. Pack stock use is the likely culprit. Another example is Onion Valley where there are now large patches of perennial pepperweed that are clearly associated with the pack station. The Forest is already moving forward with invasive species control projects (see the current quarter's SOPA), and these and other vegetation management programs might be suitable for partnerships, such as the California Native Plant Society which has other partnership agreements with other region 5 forests. We offer the following revisions to invasive species plan components:

- INV-FW-OBJ-01 (pg 86)- Increase the amount of acreage and identify non-native invasive species to target for treatment.
- INV-FW-OBJ-02 (pg 86)- Within one year of plan approval adopt a cheatgrass management plan that will be used for projects where cheatgrass establishment is a known risk.

- INV-FW-GDL-07(pg 105)- Implement livestock purging periods to minimize the spread of invasive species.
- INV-FW-STD-02 (pg 99)- When amending or reissuing livestock grazing, special uses or pack stock permits, require weed prevention measures.

Timber Suitability

Although timber suitability is a requirement of the 2012 rule, we are troubled to see suitable timber nearly doubled from the 1988 plan. Of particular concern is the overlap with known marten and goshawk occupancy west of 395 and the large area of Jeffrey pine forest east of 395. Large areas in the Red fir belt are also included, which citizens advocated for excluding during the 1988 planning process. There are also heritage concerns in suitable timber areas of the Jeffrey pine forest. Standards should also prohibit the practice of plantation reforestation and have DBH limits to protect the last remaining old growth trees and snags on our forest. Currently plan components indirectly support salvage logging and reforestation (TIMB-FW-GOAL-01 pg 90).

TIMB-FW-OBJ-01: We recommend decreasing projected timber sale quantity to 1-2 MMCF as in alternative C.

Fire Management

We appreciate the development of new fire management zones and have reviewed the maps by alternative. We support Alt B with acreage for prescribed fire, managed fire and mechanical treatments. Overall we would like to see a greater emphasis on managed fire, and if key indicators are used as projected targets, 80,000 acres may be achievable. However, a cultural shift in fire suppression on the ground will be slow, and we recognize this transition takes time.

Any site prep, thinning or management practice should include a visual objective, especially where visibility to the public is high, like along Highway 395 for instance. This visual objective should recognize the importance of maintaining the landscape in a near natural appearance rather than a highly manipulated appearance. Additionally all fuels management projects must integrate measures to address the impact of these projects on recreational resources. Currently, fuels projects have resulted in the loss and damage of recreational facilities (trails and signage) in the Mammoth Lakes Basin and Owens River Headwaters areas. Additionally, roads and handlines created during project planning, implementation and eventual public fuelwood removal create extensive new networks of unauthorized routes that are quickly discovered and used by motorized vehicles for recreation. Remediation of these fuels project impacts are currently dealt with by Forest Recreation staff with highly restricted recreation dollars. These project impacts must be remediated using significantly more abundant Fire and Fuels dollars and staff.

Forest restoration practices that have the goal of returning to the natural fire regime and forest stand demography (more large, fewer small trees), are a desirable goal and should be pursued more aggressively than outlined in the preferred alternative

(B). At just 15-30% of forest area treated, this should be increased so that more rapid adaptation to climate change might be possible. However, the harvest of small trees should not be paid for by the sale and sacrifice of larger trees. Research suggests that thinning of small trees in small catchments and prescribed burns may be most beneficial to improving resistance and resilience of watersheds to climate change impacts because of the return to Natural Range of Variation (NRV) and the decrease in evapotranspiration losses that could result in more water yield to streams.

The Mono Basin National Forest Scenic Area and the Ancient Bristlecone Pine Forest should have their own desired conditions so as to prevent an unplanned suppression action that may have unwanted impacts.

A dysfunctional schism exists in the funding of wildfire suppression that is adversely affecting general management practices such as ecosystem restoration, wilderness ranger staffing, recreation area care, maintenance and policing, and visitor center staffing, training and education/interpretive activities. Taking, borrowing or reprograming funds from the above mentioned activities is currently affecting the quality of land management activities and will continue to grow until a solution is found for effective and fair funding of wildfire disasters. Flood response, earthquakes relief, and other disasters are funded directly and so should wildfire suppression. This trend of ever-increasing use of discretionary funds will soon lead to a situation where USFS stands for United States Fire Service.

The last ten years of funding cycles has shown that this trend is ever-increasing and with the prediction of larger, more volatile fires in the future, it is an untenable situation. While realizing that this is a national funding issue, the Inyo National Forest, as an early adopter forest, can and should lead the way in bringing this situation to the forefront of discussions. If this funding schism is not addressed it will soon be a moot point whichever alternative is selected as funds will not be available to implement *any* management practices except for fire suppression.

We offer the following draft plan comments:

- The second sentence of the introduction should include the Inyo Mountains as they are commonly recognized as a separate mountain range. The White Mountains always refers to the mountain range north of Westgard Pass.

- MA-CWPZ-GDL (pg. 46)- States that snag density should be no more than one snag per ten acres in the community buffer zone. This seems unnecessarily restrictive given that these snags provide the best habitat for nesting birds. We suggest changing this to a distance based objective such as a rate of one snag per ten acres in the first 100 feet adjacent to structures, then increase the snag density as the distance increases.

- MA-GWPZ-OBJ (pg. 47)- A visual objective should be included here as a treatment on a ridgeline with high visibility to Highway 395 could end up being a very intrusive and detrimental impact.

- MA-WILD-DC-03 (pg. 49)- Some Great Basin ecosystems are very dry, and we do not know what the changing climatic conditions will bring. Adding fire to these formerly fire adapted ecosystems may bring on a bloom of unwanted cheatgrass instead of the desired fire adapted conditions of natural vegetation.

- FIRE-FW-GOAL (pg. 89)- While widespread treatment could be beneficial it should be analyzed as to its impact on the overall forest program including economic benefits. It would be more beneficial to prescribe burn 110 acres or use those funds for increased training of visitor center staff on the importance of re-introduction of fire into the ecosystem.

- FIRE-FW-STD (pg. 99): We support this standard however, because this assignment may change, the plan should list what position this duty falls under.

- FIRE-FW-GDL (pg. 106): A separate section should be added on fire suppression within the Ancient Bristlecone Pine Forest. As the map indicated, the forest is within the general fire management zone, which means that an unsupervised or non-local crew could unknowingly cut down ancient trees in their urgency to suppress a wildfire. This section should also require consultation with a resource specialist, Bristlecone Pine Forest Area Manager or Forest Botanist.

- Figure 6 (pg. 124): This map should delineate the Mono Basin National Forest Scenic Area and the Ancient Bristlecone Pine Forest.

- Site Preparation (pg. 162): We suggest deleting "selective herbicides" and change to "mechanical preparation". This may be economically accomplished through partnerships or a volunteer program. The Forest Plan should shy away from any herbicide use.

Critical Aquatic Refugees

There is an opportunity to better protect vulnerable/threatened aquatic species, as well as species diversity and their associated subwatersheds through CARs. We are pleased the Forest has added CARs in the preferred alternative but unfortunately the DEIS lacks both the methodology for selecting CARs and the narratives that must accompany each one. We are also disappointed to see the region eliminate Trout Unlimited's analysis of CARs, that identified areas of high aquatic biodiversity, especially for aquatic associated at-risk species, while considering existing USFS protected areas and land management status. CARs should also be evaluated based

on additional biodiversity indicators such as benthic macroinvertebrates, as well as hydroclimate change and fire. We recommend the region include this analysis in the DEIS or take the extra steps to evaluate CARs under the context of vulnerable aquatic-associated species diversity in combination with human, fire, and climate change stressors. In recent research (Dr. D.B. Herbst, under review for publication) studies at the Kings River Experimental Watershed (Sierra National Forest) are showing the importance of small headwater streams not only for biodiversity but their sensitivity to the impacts of climate change. CAR design then, should consider not only other elements of biodiversity, but also the places where these are most prone to further damages. Fire risk, hydroclimatic snow loss predictions, groundwater inputs, should also factor into selection of CARs.

National Forests need additional CARs as well as expansions to existing ones, in order to both protect and adapt to the needs for refugia of biodiversity. In addition, more miles of stream channel restoration are needed to reverse effects of deteriorating conditions where land use has been in excess of capacity to resist.

Aquatic and Riparian

There are elements of Alt D in terms of proactive management and restoration of forest vegetation to reduce impacts of climate, drought, fire, and insect/pathogen disease that should be carried over to Alt B. These targets should be viewed as just that- not hard and fast requirements but guidance on acreages and percentage of the forest to treat. Of particular concern is the number of meadows targeted for maintenance, restoration and enhancement. The number of meadows to be restored over the life of the plan needs to increase dramatically. In addition the key indicators table S-4 and RCA-MEAD-OBJ of the draft plan appear to be inconsistent. The objective is five to ten meadows, while the key indicator for Alt B is 10-15. Our other concern with this objective and target is the use of "maintain, improve, and restore" (or "enhance" is what is used in the draft plan). The forest should be maintaining all meadows at their desired condition, and they should be restoring, enhancing or improving a number based on criteria such as meadow condition, acreage, type, etc. If meadows must be lumped together for simplification, we recommend a target of 20-25 meadows per decade as described in alt C. The same applies for length of stream channel restored and riparian vegetation improved. Thinning of small trees in small catchments and prescribed burns may be most beneficial to improving resistance/ resilience of watersheds to climate change impacts because of the return to historic forest demography (fewer small trees, more large trees) and the decrease in evapotranspiration losses that could result in more water yield to streams.

With respect to managing the aquatic invasive New Zealand Mud Snail (p.272 DEIS), the analysis fails to note that research has shown that streams with higher specific conductance (TDS, mineral content) are more vulnerable to invasion, so this chemical attribute alone can be used to identify where protection and control may most be needed in the future (Herbst et al, 2008).

More management direction is needed for livestock grazing in all alternatives. Livestock grazing impacts on aquatic habitat of the Kern Plateau have been carefully documented in peer-reviewed scientific literature, and impacts on aquatic resources and biodiversity demonstrated – these should form the foundation for minimizing grazing impacts through reduced stocking levels or rest-rotation, or elimination in selected cases. This science should be the foundation of prescriptions for aquatic habitat conditions and improvement rather than depending primarily on unpublished vegetation plot assessments (p.268-269 discussing the condition of meadows and aquatic habitat of the DEIS fails to cite Herbst et al 2012, or Knapp & Matthews 1996, or Nussle et al 2015; all related to in-stream biota and habitat quality). This lack of reference to known science also undermines the importance of management planning for minimizing or removing livestock grazing impacts. There is very little direction given in the plans for how this important source of habitat degradation is going to be handled. TU grazing recommendations for meadows are a good start, but note that simple exclusion fencing is not the best answer. Published studies (Herbst et al 2012) found that removal of lievstock was effective in rapid recovery of aquatic habitat values but fencing was ineffective. This means that vacation of allotments or rest-rotation strategies may be most effective in recovering habitat values of riparian meadows and streams. These concepts should also be incorporated into the Rangeland Utilization Standards. The Forest Supervisors have not called for a "need for change" in the direction of livestock grazing management therefore, Forestwide Rangeland Standards of Appendix F are carried forward from 1988 plan amendment which relies on vegetation standards as management criteria. These do not address impacts to aquatic ecosystem resources, and the Watershed Evaluation Criteria do not include biological indicators. Sensitive macro-invertebrate indicators need to be incorporated into evaluations of different allotments and types of grazing system used (as shown in Table 8, pages 113 and 116).

Sustainable Recreation

An adequate analysis of sustainable recreation in the DEIS would include quantified visitor use data for each type of recreation and projections for how this use will be impacted by declining recreational budgets at the region and forest level. Although we understand that data is limited, whatever data is available on recreation needs to be included in the DEIS.

The Recreation Facility Analysis (2007) needs to be updated and its use built into plan components that go beyond decommissioning sites and capital investment to include a rotational monitoring schedule and deferred maintenance priorities. An additional inventory and evaluation of interpretative signage and programming is needed and will help identify areas of opportunity for interpretative programming (this directly also relates to the Interpretation and Education portion of the plan).

Integration

The 2012 planning rule requires that revised forest plans integrate sustainable recreation with other multiple use activities. To meet this requirement, the revised

Inyo plan must include sustainable recreation plan components, including standards and guidelines (not just desired conditions), which are integrated with plan components related to other uses. While the Recreation Opportunity Spectrum (ROS) is presented as a management tool that sets desired conditions across the forest, it is unclear how the ROS, or recreation in general, has been integrated with fire management, timber or grazing, or any other "multiple uses". As noted above, this integration is critical, as current fire and fuels projects are creating very visible and wide-spread effects on recreational facilities and use patterns. The final EIS should explain how management direction across each forest, for each use, fits within the ROS setting for any particular area. Elaborating on what the different settings and characteristics for each ROS category are would be a good first step – as it's difficult for managers to attain a desired condition without clear guidance on what that desired condition is. Likewise, specifying plan components that will help the Forests achieve the desired conditions associated with each ROS setting is necessary if ROS is to be a meaningful management tool. These details will also aid in helping the Forest Service understand how ROS is to be integrated in with forest management actions.

The plan and FEIS should also go a step further to better integrate recreation into other aspects of the plan such as fire and ecological integrity. This will help provide for resource protection in recreational areas and address the necessary balance of recreation and ecological integrity. For example, while the DEIS considers environmental consequences to aquatic and riparian ecosystems, the Alternatives do not contain any plan components that would actually integrate recreation management with conservation of aquatic and riparian ecosystems. The DEIS states that "some management activities like vegetation management and maintenance and development of infrastructure, like roads, trails and campgrounds, have the potential to cause both short- and long-term adverse impacts to aquatic and riparian habitat" and the DEIS says that plan components in Alternative B were designed to protect aquatic habitats. Yet, none of the draft plans contain plan components that integrate the ROS with riparian conservation areas. To integrate sustainable recreation with riparian conservation area management the final plans must include plan components that directly connect the ROS with specific riparian conservation areas. For example, if campgrounds, roads, and trails can cause adverse impacts to riparian habitat then certain riparian conservation areas might need to be classified as semi-primitive non-motorized or primitive and there should be associated plan components that would move these areas towards this desired state.

Recreation Opportunity Spectrum

The Forest Service is required to use the Recreation Opportunity Spectrum to integrate recreation with other resource values to derive sustainable recreation outcomes (FSH 1909.12). This is the best tool the Forest Service has for forest-scale recreation planning. Although the different ROS classes are described on page 463 of the DEIS, there is nothing in the draft plans that actually describes the characteristics of different ROS settings or associated plan components to achieve the desired ROS settings. In order for the ROS to be an effective tool for land

management planning it needs to be incorporated into plan components, beyond desired conditions, that are prescriptive, instead of descriptive. This would assure the adequate protection and maintenance of national forest recreation areas and resources, as intended in the 2012 rule. We are concerned the lack of plan components, including standards and guidelines, may be in violation of the 2012 rule. While there are some guidelines for recreation on page 107 of the draft plan, standards are notably absent. We suggest that the final plan include the following plan components:

- REC-FW-OBJ-01-Within 10 years, take action to restore all motorized roads and trails within primitive and semi-primitive non-motorized ROS classes.
- REC-FW-GDL-01-Primitive ROS class should be managed to be essentially free from evidence of man-induced restrictions and controls. Only essential facilities for resource protection are used and are constructed of on-site materials. No facilities for comfort or convenience of the user are provided. Spacing of groups is informal and dispersed to minimize contacts with other groups or individuals.
- REC-FW-GDL-01-Semi-primitive non-motorized ROS class should remain a predominantly unmodified natural environment with a low concentration of users, but there is often evidence of other area users. The area should be managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Facilities are primarily provided for the protection of resource values and safety of users. On-site materials are used where possible. Spacing of groups may be formalized to disperse use and provide low-to-moderate contacts with other groups or individuals. Motor vehicle use is not permitted.
- REC-FW-STD-01-Prohibit roads and motorized trails within primitive and semi-primitive non-motorized ROS classes

In addition to these added plan components, we recommend the Inyo incorporate the ROS setting characteristics and plan component examples developed by the Washington Office as tools for creating plan components based on ROS classes (summer and winter).[1] These tables are part of a larger effort by the Washington Office to update the recreation planning directives and are still in draft form. The Inyo could also follow the example set by the Flathead National Forest, whose draft plan includes plan components that describe the settings, appropriate uses, and other details associated with the ROS.[2]

We feel the ROS maps would benefit from improvements such as separating the north and south zones of the forest as was presented at the Aug 1 and 2nd public meetings. An analysis performed by the Wilderness Society (TWS) shows there are 108,358 acres of semi-primitive or roaded natural classes within Alt C

[1] See exhibits A and B, ROS Setting Characteristics and ROS Plan Components
[2] Flathead National Forest draft plan, page 63

recommended wilderness, whereas non-motorized classifications total 169,301 acres. The current draft plans would allocate significant proportions of roadless areas – including highly deserving areas that would be recommended as wilderness under Alternative C – to motorized ROS prescriptions. Clearly there needs to be some changes to protect wilderness quality and inventoried roadless area lands, regardless of whether or not they become recommended wilderness. Examples of these modifications to classifications include:

- White Mountains potential wilderness addition alt C areas should be a primitive class.
- Dexter Canyon and the area north of Glass Mountain should be semi-primitive non-motorized to be consistent with other recommended wilderness in alt C (The Ansel Adams wilderness addition, the Excelsior polygons and Glass Mountain are all semi-primitive non-motorized)

Furthermore, we have found significant discrepancies and mistakes in ROS classifications between existing conditions (Alt A) and the desired objectives laid out in Alternatives B through D. In the Sherwins Area south of Mammoth Lakes on the Inyo NF, for example, the Alt A ROS map shows a mix of Rural, Semi-Primitive Non-Motorized, and Semi Primitive Motorized zones, which do not necessarily reflect existing conditions for designated motorized travel (eg. Rural classification for an area where there are no existing roads or designated motorized routes). On the Alt B through D maps, the same zones are all classified Semi-Primitive Motorized, despite the fact that there is only one designated motorized route in the entire area—the Laurel Lakes road. We believe this is a mistake. Aside from concerns such mistakes raise about the accuracy of ROS classifications in the rest of the draft revised plans, this also raises concerns about how a misclassification of this kind might ultimately inform winter ROS classes and Subpart C planning or other future management actions. Likewise, while the draft plans and DEIS often mention that hiking, climbing, paddling, mountain biking, and skiing occur in certain areas of the forests, rarely do these documents actually describe how plan components or plan direction relate to these or other activities.

The DEIS also contains errors and confusing analysis that need to be corrected prior to release of a FEIS. For example, in Tables 101 (Existing recreation opportunity spectrum classes) and 104 (Existing [alternative A] and desired [alternatives B, C, D] recreation opportunity spectrum classes in acres and percent of national forest by alternative), the percent total acres for the primitive (790,306 acres) and semi-primitive non-motorized (471,686 acres) classes in alternative A appear to be incorrect, considering a total of approximately 2,100,000 acres on the Inyo National Forest. A more accurate percent total acres would be closer to 38% and 22%, respectively. Secondly, the narrative on page 480 describing the Consequences Specific to Alternative A, states that "the amount of non-motorized setting in this alternative is higher than alternative B and less than alternatives C and D." Yet the data provided in Table 104 indicates that the non-motorized setting in alternative A is less than as in alternatives B and D. Again on page 500 of the DEIS, the narrative

describing the Comparison of Recreation Opportunity Spectrum For the Non-motorized Setting states: "Alternative A has the lowest amount of non-motorized setting and the lowest amount of motorized setting." Yet Table 110 indicates that alternative A has the second highest amount of motorized setting and alternative C has the lowest amount of motorized setting.

Finally, the analysis that was conducted to compare the Recreation Opportunity Spectrum classes across the alternatives contain inconsistencies in the data and analysis, which makes it difficult to evaluate the analysis process and rely on the conclusions made. There also appears to be some conflicts within Fire Management Zones and the values of Recreation Places and valued activities. How the ROS classifications interface with Fire Management Zones also remains unaddressed in the DEIS.

Winter Recreation

One glaring omission from the draft management plan is a Winter Recreation Opportunity Spectrum. A good example of a winter ROS can be found in the revised draft plan for the Flathead National Forest.[3] Recreation settings and opportunities change across the Forest with the onset of winter and an accumulation of snow. While some settings become less accessible and more remote, others may change from non-motorized to accommodating over-snow vehicles. Although the full range of settings, primitive to rural, still exist in winter, the location, distribution and percentages for each category change significantly between summer and winter. Primitive and semi-primitive non-motorized backcountry settings offer solitude and quiet recreation for those accessing the forest on skis, snowshoes, and snowboards. Semi-primitive motorized settings allow visitors with over-snow vehicles the opportunity to explore areas of the forest that are may be non-motorized in the summer months. Roaded natural and rural settings continue to serve as convenient connections to surrounding communities and provide easy, often times plowed, access to visitors. These more developed settings provide facilities such as restrooms, warming huts, and groomed trails. Rental cabins are still used in winter, although many require a ski in or over-snow vehicle trip to access them. A winter ROS should address and provide plan direction for these seasonal changes.

The Inyo's Proposed Action included a plan standard that established a minimum snow depth of 18 inches for cross-country OSV travel. We are disappointed that this standard has been dropped from the current draft plan. The final plan should include a Standard that sets a minimum snow depth of 18 inches for cross-country OSV travel. This standard is necessary to protect soils and vegetation, provide consistency in regulations as visitors travel from one forest to another, and allow management to adapt to changing conditions. A minimum snow depth helps ensure

[3] Flathead National Forest draft plan, available at http://www.fs.usda.gov/detailfull/flathead/home/?cid=stelprdb5422786&width=full

that forest resources are protected as snow conditions change throughout the course of the winter season.

To address winter ROS and other management issues related to winter recreation, we recommend the following desired conditions be adopted in the final land management plan:

- **Desired Conditions**
    - Winter recreation settings provide a range of opportunities as described by the Recreation Opportunity Spectrum.
        - **Standard**: A minimum snow depth of 18 inches is required for cross-country over-snow vehicle travel
    - Winter Primitive Recreation Opportunity Spectrum settings are large, remote, wild, and predominately unmodified. Winter Primitive Recreation Opportunity Spectrum settings provide quiet solitude away from roads, and people. There is no motorized activity and little probability of seeing other people. Constructed trails that are evident in the summer months are covered by snow, making these settings appear even more natural and untouched by human management.
        - **Standard:** Over-snow vehicle use is not permitted in primitive areas.
    - Winter Semi-primitive Non-motorized Recreation Opportunity Spectrum settings provide backcountry skiing, snowboarding, and snowshoeing opportunities. Trails are un-groomed and often not marked. Rustic facilities, such as historic cabins, yurts may exist but are rare.
        - **Standard:** Over-snow vehicle use is not permitted in semi-primitive non-motorized areas.
    - Winter Semi-primitive Motorized Recreation Opportunity Spectrum settings provide backcountry skiing and snowmobiling opportunities. Routes are typically un-groomed but are often signed and marked. There are vast areas to travel cross-country in designated areas, offering visitors an opportunity for exploration and challenge. Occasionally, historic rental cabins are available for overnight use and warming huts are available for short breaks.
        - **Objective:** Site-specific winter travel planning will be completed within three years of plan implementation to determine specific routes and areas within semi-primitive motorized areas where over-snow vehicle use is allowed
    - Winter Roaded Natural Recreation Opportunity Spectrum settings support higher concentrations of use, user comfort, and social interaction. The road system is plowed and accommodates travel. Winter trails are routinely groomed and may have ancillary facilities such as warming huts and restrooms. System roads and trails often provide staging to adjacent backcountry settings (primitive, semi-primitive non-motorized, semi-primitive motorized). Guided winter recreation activities may also be present.

        - **Objective:** Site-specific winter travel planning will be completed within three years of plan implementation to determine specific routes and areas within roaded natural ROS areas where over-snow vehicle use is allowed
    - Winter Rural Recreation Opportunity Spectrum settings provide high-use ski areas such as Mammoth Mountain Resort. These areas are accessed from paved and plowed roads and are generally close to population centers. User comfort facilities such as toilets, restaurants, heated shelter facilities, and information and education are commonly present. Parking areas are large and plowed. Entry points and routes are signed and direct over-snow vehicles to adjacent roaded natural and semi-primitive motorized settings. Non-motorized trails are also typically groomed for Nordic skiing. Rural winter settings provide access for communities and families to celebrate holidays, conduct racing events, and skiing.
        - **Objective:** Site-specific winter travel planning will be completed within three years of plan implementation to determine specific routes within rural ROS areas where over-snow vehicle use is allowed
        - **Standard:** Over-snow vehicle use is not permitted off of designated routes within rural ROS areas.

To further describe the range of recreation opportunities available on the Inyo in the winter, and to encompass the range of experiences visitors seek, we suggest additional ROS subclasses. The Deschutes National Forest defined appropriate winter recreation ROS subclasses in its 2009 Winter Recreation Suitability Analysis[4], and we feel that the subclasses they developed make sense for the Inyo as well. These subclasses are as follows:

- Alpine Solitude (ROS primitive and semi-primitive non-motorized)
    1. These areas provide opportunities for challenge and self-reliance in a wilderness setting. These areas provide untracked snow.
        - Standard: Facilities and services are not provided.
- Backcountry (ROS semi-primitive non-motorized and semi-primitive motorized)
    1. These areas provide opportunities for challenge and self-reliance in a backcountry setting. Untracked snow is easy to find.
        - Standard: Trails are marked but not groomed.
- Alpine Challenge (ROS semi-primitive non-motorized and semi-primitive motorized)
    1. These areas provide opportunities for challenge and low to moderate social interaction in an alpine setting.

[4] See exhibit C

        - Standard: Marked trails provide good access and a variety of terrain features provide alpine recreation opportunities for visitors.
- Motorized Social (ROS roaded natural)
    1. These areas provide safe and family-friendly opportunities on motorized trails. Well-marked and maintained trails and adequate parking and staging facilities are appropriate and expected. Non-motorized visitors expect to see and hear over-snow vehicles.
    - Non-motorized Social (ROS roaded natural)
        1. These areas provide safe and family-friendly opportunities on non-motorized trails.
        2. Standard: Well-marked and groomed trails, snow play areas, and adequate parking and staging facilities are appropriate and expected.

The Final EIS and final plan should make clear that winter ROS settings do not preclude travel planning decisions. The final plan should explain that site-specific travel planning is needed to determine where within semi-primitive motorized, roaded natural, and rural areas over-snow vehicle use will be allowed. Chapter 10 § 11.2 of the recently revised Travel Management Planning directives state "The Responsible Official generally should avoid including travel management decisions in land management plans prepared or revised under current planning regulations (36 CFR Part 219, Subpart A). If travel management decisions are approved simultaneously with a plan, plan amendment, or plan revision, the travel management decisions must be accompanied by appropriate environmental analysis." Appropriate environmental analysis would include compliance with the minimization criteria, as described in 36 C.F.R. § 261.14. Given that application of the minimization criteria are not part of the process wherein ROS classifications are assigned, ROS classifications cannot serve a dual purpose as over-snow vehicle area designations.

Finally, because the draft plan and DEIS do not contain a winter ROS, the Forest Service must issue a supplemental DEIS *prior* to publishing a final EIS so that the public can review and comment on the winter ROS. Merely incorporating a winter ROS into the final plan without public comment would violate NEPA, the Administrative Procedures Act, and the intent of the 2012 planning rule.

Recreation Places and Special Management Areas
We offer the following changes and additions to the Recreation Places (page 68-79)

- Bishop to Convict Creek Place- This should include the McGee Canyon
- Glass Mountain Place- It is acknowledged that nearly half of this place comprises an inventoried roadless area, yet hiking, backpacking, mountain biking, and other human powered activities are not mentioned. The area should also mention the extensive dry-forb meadow/pumice flats found here.

- June Lake Loop-Walker-Parker Place- The place is correctly described but is known for its system of popular primitive trails as well. Mountain biking is also a valued recreational use in the area, as well as backcountry and Nordic skiing and ice climbing. Mono Craters should also be added to this place description.
- Mono Basin-Lee Vining Place- We are not aware of gooseberry gathering locations, but if this is mentioned the other forms of traditional gathering (Piuga or pinyon pine nuts for example), should also be mentioned. Other than the Tioga Road and Saddlebag Lake Road, we know of little or no snowmobiling activity so these activities should be mentioned in context to these locations. Ice Climbing is a valued recreational use. Within desired conditions, the sentence on filming opportunities should be reworded to better allow for this opportunity in the future.
- Pizona Place- this description should acknowledge the large inventoried roadless area found here. Dune systems should also be included.

While dividing the forest into recreation places is a good first step towards understanding recreation use and access on the Inyo, these areas are too large to provide meaningful management direction. We suggest that the Inyo go a step further and designate discrete Special Recreation Management Areas that encompass the highly-visited parts of the forest where additional management attention is needed.

Designating Special Recreation Management Areas is a way for the Forest Service to direct additional attention and resources to specific areas on the forest that are particularly impacted by recreational use. These areas (see examples below) receive more visitors than other areas of the forest and require special management direction to ensure that recreation within these areas is sustainable – both in terms of the public enjoying specific recreation opportunities but also so that recreation uses do not degrade the natural environment. We suggest the following plan components related to special recreation management areas:

- **Desired condition**: Places of special recreational significance are recognized and managed in a way that protects their unique settings and the sustainable place-based activities they support. Examples include climbing areas, backcountry skiing or paddling destinations, and trails recognized as exemplary for mountain biking or hiking.
    - **Standard**: Special Recreation Management Areas shall be managed in accordance with the appropriate ROS setting necessary to protect their unique recreational experience.
    - **Guideline:** Fire management within Special Recreation Management Areas should strive to protect and preserve recreation infrastructure.
    - **Guideline**: The Forest Service should work with local and national partners to maintain and develop the recreation infrastructure (trails, river access sites, climbing anchors, and winter trailheads) necessary

for the public to access and enjoy special recreation management areas.

As an example, we feel that the Mammoth Lakes Basin would be appropriate to designate as a Special Recreation Management Area:

Mammoth Lakes Basin
As one of the Inyo National Forest's most popular destinations, this area sees hundreds of thousands of visitors every summer who come to experience a wide diversity of recreation experiences—camping, hiking, backpacking, paddling, mountain biking, road biking, rock climbing, horseback riding—and many thousands more seeking Nordic and backcountry ski experiences and other quiet, human-powered recreation opportunities in winter. The Mammoth Lakes Basin is also a critical watershed providing water resources to Mammoth Lakes and other downstream communities. Current issues include erosion and resource damage, a proliferation of informal use trails and user-created off-road parking spaces, traffic, trash, informal or inadequate signage, user conflicts, and inadequate restrooms and staging areas (especially in winter). Proper planning and management will ensure that the Lakes Basin can continue to provide exceptional recreational experiences for a growing number of visitors while protecting and sustaining the scenic integrity and natural resources of the area.

Goals
- The Mammoth Lakes Basin provides quality year-round recreation opportunities for those seeking a wide range of experiences on the National Forest
- The Inyo shall strive to maintain a geospatial dataset, a library of guidebooks, and a network of informed partners relating to the Mammoth Lakes Basin

Desired Condition Manage the Mammoth Lakes Basin to promote, and enhance and balance opportunities for managed camping, fishing, hiking, sightseeing, mountain biking, road biking, rock climbing, paddling, equestrian use, traditional hiking, picnicking, fishing and dispersed backcountry camping, as well as backcountry and Nordic skiing and snowshoeing in winter, while protecting the area's unique natural ecosystem and scenic integrity.

Objectives
- In partnership with local organizations, municipal government and public transit entities, improve summer traffic management and parking issues;
- Improve summer and winter staging areas and restrooms to minimize resource impact and user conflict;
- Improve and standardize signage/wayfinding/interpretative facilities and opportunities throughout the basin;

- With local partners, construct a sustainable mountain bike trail system, separate from and to minimize conflict with equestrian and hiking trails, within five years of plan implementation;
- With local partners, plow important winter access points to provide adequate parking;
- Designate public snow-play areas outside of the Mammoth Lakes Basin to relieve parking and infrastructure pressure and conflicts with other uses;
- Hire backcountry rangers and/or work with local organizations to develop a robust trail ambassador corps, a sustainable adopt-a-trail program, and other on-the-ground stewardship and interpretive programs;
- Work with local partners and municipality to achieve timely opening and closing of access and facilities based on snowpack and other seasonal considerations rather than fixed administrative calendar.

Standards

- Foot travel, including skiing and snowshoeing, is allowed for cross-country travel and public access to wilderness unless area is administratively closed to such travel.
- Climbing is allowed unless the area is administratively closed to climbing.
- Mountain biking is allowed unless the area or trail is administratively closed to mountain biking or is within designated Wilderness.
- Strive to use natural or natural-appearing materials when constructing trails, steps, bridges, and other recreational infrastructure.
- Trails that traverse or approach sensitive environmental areas shall be sited, designed, and monitored to ensure those trails are not unsustainably impacting biological resources.
- Partner with local and national recreation stakeholder organizations to encourage responsible behavior that promotes and/or avoids compromising the safety of other users, such as educating visitors at trailheads and prior to visitation, and in resolving user conflicts.

Guidelines

- While many trails should be suitable for the average user, trails will be designed to provide a range of desired challenges to various user groups.
- The Forest Service encourages responsible behavior that promotes and/or avoids compromising the safety of trail users.
- Access trails for climbing areas are maintained in partnership with local stakeholder groups
- With appropriate partner organizations, climbing anchors and bolts are maintained to ensure user safety
- In winter, some “roaded natural” areas will be designated as non-motorized, pending site-specific winter travel planning.

Suitability

- Due to significant non-motorized use and conflict with permitted Nordic ski grooming system, private over-snow vehicle use is not suitable
- Human-powered recreation, including mechanized use,-suitable except for mechanized use within designated Wilderness.
- The use of power drills to replace climbing bolts is suitable outside of designated Wilderness.

Partnerships

Many of our comments on partnerships are found in other sections of this topic letter, where partnerships could be used to achieve desired conditions and meet objectives throughout the plan. We are thrilled to see the addition of an appendix on partnerships and the agency's commitment to using them. There is clarification needed on how we will develop and maintain such partnerships. We suggest including some of the key messages within the appendix as measurable and specific plan components that would guide implementation of partnership development. The appendix and the plan should identify the breadth of opportunities for collaborative partnerships.

We believe it is essential for the Inyo National Forest to hire a partnership coordinator similar to the existing position on the Sierra National Forest. On page 147 of Appendix C, instead of simply identifying a partnership coordinator, we suggest revising this to a measurable objective: "hire a partnership coordinator within one year of plan implementation". This is one avenue to demonstrate real commitment toward establishing and maintaining robust partnerships with local communities, a variety of non-profit organizations, user groups and others to help achieve desired conditions for land management on the forest.

Pacific Crest Trail

In 1968, Congress designated the Pacific Crest National Scenic Trail. The establishment of a management area around the trail was the intent of Congress but has yet to be implemented. We are pleased to see the three early adopters take a step toward implementing a PCT management area in alternatives B and C. The Pacific Crest Trail is 1,378 miles, a continuous long distance trail from the Mexican border near Campo, California to the Canadian Border at Boundary Monument 78 near Manning Provincial Park, Canada.

The Inyo National Forest manages 86 miles of the Pacific Crest Trail (PCT), 96 percent of which are in wilderness. These 86 miles are part of the John Muir Trail (JMT), the "heart of the High Sierra". The PCT highly impacts the JMT with increased use and abuse of the resources of the Inyo National Forest. The increase in use has been staggering: in 2013 there were 1,879 permits issued, in 2014 there were 2,655, in 2015 there were 4,458, and this year there is an estimate of more than 5,000. The draft plan does not address the available budget from Pacific Crest Trail Association to help the Inyo manage all of the "feeder" trails on the Eastside. These feeder trails receive just as much use, if not more, than the trail corridor, as through hikers often camp in areas accessed by these trails. One way to address these issues is to adopt

the Alternative C management approach, which would cover some of the high use feeder trails adjacent to the PCT.

Recreation Opportunity Spectrum
To maintain an undeveloped and remote wilderness experience that most users seek, forest planners should apply Recreation Opportunity Spectrum primitive class. We believe the best approach to the management corridor is to use the Scenery Management System's foreground corridor. The visible foreground is the distance zone, up to a half-mile, that is visible from the trail at a height of five feet, and using terrain to define the boundaries. We would like the five foot visual height to be taller to enhance the view for equestrian users.

To ensure the conservation of the Pacific Crest Trails nationally significant wild, scenic, natural, and heritage resources, and to maximize its intended recreation opportunities, the trail's entire length, together with sufficient land area on both sides to safeguard and preserve its character, should be publicly owned, permanently protected, and managed as a single entity across all jurisdictions. The PCT experience should favor panoramic views of undisturbed landscapes in an uncrowded, non-mechanized, quiet and predominantly natural environment. It should feature diverse untrammeled ecosystems and historic high country landmarks, while avoiding, as much as possible, road crossings, private operations, and other signs of modern development. Trail facilities such as campsites, water sources and other amenities for hiker and pack-and-saddle use should be primitive or non- existent. It is for these reasons we support Alternative C's approach to managing the PCT.

Partnerships
The investment of citizen stewards offers another critical thread of continuity for the preservation of this iconic National Scenic Trail. In section 2(c) of the National Scenic Trail Act, Congress recognized the contributions of volunteer and non-profit groups. It is crucial that direction is given in the plan to continue and enhance the involvement of these groups. Though only 86 miles of the PCT is in the Inyo National Forest all of it is aligned with the John Muir Trail, which is heavily used, perhaps beyond capacity. As mentioned the trails feeding into the PCT/JMT are also heavily impacted by hikers coming out to resupply. We believe that the plan should address this increased use and reinstitute the use of backcountry rangers to patrol and monitor the most impacted trails such as the Mount Whitney Trail, Kearsarge Pass Trail, Bishop Creek Trail, Duck Pass, and Red's Meadow. There are many reports of more trash, use trails and illegal campsites than five years ago. Another possible management tool is to create a small user fee using Federal Lands Recreation Enhancement Act authority, such as $5 for each person or permit, to provide regular, restricted funding for rangers and ongoing maintenance. Volunteer groups could also help to educate users at trailheads. The national parks on the west side does a good job of providing wilderness rangers to monitor visitor use.

Other Considerations

- We agree with the draft plan which prohibits surface occupancy of mining activities on federal lands. This prohibition must be enforced to protect our resources, the wilderness qualities and the character of the Pacific Crest Trail.
- Timber production is not a suitable activity within the boundaries of the Pacific Crest Trail. Harvests should occur only as part of forest health restoration projects. All vegetation management projects must meet a Scenic Integrity of "High" consistent with PCT management.
- New utility corridors for power lines should be restricted to areas already disrupted by current crossings or transportation infrastructure.
- Structures made by man in the PCT Management Area should be limited to serving a necessary public need with no feasible alternative.
- Mechanized and motorized travel should be prohibited as established by the USFS in 1988 closing the trails to bicycles. Of course, all motorized use should also be prohibited.
- Friends of the Inyo agrees with Alternative B in the draft plan proposing no new large groups or competitive events**.**

Friends of the Inyo and its members value the treasures of the PCT, a national and international destination for nearly 5,000 visitors annually, and look forward to seeing a management corridor to protect it.

Wild and Scenic Rivers

The Wild and Scenic River Appendix appears to be largely unchanged from the December 2015 version so we will reiterate those comments briefly and ask that you review our previous comments. The Middle Fork of the San Joaquin still contains errors in table C-22, although text seems to be corrected and another table, C-3, was included on page 399 that adds up to the correct eligible river miles and segments. There also appears to be inconsistencies with Parker and other creeks between the narratives and tables. We still do not see adequate justification for the exclusion of George and Independence Creeks, South Fork Birch Creek in the White Mountains, Dexter and Wet creeks in the Glass, Black and Marble creeks. Although we appreciate the inclusion of Rush, Lee Vining, Mill, Walker, and Parker creeks, the lower reaches of these streams to the delta should be included as eligible (see our previous comments, as well as those from the Mono Lake Committee, for ORVs of these streams). Friends of the Inyo believes, due to our drought impacted and already arid landscape, protection of all stream courses is of utmost priority.

The Figure 8 map within the draft plan could be improved by the including of the names of the eligible segments and the existing WSRs. More detailed maps of each eligible segment showing the proposed river corridors, segments, and classifications should be provided in Appendix C (similar to what was done for the wilderness evaluation). Considering the lifespan of the plan it is essential that segment details be fully documented within the plan so that the agency is better positioned to protect their free flowing condition and outstandingly remarkable values.

We strongly support the action on pg 145 of the draft plan to: "Complete comprehensive river management plans for the newly designated Cottonwood Creek and Upper Owens River Wild and Scenic Rivers". This is a proposed action, since the Wild and Scenic Rivers Act requires that CRMPs be completed within three years of designation (these streams were designated in 2009). We recommend that the following proposed actions also be added to Appendix B of the final plan (pg 145):

- Coordinate with the BLM on the development of the Cottonwood Creek CRMP.
- Include in the Upper Owens Wild and Scenic River CRMP, identification of the outstandingly remarkable values of Deadman Creek upstream of its confluence with Glass Creek.

The first additional proposed action recognizes that the BLM manages the lower segment of Cottonwood Creek and the CRMP should be developed jointly with the BLM. In our work with Ridgecrest BLM, we understand they are in the process of drafting their CRMPs, and we encourage the USFS to work with BLM as they finalize their CRMP. The second Proposed Action recognizes that the Forest Service did not find Deadman Creek to be eligible in the 1993 evaluation but Congress designated it in 2009. This puts the Forest Service in the ambiguous position of having to protect unspecified outstandingly remarkable values. Our scoping comments provided details on the outstandingly remarkable values of upper Deadman Creek. The best method for resolving this issue is to evaluate upper Deadman Creek and present these findings in the revised Appendix C Evaluation.

Recommended Wilderness

Ansel Adams Wilderness Addition
This addition represents the transitional slope from the floor of the Mono Basin to the current mid-slope boundary of the Ansel Adams Wilderness. Lands in this polygon support mature, mixed conifer forests in Gibbs, Bloody and especially Sawmill canyons. Extensive, old-growth mixed conifer forest of this transitional zone is currently poorly represented in Wilderness on the Inyo National Forest. This mixed conifer zone is also unique for it's diversity and inclusion of relatively rare conifer species in this zone of the Inyo National Forest – namely healthy Limber Pines in Bloody Canyon. We strongly support the Forest's acknowledgement of the roadless character of the Parker Bench area, however the boundary should exclude Walker Lake. This southern section of the IRA should include the extensive aspen groves, old-growth lodgepole forests and numerous isolated riparian systems. We thank the Forest for including the isolated population of Southern Alligator Lizards (historically documented and recently rediscovered) that exist in aspen groves along the Parker Bench trail in the polygon narrative. With boundary modifications that exclude motorized areas such as Walker Lake and other developed recreational

facilities, we support moving this wilderness addition to the preferred alternative as recommended wilderness.

Adobe Hills, Huntoon Creek and South Huntoon Creek, Pizona and Truman Meadows
The roadless polygons of the Excelsior range represent an amazingly wild, untouched chunk of the western Great Basin. The Excelsior IRA contains extensive pinyon-juniper woods, isolated ephemeral lakes, dune systems and locally limited but ecologically critical springs and associated riparian systems. When taken together with the contiguous IRAs on the Humboldt-Toiyabe National Forest east of the CA-NV line, this roadless complex contains over 200,000 acres of primeval public lands rich in Native American and European settlement era history. The Excelsior area, especially when viewed at the landscape level with the adjacent IRAs in Nevada offer solitude, primitive recreation, habitat connectivity, and ecosystem representation in the wilderness preservation system. Rare plants include Williams Combleaf, Long Valley Milkvetch, Globe Dune Parsley, and Dune Horsebrush.

In the context of the Montgomery Wild Horse Management Area (MWHMA) overlapping with these polygons, there are numerous examples of existing wilderness areas with successful wild horse management programs. Designated or recommended wilderness (and WSAs) where agencies are able to manage feral horse herds while maintaining wilderness characteristics, include the Boundary Peak Wilderness in Nevada, the Cumberland Island National Seashore and Wilderness in Georgia, Little Bookcliffs WSA in Colorado, McCullough Peaks and Adobe Town WSAs in Wyoming, and Cedar Mountain Wilderness in Utah. Wild Horses are not incompatible with wilderness and in fact are one of the many wilderness values of the Excelsior area. We hope the MWHMA will not be used as a justification for excluding the Excelsiors as recommended wilderness.

We thank the Forest for analyzing these polygons in the DEIS and believe they present strong candidates for inclusion in the National Wilderness Preservation System and should be recommended as such by the Forest Service. We ask these polygons be moved to the preferred alternative as recommended wilderness.

Dexter Canyon
Dexter Canyon is perhaps the most geographically varied and ecologically rich IRA on the north zone of the Inyo National Forest. A landscape of rough-hewn granite knobs, rolling uplands, and flat volcanic mesas deeply incised with steep-walled canyons reminiscent of the desert southwest, Dexter is unlike anywhere on the Forest. The western potion supports old-growth Lodgepole and Jeffrey Pine forests dotted with sedge/rush-dominated meadows (Crooked Meadow, Dead Horse Meadow, Sagehen Meadow Sentinel Meadow, Johnny Meadow) while the northern and eastern portion are defined by open sagebrush plains, extensive snowbank aspen groves and narrow riparian aspen filled canyons. Within the Dexter IRA, free-flowing North Canyon Creek, Dexter Canyon Creek, Wild Cow Creek and Wet Canyon Creeks support locally-limited but ecologically critical riparian habitat. Goshawk, sage grouse, black-backed woodpeckers, willow flycatchers and nesting golden

eagles join badgers, abundant mule deer, and brook trout as wild citizens of this area. Scattered across the IRA are abundant upland snowbank aspen groves. Isolated from any surface water source, these groves are distinct from riparian aspen. Extensive groves exist on northeast facing slopes east of Sagehen Peak and Dead Horse Meadow, as well as the walls of upper Dexter Canyon east of Crooked Meadows.

The current boundary presented in alternative C excludes the southwestern corner of the IRA, despite our previous comments and redrawn polygon submitted to Forest staff in 2015[5]. The exclusion is likely due to an over 0.5 mile constriction with two roads, however it contains a set of two, parallel 500' deep canyons supporting a unique mix of conifers and flowing streams (Dexter and Wet Canyon creeks). From the bottom of these canyons, one would be hard pressed to describe the surrounding aspen groves and sheer volcanic walls as anything but wilderness. Because this constriction is over .5 miles it does not justify excluding the entire southwestern portion of the roadless area, which is the wildest and wettest portion of the IRA. The southwest portion also has the highest ecological value and provides outstanding opportunities for primitive recreation.

We believe the Dexter Canyon area, with adjustments to exclude motorized system routes and **include** the southwestern portion, presents a strong candidate for inclusion in the National Wilderness Preservation System and should be recommended as such by the Forest Service. Please see exhibit D for a suggested boundary modification.

Glass Mountain
Unique for the Eastern Sierra, the Glass Mountains form a transverse highland. Unlike most ranges in the Eastern Sierra, the Glass Mountains run east-west connecting the Sierra Nevada biogeographic province to the Great Basin. Inclusion of a portion of this large roadless landscape would fill a current wilderness gap geographically, biologically and recreationally in the heart of the Inyo National Forest. Rare plant species include Mono Lake Lupine, and the Raven's and Mono Milkvetch. At this polygon's core, the 2,041-acre Sentinel Meadow RNA is already closed to motorized use and is surrounded by inaccessible, heavily forested sheer slopes. We know of no sagebrush within this Limber Pine RNA and the boundary should probably extend to include the entire RNA. That being said, we believe the previous December 2015 Alt C acreage of 17,433 instead of the most recent Alt C acreage of 34,591 is the best footprint for recommended wilderness. Based on public feedback and the greater flexibility to manage sage grouse habitat and carry out fuels treatment work we recommend Glass Mountain (17,433 acres) be moved to Alt B.

White Mountain Wilderness Additions

[5] See exhibit D

We support the inclusion of the east and west White Mountain wilderness additions as recommended wilderness in the preferred alternative as these lands were sadly left out of the 2009 Omnibus bill. We do not fully understand the exclusion of land within the western addition, just west of dead horse meadow. The justification has been sage grouse habitat but after "ground truthing" this area in July of 2016 most of this area is steep pinyon juniper woodland, not sagebrush. The exclusion of the lower elevation lands to the east of the eastern addition are also a mystery. For these reasons we recommend the agency adopt the Alt C boundaries into the preferred alternative. At a minimum there needs to be a detailed justification for why the Alternative B ~~Alt~~ boundaries were selected over Alternative C.

We have explored the opportunities for primitive recreation, which are exceptional and include hiking and hunting access via the scenic Wyman Canyon road. Access points into the recommended wilderness would include Water and Mill canyons and the Cedar Springs use trail to Blanco Mountain, a highlight of any excursion to the White Mountains.

Piper Mountain Wilderness Additions
These two potential additions are contiguous to the existing Piper Mountains Wilderness managed by the Bureau of Land Management and offer unique opportunities to conserve an east-west corridor for species moving from the Mojave to the Sierra. These additions will safeguard habitat connectivity and include under-represented ecosystems, such as blackbrush, xeric shrubland and alkali flats in the Wilderness Preservation System. In an era of drought and environmental stress, species will be moving and adapting as conditions and habitats change. Such rare species include Little Cutleaf, Mojave Fishhook, Compact Fleabane, Inyo Milkvetch, Pinyon Beardtongue and Inyo Onion.

This area has high ecological integrity with few alterations to natural conditions. There are no known developments in the area that would degrade the undeveloped quality. These lands are also known for unparalleled prehistoric cultural resources. We support the Alternative B boundaries as it has been refined to make it clearly identifiable and use setbacks from roads and motorized trails that are consistent with current wilderness boundary setbacks on the forest. The northern and western sections of the boundary closely follow authorized (legal) national forest roads and motorized trails, which will provide foot access and is identifiable on a map. The southern boundary generally follows a prominent natural feature, an east-west trending ridgeline that is locatable on the ground and by map. We ask that the Piper Mountains wilderness addition in Alternative C be moved to Alternative B and both additions be recommended for inclusion in the National Wilderness Preservation System.

Deep Springs North
We appreciate the addition of the western portion of roadless lands, which comprise a large area of the Congressionally Designated Bristlecone Pine Forest. Another ecological highpoint of this Alternative C recommendation is Birch Creek. A lush

riparian corridor at the boundary of the Mojave and Great Basin deserts, Birch Creek's rich birch-cottonwood riparian forests host a recently discovered isolated population of Black Toad, a California Fully Protected Species. Other important and rare species to the area include Spiny-leaved Milkvetch, Little Cutleaf, Nevada Ninebark, Compact Fleabane and Dedecker's Clover. In addition to the Ancient Bristlecone Pine Forest, there is extensive pinyon-juniper forest with scattered limber pine and transitional desert habitat from saltbrush scrub to sagebrush steppe. We ask the forest to move this area to Alternative B after modifying boundaries to exclude motorized routes such as route 35E313 and other boundary adjustments recommended by stakeholders, including Inyo County.

Solider Canyon
Straddling the low gap between the highlands of the White Mountains to the north and the Inyo Mountains to the south, the Soldier Canyon IRA presents a unique designation opportunity to conserve both an east-west corridor for species moving from the Mojave to the Sierra, but also a north-south bridge connecting the Whites and Inyos. The area's topography is varied (steep to gentle slopes) and this terrain as well as the area's canyons provides excellent opportunities for solitude. The area also has ecological integrity and a substantially natural character. Recreation opportunities include backcountry activities such as hiking, horseback riding and hunting, wildlife observation, photography, spring wildflower observation, and cultural/historical resource exploration. Ecosystem types include pinyon-juniper, sagebrush, xeric shrublands and blackbrush, which are not well represented as designated wilderness on the Inyo National Forest. Significant species found in this area include Mojave Fishhook Cactus and Little Cutleaf. We recommend this area be moved to the preferred alternative.

Deadman Canyon
This area is located between the White Mountains and Inyo Mountains, north of Eureka Valley Road and south of the boundary between the White Mountain and Mount Whitney Ranger Districts. Ecosystem types include pinyon-juniper, sagebrush, xeric shrublands and blackbrush which are habitats that are under-represented as wilderness currently on the Inyo National Forest. The topography includes steep to gentle slopes and offers opportunities for solitude and a wilderness quality experience. The pinyon-juniper woodlands and subalpine areas offer popular primitive recreation opportunities including hiking, horseback riding and deer hunting. We recommend this area be moved to the preferred alternative.

Inyo Mountain Wilderness Addition
A portion of this proposed addition is contiguous with the Inyo Mountain Wilderness, enhancing the existing wilderness and provide additional habitat connectivity and protection. Ecosystem types include pinyon-juniper, sagebrush, subalpine forest, xeric shrublands and blackbrush, currently under-represented as wilderness on the Inyo National Forest. The topography includes canyons, including the scenic and geologically unique Marble Canyon, extremely rugged terrain and high elevation plateaus with steep to gentle slopes along the eastern side. The area

offers opportunities for solitude and quiet recreation. Significant species found in this area include Townsend's Big-eared Bat, Pinyon Beardtongue, Inyo Milkvetch, Pinyon Rockcress, Mohave Fishhook Cactus, and Bristlecone Pines. We recommend this area be moved to the preferred alternative.

South Sierra Wilderness Addition
Encompassing the transition zone from the Mojave Desert up to the Sierra, this addition would add wilderness quality lands along the steep sierra escarpment. The northern end benefits from excluding a wider buffer around the Sage Flat area at the Olancha Trailhead, as the preferred alternative shows. The area contains outstanding scenic variety and ecological diversity with Joshua trees, cholla cactus Canyon live oak, Kern Milkvetch, Mountain Yellow violet, Field Ivesia, Kern Canyon Clarkia, Charlotte's Phacelia, Silk Tassel Bush (northern most population), unique hummocks in spring areas and the Kern slender salamander. The area lacks any known non-conforming structures. Boundary allowances should be made around any developed private land and along the Haiwee trail road, to allow for maintenance in the event of flooding. This eastern polygon is contiguous with both the South Sierra Wilderness and the Sacatar Trail Wilderness to the south and presents an outstanding and conflict free addition to the National Wilderness Preservation System. We support the agency's recommendation as wilderness in Alternative B.

We did note an error in the DEIS in Table 118 (Volume pg 517). South Huntoon Creek (acreage 5,805) and Solider Canyon (acreage 10,037) are missing from Table 118. This means the total acreages described on pg 516 is inconsistent with the combined acreage in table 118. Also the narrative on page 516 cites 15 areas as not adjacent to existing wilderness, whereas table 118 has 13 areas. Page 234 of DEIS volume 2 appears to be correct, but we recommend the DEIS be crosschecked for inconsistencies or errors on areas and acreages.

Alternative Designations
Our comments here mirror those we submitted during the Need for Change portion of the planning process. We are disappointed the forest has not considered alternative designations or done the appropriate analysis in the DEIS. The Planning Rule requires the Forest Service to assess the potential need and opportunity for additional designated areas, which then enables the Forest Service to designate additional areas as needed. The opportunity for establishing new designations is not adequately addressed in the DEIS. The Forest Assessment (chapter 16, page 196) outlines several community types on the Inyo that hold unique geology and vegetation. These include aspen, sagebrush steppe, xeric shrublands, and carbonate areas. These ecologically unique core areas may benefit from various designations that will protect and help the Forest manage them responsibly. The use of partnerships could facilitate research and education in these places. We are also concerned about the protection and management of roadless areas on the forest. As we addressed in our recreation comments, these roadless areas need to be classified as semi-primitive non-motorized or primitive to allow for human powered

recreation that may be prohibited in wilderness. There needs to be high quality non-motorized recreational opportunities as well as resource protection in roadless areas that may not qualify, or be brought forward for other reasons, as recommended wilderness.

Conclusion

We thank the Regional and Inyo National Forest staff for their hard work on plan revision. Although it is no easy task to compile the breadth and depth of information required for the draft plans and associated environmental analysis, the Inyo National Forest draft plan and DEIS contain too many gaps in information and are missing too many important analyses to support sufficient public review and understanding. Key topic areas such as sustainable recreation and species protection, while discussed, are by no means comprehensive. After corrections are made to inaccurate and inconsistent information such as the BAIS, the public should be afforded additional opportunity for review. Therefore, we are requesting the region either prepare a revised DEIS or prepare a supplemental DEIS to address the "substantial changes" that must be made to the draft plans to comply with the NFMA and the 2012 planning rule and to integrate the "significant new information" provided through public comment (40 C.F.R. § 1502.9(c)).

Finally, attached to these comments is a spreadsheet of results from a public comment survey we put together in May. The intent was to reach a wider audience for commenting on forest land management. We asked people to include demographic information that would be helpful for the Forest Service. The survey questions were shared beforehand with the Forest Planner and Public Affairs Officer. We received 36 responses to the survey and the answers are complied within the spreadsheet. The survey questions can be viewed at: https://docs.google.com/a/friendsoftheinyo.org/forms/d/1K-C4661_giYhE84deAbQ1ZxV1FboxnjPM9kziG3wk-A/edit?ts=579795e9

Sincerely,

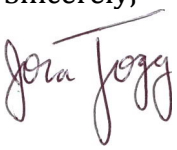

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Exhibit A: ROS Plan Components
Exhibit B: ROS Setting Characteristics
Exhibit C: Deschutes Winter Recreation Sustainability Analysis
Exhibit D: Map of Dexter Canyon
Exhibit E: Spreadsheet of INF survey results

X2.43 - Exhibit 2

Plan Component Examples based on ROS Characteristics (reference X0.32 – Exhibit 1)

Desired Conditions (*reference the desired ROS map in the plan set of documents*)	Associated Plan Components to achieve Desired ROS Setting	
Primitive ROS settings (Summer) encompass large, wild, remote, and predominately unmodified landscapes. These settings often coincide with designated Wilderness. Additional primitive ROS settings are scattered across the forest, often surrounded by SPNM settings. Primitive ROS settings contain no motorized recreation and little probability of seeing other people. They provide quiet solitude away from roads and people, are generally free of human development, and facilitate self-reliance and discovery. Historic structures such as log ranger stations and fire lookouts are occasionally present. Signing, and other infrastructure is minimal and constructed of rustic, native materials. **Primitive ROS settings (Winter)** are large, remote, wild, and predominately unmodified. Winter Primitive ROS settings provide quiet solitude away from roads, and people. There is no motorized activity and little probability of seeing other people. Constructed trails that are evident in the summer months are covered by snow, making these settings appear even more natural and untouched by human management.	**Objective**	Eliminate existing motorized incursions within 5 years. Sign the xx Wilderness boundary along adjacent motorized settings within 2 years to better inform visitors of motorized restrictions within this desired Primitive ROS setting.
	Standard	No motorized routes shall be constructed in desired Primitive settings.
	Guideline	No new permanent structures should be constructed in desired Primitive ROS settings to maintain the unmodified character of these landscapes.
	Summer Suitability	Motorized recreation travel is not suitable in desired Primitive settings. Non-motorized trails and travel are suitable in desired Primitive settings. Trail class 1 routes are generally suitable in desired P ROS settings. Mechanized recreation travel is generally suitable on designated trails in desired Primitive settings that are outside Wilderness and Recommended Wilderness Areas. Recreation facilities, other than historic structures, are not suitable in desired Primitive settings. The SIO of Very High is suitable in Primitive ROS settings.
	Winter Suitability	Motorized over snow vehicle travel is not suitable in desired Primitive settings. Plowed roads and groomed trails are not suitable in desired winter Primitive settings. Non-motorized trails and cross-country non-motorized travel are generally suitable in desired winter Primitive settings.
Semi-Primitive Non-Motorized settings (Summer) provide opportunities for exploration, challenge, and self-reliance. Rustic structures such as signs and foot bridges are occasionally present to direct use and/or protect the setting's natural and cultural resources. These rustic constructed features are built from native materials or those	**Objective**	Within XX years, obliterate XX miles of road/motorized trails within Desired Semi Primitive Non-Motorized ROS settings.
	Standard	No new motorized routes shall be constructed and no routes or areas shall be designated for motorized used in Desired SPNM ROS settings.
	Guideline	The development scale of recreation facilities should be 0-1 to protect the undeveloped character of desired SPNM settings.

that mimic native materials. Closed roads may be present but do not dominate the landscape or detract from the SPNM experience of visitors. These settings are free of motorized recreation travel but mechanized travel may be present.	**Summer Suitability**	Motorized recreation travel is not suitable in desired SPNM settings. Mechanized recreation travel (bicycles) is generally suitable on designated routes and areas in desired SPNM settings. Trail classes generally suitable in desired SPNM setting include classes 1-2. Development scale 0-1 recreation sites (dispersed sites with minimal infrastructure and to address resource concerns) are generally suitable in desired SPNM settings. Development scale 2-5 recreation sites are generally not suitable in desired SPNM settings. The SIO of High is suitable in SPNM settings.
Winter Semi-Primitive Non-Motorized settings (Winter) provide backcountry skiing, snowboarding, and snowshoeing opportunities. Trails are un-groomed and often not marked. Rustic facilities, such as historic cabins, yurts may exist but are rare.	**Winter Suitability**	Motorized recreation travel is not suitable in desired winter SPNM settings. Plowed roads and groomed snowmobile trails are not suitable in desired winter SPNM settings.
Semi-Primitive Motorized ROS settings (Summer) provide motorized recreation opportunities in backcountry settings. Routes are designed for Off Highway Vehicles (OHVs) and high clearance vehicles that connect to local communities, access key destinations and vantage points, provide short day trips on scenic loops or facilitate longer and even overnight, expeditions. Visitors challenge themselves as they explore vast, rugged landscapes. Mountain bikes and other mechanized equipment may also be present. Facilities are rustic and are used for the purpose of protecting the setting's natural and cultural resources. Bridges are sometimes present to accommodate foot, horse and ATV traffic but are built from native or natural appearing materials that blend with the surrounding landscape and maintain the semi-primitive character of the setting. There may also be nodes that function as portals for visitors to park their ATVs and explore adjacent Semi-Primitive Non-Motorized and Primitive settings on foot.	**Objective**	Construct a motorized trail that connects the community of xxx with the adjacent system of designated motorized routes within 3 years.
	Standard	No new maintenance level 3-5 roads will be constructed in desired SPM areas.
	Guideline	The development scale of recreation facilities should be 0-2 to protect the semi-primitive character of these desired settings.
	Summer Suitability	ATV use is generally suitable on designated routes and areas in desired SPM settings. Maintenance level 2 roads are generally suitable in desired SPM settings. Trail class 2 routes are generally suitable in desired SPM settings. Mechanized travel (bicycles) is generally suitable on designated routes and areas in desired SPNM settings. Development scale 0-2 recreation sites are generally suitable in desired SPM settings. Development scale 3-5 recreation sites are generally not suitable in desired SPM settings. The SIO of High and Moderate are generally suitable in SPM settings.
Semi-Primitive Motorized settings (Winter) provide backcountry skiing and snowmobiling opportunities. Routes are typically un-groomed but are often signed and marked. There are vast areas to travel cross-country, offering visitors an opportunity for exploration and challenge. Occasionally, historic cabins or warming huts are available for short breaks or overnight use.	**Winter Suitability**	Motorized vehicles, other than those designed for over-snow use, are generally not suitable in desired SPM settings. Plowed roads and groomed over-snow vehicle trails are generally not suitable in desired winter SPM settings.
Roaded Natural ROS settings (Summer) are often	**Objective**	Close and rehabilitate xx dispersed recreation sites within 5 miles of developed campgrounds.

referred to as front country recreation areas. This setting is managed as natural appearing with nodes and corridors of development that support higher concentrations of use, user comfort, and social interaction. The road system is well defined and can typically accommodate sedan travel. Sanitation, potable water, interpretive signing, and other amenities are strategically placed to serve as destination points and/or portals to adjacent backcountry settings. Signing, facilities, bridges and other infrastructure are constructed of native materials or natural appearing materials that blend with and complement the surrounding natural setting. **Roaded Natural ROS settings (Winter)** support higher concentrations of use, user comfort, and social interaction. The road system is plowed and accommodates sedan travel. Winter trails are routinely groomed and may have ancillary facilities such as warming huts and restrooms. System roads and trails often provide staging to adjacent backcountry settings (primitive, SPNM and SPM). Guided snowmobiling, dog sledding, skiing, and snowshoeing may also be present.	**Standard**	Plantings and seed mixes near roads and developed facilities shall not contain species that may attract mammals.
	Guideline	Roads interior to developed recreation sites should not be paved to maintain a more rustic setting.
	Summer Suitability	Motorized and mechanized recreation travel is generally suitable on designated routes and areas within desired RN settings. Road maintenance levels 2-5 are generally suitable in desired RN settings. Trail classes 3-4 are generally suitable in desired RN ROS settings. Recreation site development scales: 0-3 are generally suitable in desired RN settings. The SIOs of High, Moderate, and Low are generally suitable in desired RN ROS settings.
	Winter Suitability	Motorized vehicles not designed for over-snow use are generally not suitable on groomed trails or areas designated for over-now vehicle use. Plowed roads and groomed trails are generally suitable in desired winter RN settings
Rural ROS settings (Summer) Often serve as a recreation destination and sometimes provide access to adjacent roaded natural and semi-primitive settings and opportunities. These areas are accessed from paved roads and are generally close to communities. Developed recreation facilities are designed for large groups and provide opportunities to socialize in both day-use and overnight sites. **Rural ROS settings (Winter)** provide staging to adjacent winter settings and opportunities. These areas are accessed from paved and plowed roads and are generally close to population centers. Warming huts or other shelters, sanitation, and I&E (information and education) are commonly present. Parking areas are large and plowed. Entry points and routes are signed and lead snowmobiles to adjacent RN and SPM settings. Non-motorized trails are also typically groomed for skate skiing, and x-country skiing. Rural winter settings provide quick and convenient access for communities and families to celebrate holidays, conduct racing events, walk the dog, or simply get some exercise.	**Objective**	Within 5 years, stabilize the historic ranger station and adjacent work center to serve as a destination for visitors to enjoy and learn about its rich history.
	Standard	All newly constructed facilities shall accommodate large RVs and buses.
	Guideline	To preserve the valued heritage of the area, all newly constructed facilities should utilize materials and other design considerations that complement existing historic structures.
	Summer Suitability	Maintenance Level 3-5 roads are typically suitable in desired Rural settings. Development scale 4-5 recreation sites are generally suitable in desired Rural settings.
	Winter Suitability	Motorized vehicles that are not designed for over-snow use are not suitable on groomed trails or cross country travel in desired winter Rural settings. Plowed roads (OML 3-5) and groomed trails are generally suitable in desired winter Rural settings.
Urban ROS settings (Summer) These highly developed areas are accessed from paved roads and highways. They are typically close to communities. Developed recreation	**Objective**	Mass transit will be provided to three popular destinations within 5 years.
	Standard	All new parking areas shall be designed to accommodate tour buses.

facilities are designed for large groups and provide opportunities to gather and socialize. Recreation sites are often destinations for day use. Visitor centers and interpretive exhibits are often present. Resorts may be present and offer overnight accommodations. **Urban ROS settings (Winter)** These areas are accessed from plowed roads and are generally close to population centers. Warming huts or other shelters, restrooms, and I&E (information and education) are commonly present. Parking areas are large and plowed. Entry points and routes are signed and lead snowmobiles to adjacent RN and SPM settings. Non-motorized trails are also typically groomed for skate skiing, and x-country skiing. Winter Urban settings may also contain ski resorts with groomed down-hill skiing and snowboarding opportunities.	**Guideline**	Interpretive display should focus on conveying broader recreation opportunities available on the unit to encourage visitation in areas that can accommodate additional use.
	Summer Suitability	Motorized vehicles are generally suitable on designated routes and areas in desired Urban settings Development scale 5 recreation sites are generally suitable in desired urban settings. Camping in areas outside of developed campgrounds is generally not suitable.
	Winter Suitability	Motorized vehicles that are not designed for over-snow use are not suitable on groomed trails or cross country travel in desired winter Urban ROS settings. Plowed roads and groomed trails are generally suitable in desired winter Urban settings Developed recreation settings, including visitor center, ski areas, and other resorts are generally open and suitable in desired winter Urban settings.

ROS Setting Characteristics

ROS SETTING		SUMMER CHARACTERISTICS	WINTER CHARACTERISTICS
Primitive	Physical	**Theme:** Predominately unmodified, naturally evolving, vast, and remote	
		Remoteness: 3 miles or more from designated motorized routes and areas	
		Size: 5,000 or more acres	
		Infrastructure (access and facilities) *Access* - Non-motorized trails, class 1; Travel on foot and horse, no motorized travel, no mechanized travel within designated Wilderness *Rec sites* – Dev. scale 0, no improvements *Sanitation* – no facilities, leave no trace; *Water supply* – undeveloped natural; *Signing* – minimal, constructed of rustic, natural materials; *Interpretation* - through self-discovery *Water crossing* – minimal, pedestrian only, made of natural materials	*Access* – No roads or motorized trails. User-created ski and snow shoe trails, No motorized travel No mechanized travel within designated Wilderness No other infrastructure or facilities typically present
		Vegetation: Natural, no treatments except for fire use.	
		Scenic Integrity: Very High	
	Managerial	Little to no on-site regimentation, few encounters with rangers	
	Social	Very high probability of solitude; closeness to nature; self-reliance, high challenge and risk; little evidence of people. Typically 6 or less encounters with other parties on trails, and less than 3 parties visible from camping sites.	
Semi-Primitive Non-Motorized	Physical	**Theme:** Predominately natural/natural appearing; rustic improvements to protect resources.	
		Remoteness: ½ mile or more from designated motorized routes and areas.	
		Size: 2,500 or more acres	
		Infrastructure (access and facilities) *Access* - Non-motorized routes, trail classes 1-2 typical. Foot/horse/mountain bike use - no motorized travel. Closed and temporary roads may be present. *Rec sites* – Dev Scale 0-1, minor investments to protect resources *Sanitation* – no facilities, leave no trace *Water supply* – undeveloped, natural *Signing* – rustic, natural materials. *Interpretation* - typically self-discovery *Water crossing* – rustic structures for foot/horse traffic	*Access* – Ungroomed non-motorized trails with some trail markers, user created routes and areas from ski or snow shoe use. No motorized travel No other infrastructure or facilities typically available
		Vegetation: Predominately natural treatment to enhance forest health	
		Scenic Integrity: High	
	Managerial	Minimum or subtle signing, regulations, or other regimentation. Low encounters with rangers.	
	Social	High probability of solitude, closeness to nature, self-reliance. High to moderate challenge and risk. Usually 6-15 encounters with other parties on trails. 6 or less parties visible from camping sites.	

ROS SETTING		SUMMER CHARACTERISTICS	WINTER CHARACTERISTICS
Semi-Primitive Motorized	Physical	**Theme:** Predominately natural appearing, motorized use visible and audible.	
		Remoteness: ½ mile or more from OM 3-5 roads	
		Size: 2,500 or more acres	
		Infrastructure (access and facilities) *Access* - Motorized routes: OML 2 roads and trail class 2 typical; OHVs allowed on designated routes and areas *Rec sites* – Dev. Scales 0-2; investments to protect resources *Sanitation* – limited facilities, outhouses may be in areas of concentrated use. *Water supply* - undeveloped natural *Signing* – rustic, made of natural materials; *Interpretation* – self-discovery, some located on site or at trailheads; *Water crossing* - rustic structures or bridges	*Access* – ungroomed but marked over-snow vehicle routes and areas. Ungroomed ski trails. Over snow vehicles on designated routes and areas. Few, if any, facilities or services available
		Vegetation: treatment areas are very small in number, widely disbursed, and consistent with natural vegetation patterns.	
		Scenic Integrity: High or Moderate	
	Managerial	Minimum, subtle on-site controls; designated motorized routes/areas	Minimum, subtle on-site controls; Designated routes and areas for over-snow vehicles.
	Social	Moderate to high probability of solitude. High degree of risk/challenge	
Roaded Natural	Physical	**Theme:** Natural Appearing with nodes and corridors of development such as campgrounds, trailheads, boat launches, and rustic, small-scale resorts.	
		Remoteness: encompass ½ mile buffer of OML 3-5 roads.	
		Size: **n/a**	
		Infrastructure (access and facilities): *Access* – Typically :OML 2-5 roads and Trail Class 3-4, hwy. vehicles, OHVs and non-motorized travel on designated routes *Rec sites* – Dev. Scales 0-3 typical *Sanitation* –typically vault toilets *Water supply* – often developed *Signing* – variety of materials, blend with natural setting *Interpretation* – simple roadside signs, some interpretive displays *Water crossings* – bridges, natural materials.	*Access – Some plowed roads and groomed snowmobile routes. Groomed ski trails may also exist.* Warming huts, cabins, and rustic facilities may be present.
		Vegetation: Vegetation treatment are evident but in harmony/subordinate to natural setting.	
		Scenic Integrity: High to Low	
	Managerial	Signs and regulations present but typically subordinate to the setting. Moderate likelihood of encountering Forest Service rangers.	
	Social	Moderate evidence of human sights and sounds; moderate concentration of users at campsites; little challenge or risk.	

ROS SETTING		SUMMER CHARACTERISTICS	WINTER CHARACTERISTICS
Rural	Physical	**Theme:** Altered landscapes with cultural emphasis such as: rural, pastoral, and/or agricultural. Administrative sites, historic complexes, and moderately developed resorts are typical	
		Remoteness: not remote, often near other (non-FS) rural settings and communities.	
		Size: n/a but typically small parcels within larger roaded natural settings.	
		Infrastructure (access and facilities): *Access* – typically OML 3-5 roads and trail classes 3-5, mass transit sometimes available *Rec sites* – Dev. scale 4-5 *Sanitation* – Flush toilets *Water supply* – developed, showers common *Signing* – natural and synthetic materials *Interpretation* –roadside exhibits, interpretive. programs, etc. *Water crossings* – bridges, accommodating hwy. vehicles, RVs, heavy equipment	*Access* – Groomed over-snow vehicle routes, groomed cross-country skiing, skate skiing, and downhill ski/snowboard trails Full service facilities: and resorts often present
		Vegetation: treatments often visible, blend with landscape	
		Scenic Integrity: High to Low	
	Managerial	Obvious signing (regulation and information), education and law enforcement staff. Motorized and mechanized travel common and often separated.	
	Social	High interaction among users is common. Other people in constant view. Little challenge or risk associated with being outdoors.	

ROS SETTING		SUMMER CHARACTERISTICS	WINTER CHARACTERISTICS
Urban	Physical	**Theme:** Highly developed site modifications and facilities. Ski areas, large visitor centers, and large resorts are examples of urban nodes within NF System lands.	
		Remoteness: often close to towns and cities**.**	
		Size: n/a but typically small nodes	
		Infrastructure (access and facilities): *Access* – OML 4-5 roads and trail classes 4-5, mass transit often available *Rec sites* – Dev scale 5 typical *Sanitation* – flush toilets *Water supply* – Hot water, showers *Signing* – extensive *Interpretation* –exhibits in staffed visitor centers, highly developed and formalized exhibits *Water crossings* - bridges for: hwy. vehicles, buses, RVs, heavy equip.	*Access* – Groomed over-snow vehicle routes, groomed cross-country skiing, skate skiing and downhill ski/snowboard trails Full service facilities: visitor centers, resorts and lodging often present
		Vegetation: often planted, manicured and maintained	
		Scenic Integrity: High to Low	
	Managerial	Intensive on-site management, obvious signs, and staffing, education and law enforcement available. Motorized and mechanized travel restricted to designated routes. No motorized or mechanized travel allowed off designated travel routes.	
	Social	High degree of interaction with people. People are in constant view. Challenge and risk are unimportant except for competitive sports.	

Deschutes National Forest

WINTER

Winter Recreation Sustainability Analysis

Deschutes National Forest
August 5, 2009

Prepared by Independent Resources Enterprise Team

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Executive Summary

Increasing urbanization, population growth and demand for access to recreation have made providing opportunities for quality winter recreation a challenge on the Deschutes National Forest. With abundant snow, good access and outstanding scenery, the Deschutes is a popular winter recreation destination for residents of central Oregon and the Pacific Northwest. Visitors participate in a variety of traditional winter activities including downhill skiing, snowmobiling, cross-country skiing, snowshoeing, dog sledding and snow play. In addition, emerging activities such as snowmobile-assisted skiing (hybrid skiing), snowcross and kite skiing are becoming increasingly popular. The challenge for the Deschutes National Forest is to provide quality winter recreation opportunities that meet visitor needs and protect natural resources now and in the future.

The winter recreation sustainability analysis considers the social, environmental and managerial components of providing winter recreation opportunities that meet visitor's needs, protect resources and are within the forest's management capacity. Information from existing laws, policy and regulations, a demand analysis of trends affecting winter recreation in Central Oregon, and data gathered about visitors' values for winter recreation opportunities and resource protection informed this analysis. Winter recreation opportunities across a range of settings on the forest are identified. For each setting, indicators of desired future condition for quality winter recreation opportunities are identified. These indicators will help managers determine appropriate management inputs and actions to move the winter recreation program toward the desired future condition.

An analysis of key issues is also part of this document. The issue analysis includes:

- Parking capacity
- Solitude and quiet recreation
- Dogs and winter recreation
- Impacts to other resources

Key strategies for moving the Deschutes toward a sustainable winter recreation program include:

- Understand visitor use patterns, demand and satisfaction.
- Provide adequate parking across the forest.
- Consider management alternatives for Dutchman Flat.
- Protect opportunities for solitude and self-reliance.
- Provide dog-friendly winter recreation areas.
- Provide alternative transportation to non-motorized use areas on the Cascade Lakes Highway.
- Institute minimum snow depth for over-snow vehicles.
- Build monitoring into daily winter recreation management.
- Continue to build constituent support for the recreation program.
- Provide management for winter recreation that is commensurate with use.

Introduction

The Deschutes National Forest is one of the premier winter recreation destinations in the Pacific Northwest. From downhill skiing and snowboarding at Mt. Bachelor to hundreds of miles of snowmobile, cross-country ski and snowshoe trails, the forest provides a wide variety of winter recreation opportunties to residents of nearby communities and visitors from other parts of Oregon, Washington and California.

The Cascade Mountain Range provides an exceptional scenic backdrop for winter recreationists. The mountains also help provide the area with some of the most consistent, easily accessible snow conditions in the state. Because of unique geographic and climatic conditions, visitors have access to outstanding winter recreation opportunities on the Deschutes National Forest.

The forest is categorized into three primary recreation settings: Alpine Summit, Recreation Hub and High Desert (Figure 1). Winter recreation on the Deschutes National Forest is concentrated primarily on the east slope of the Cascade Range and in the vicinity of Newberry National Volcanic Monument. These areas lie within the Alpine Summit and Recreation Hub areas. The High Desert area is not suitable for winter recreation, primarily due to lack of adequate snow cover.

The Alpine Summit setting is located along the crest of the Cascade Mountains. High peaks such as Mt. Jefferson and the Three Sisters are dominant features and much of setting is designated Wilderness. The interior of the Alpine Summit is inaccessible to all but the hardiest adventurers during winter months. Areas closer to sno-parks and trailheads offer primarily day use opportunities for backcountry skiing, mountaineering, hybrid users (use of snow machine as transportation for non-motorized activity) and snowmobiling outside Wilderness. Most of the Alpine Summit setting provides opportunities for primitive and backcountry experiences.

The Recreation Hub setting offers more developed and concentrated day use opportunities. Developed ski areas, groomed snowmobile and ski trails, and marked snowshoe trails provide users with easy access and infrastructure for enjoyment of diverse winter recreation activities. Long distance and loop trails allow visitors to access the backcountry.

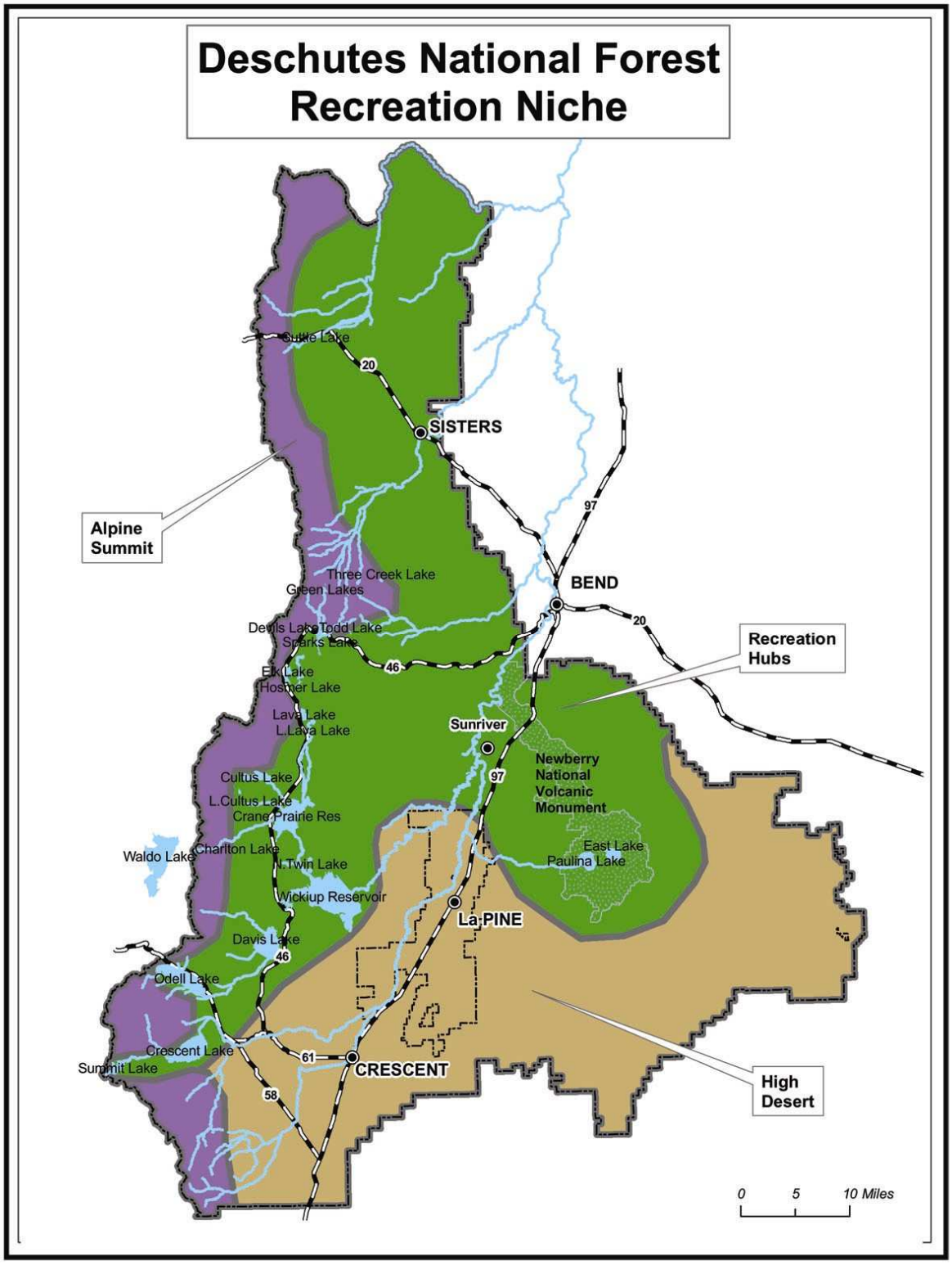
As winter recreation use increases on the forest, the Deschutes wants to continue to provide high-quality outdoor recreation opportunities in a sustainable manner. The goals of the winter recreation sustainability analysis are:

- Determine appropriate areas for winter recreation opportunities forest wide.
- Identify strategies to manage winter recreation opportunities sustainably.

Background

Winter recreation opportunities on the Deschutes National Forest have been a primary attraction for central Oregon since the 1960s. Consistent snow, alpine scenery and easy access transform the Cascade Mountains into a winter wonderland. Mt. Bachelor ski area began operations in the late 1950s and cross-country skiing and snowmobiling use along the Cascade Lakes Highway steadily increased into the 1990s.

Beginning in the 1990s, a population boom in Bend and central Oregon led to dramatic increases in winter recreation use on the forest, particularly along the Cascade Lakes Highway. As Bend's population grew, smaller communities such as Sisters, Redmond, La Pine and Crescent also saw increased immigration. Winter recreation areas (such as Newberry National Volcanic Monument, Three Creek, Santiam Pass and southern parts of the forest) accessed from these communities also saw increasing


Deschutes National Forest
Recreation Niche
Suttle Lake
20
SISTERS
97
Alpine
Summit
Three Creek Lake
Green Lakes
BEND
Devils Lake
Todd Lake
Sparks Lake
20
Recreation
Hubs
46
Elk Lake
Hosmer Lake
Lava Lake
L.Lava Lake
Sunriver
Newberry
National
Volcanic
Monument
Cultus Lake
L.Cultus Lake
Crane Prairie Res
97
Waldo Lake
Charlton Lake
N.Twin Lake
East Lake
Paulina Lake
Wickiup Reservoir
La PINE
Davis Lake
46
Odell Lake
Crescent Lake
Summit Lake
61
CRESCENT
58
High
Desert
0
5
10 Miles

use, although not as dramatically as the Cascade Lakes corridor. Coupled with this increasing use, several low snow years in parts of the Pacific Northwest led recreationists to seek better winter recreation opportunities on the Deschutes. Once winter recreation on the Deschutes was "discovered," recreationists continued to come to central Oregon.

In addition to the increase in sheer numbers of recreationists, technology has enabled more users to easily access areas that were previously difficult to reach. Both motorized and non-motorized equipment has undergone significant technological improvements. Lighter and smaller snowshoes are driving a large increase in demand for snowshoe trails. Alpine-touring (AT), telemark, and split-board advancements have allowed more skiers and snowboarders to find their own way up and down the mountains. Snowmobiles have dramatically changed in performance and function allowing even novice users to travel over snow in almost any surface conditions. Avalanche safety equipment has improved and become more intuitive and accessible. These and other changes have dramatically influenced use patterns of winter recreationists. Terrain that was difficult or inaccessible 20 years ago is now easily reached.

Increased visitation has led to parking 'bottlenecks' at some sno-parks, creating safety issues to visitors. For example, Dutchman Flat Sno-park is the highest sno-park on the Deschutes National Forest; it is also one of the smallest. Due to its elevation, it is very attractive for early and late season use, but also for good quality snow in mid season. Most of the congestion is due to limited high demand and limited parking capacity. Although crowding at this and other parks is common during peak use, Dutchman has been the spearhead for winter recreation tension on the forest.

The Deschutes National Forest also has a large number of recreationists who choose to recreate with dogs. These recreationists include dog sledders, skijorers, and others who are looking for a place to exercise themselves and their animals. While dog sledders are able to use groomed snowmobile trails with the required free permits, dog owners who are looking to snowshoe or ski with their pets on groomed non-motorized trails have limited options. This is a user group that appears to need expanded opportunities.

In April of 2004, the forest hosted the 'Dutchman Summit' in order to build understanding and foster dialogue about winter recreation issues on the forest. Members of the public, including local user groups, attended two workshops where they expressed strengths and weakness of the winter program as well as submitted ideas for improving user experiences. The outcome of the Summit was that snowmobile use was restricted in the Dutchman Flats corridor and on portions of Tumalo Mountain. This outcome was then further negotiated by the Oregon State Snowmobile Association (OSSA) to allow a 23-acre play area on the south end of Dutchman Flats. The final plan had several restrictions for both motorized and non-motorized travel within the congested area.

Sustainability

The Forest Service mission is to "sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." The Forest Service Strategic Plan states: "To achieve sustainability – the capacity of forests and grasslands to maintain their health, productivity, diversity, and overall integrity – the agency will integrate environmental, social, and economic issues and values into its management decisions and actions while accounting for future as well as present needs."[1] Recreation management implications are found in four of the seven Strategic Plan goals:

- Provide and sustain benefits to the American people
- Conserve Open Space
- Sustain and Enhance Outdoor Recreation Opportunities

[1] USDA Forest Service Strategic Plan, FY2007-2012

- Engage Urban America with Forest Service Programs

Sustainable recreation management is about providing recreation opportunities in a way that meets the needs and desires of people today without affecting the ability to meet the needs of future generations. Three dimensions – social, environmental, and economic/managerial – shape visitors' interactions with the land. They are interrelated and each dimension affects how well the others contribute to sustainability. Finding a balance among the three dimensions is often difficult and requires flexibility and adaptability.

The social dimension of sustainability includes the degree to which visitor, community, and society needs are being met. It includes factors such as visitor use and demand, values for recreation experiences, public health and safety, community stability, social acceptability and quality of life. Many people experience nature through recreation and develop personal connections with the land that ultimately support sustainability.

The environmental dimension of sustainability includes the protection and conservation of resources and settings for current and future generations to enjoy. Recreation use inevitably impacts resources to some extent. It is the responsibility of land managers and constituents to understand the degree to which impacts are acceptable for recreation to be sustainable.

The managerial (or economic) dimension of sustainability includes the financial and custodial inputs necessary to ensure fiscal responsibility of a recreation program that is socially and environmentally sustainable. Appropriated funds are leveraged with fees, partnerships, and other funding sources to meet visitor needs and protect resources.

Planning for a sustainable recreation program combines scientific and technical expertise with public values and interests to reach a shared vision for the future (desired future condition). A key part of agreeing upon the shared future vision is an understanding of the current situation. The situation analysis includes questions such as:

- Social – Who are our current and future visitors? What kinds of recreation opportunities do they value? What recreation opportunities can the forest provide better than anyone else?
- Environmental – How does recreation impact natural resources? What are the acceptable conditions for visitor use, and how do we achieve them?
- Economic/Managerial – What are the barriers to managing recreation sustainably? What is the appropriate mix of resources, including partnerships, to achieve a sustainable program?

Need for Winter Recreation Sustainability Analysis

The focus of the Winter Recreation Sustainability Analysis is on the social conditions that support quality recreation experiences. As the number and variety of users continues to increase, the Deschutes has a responsibility to plan for and manage recreation opportunities so users can reasonably attain desired experiences sustainably into the future. By focusing key recreation activities in key settings, the forest will set the stage for providing a range of recreation opportunities in appropriate areas. Conversely, managing for a sustainable winter recreation program requires the forest to make choices about not providing some recreation opportunities in certain areas because they do not contribute to sustainability. Ultimately, managing for a sustainable winter recreation program requires that visitor needs are balanced with environmental impacts and managerial capacity.

A sustainable winter recreation program considers the degree to which recreation impacts are acceptable or unacceptable, and implements appropriate mitigation measures to ensure ecosystem viability. All winter recreation use on the Deschutes will comply with existing laws, regulation and policy related to resource management and protection. Federal laws such as the Wilderness Act, the Endangered Species

Act and the Clean Water Act provide direction for resource management on federal lands. Further, the Deschutes LRMP and Northwest Forest Plan set specific management area standards and guidelines related to recreation (Appendix A). Details of management policy and guidance are not repeated in this document.

The Deschutes already has good relationships with diverse stakeholder organizations and is well poised to manage the winter recreation program to meet the needs of current and future visitors. The forest has a small and dedicated workforce that is effective at leveraging limited resources to get work done. Because of the active outdoor lifestyle in Bend and other communities adjacent to the forest, potential support from volunteers, partners and other stakeholders is high. Expanding partnerships and volunteer programs is a high priority for managers to creatively leverage limited capacity. In order for the forest to sustainably provide the diversity and quality of experiences that forest users' desire, proper planning and management strategies need to be implemented and monitored.

Planning Framework

The winter recreation sustainability analysis uses the Recreation Opportunity Spectrum planning framework to evaluate visitor use and potential impacts on the environment. This framework addresses recreation planning issues by recognizing different types of desired recreation experiences, identifying issues associated with recreation use, identifying indicators that represent important resource and social conditions, and outlining desired conditions for a range of recreation opportunities[2].

Planning Steps

1. Identify public values for winter recreation.
2. Determine issues.
3. Describe existing winter recreation opportunities.
4. Determine indicators and standards for social, resource and managerial conditions.
5. Determine desired future condition for winter recreation opportunities (ROS classes).
6. *Conduct site specific analysis as needed[3].*
7. *Monitor and evaluate.*

Information Gathering

The winter recreation sustainability analysis was informed by multiple data sources. First, existing laws, regulations and policies were reviewed to determine restrictions on winter recreation opportunities (see Appendix A). Next, existing information sources such as the Deschutes recreation niche, recreation focus group interviews, and sense of place mapping were reviewed. Finally, visitor surveys, values workshops, and key informant interviews were used to establish public values for winter recreation. A demand analysis of winter recreation trends in central Oregon was also conducted.

The following is a summary of information sources and how they are used in the winter recreation sustainability analysis:

- **National Visitor Use Monitoring (NVUM) -** The Deschutes participated in the first round of NVUM in fiscal year 2002. The second round took place during fiscal year 2008 and that data will not be available until mid-2009. Snowshoeing and other winter activities were not listed as separate activity choices. NVUM information was incorporated in the demand analysis to describe current visitors and predicted future growth in winter recreation.

[2] McCool, Clark, and Stankey, 2007. *An Assessment of Frameworks Useful for Public Land Recreation Planning.*

[3] Steps 6 & 7 are not a part of this document.

- **Sense-of-Place Mapping -** In 2003, the forest participated in sense-of-place mapping of central Oregon. Twelve areas encompassing federal, state, tribal and private lands were identified and described in terms of their functional, geographic and cultural relationships to communities and visitors. Sense-of-place areas were used to help identify desired winter recreation opportunities across the forest.

- **Dutchman Summit -** In April of 2004, the Deschutes convened a summit of winter recreation users to discuss the future of Dutchman Flat Sno-park and the surrounding area. The result of the summit was the current management plan for the Dutchman Flat area. The Dutchman Summit notes were used to identify values, issues and desired winter recreation opportunities across the forest.

- **Focus Group Interviews -** In June and July of 2004, the Deschutes contracted with university researchers to conduct focus group interviews of central Oregon residents' use of the forest. Interviewers asked participants about favorite recreation activities, constraints to participations, likes and dislikes of the forest, the role of forests in central Oregon, and the benefits of forests in central Oregon. Focus group interviews were used to identify values, issues and desired winter recreation opportunities across the forest.

- **Winter Recreation Surveys** – In conjunction with the FY2008 NVUM surveys, a winter recreation survey was conducted during the 2007-2008 winter season. The survey identified visitor characteristics, use patterns, perceptions and preferences. Surveys were collected at sno-parks along the Cascade Lakes corridor from December to March. Survey results are contained in a draft report titled "Winter Use Recreationists at the Deschutes National Forest: A Survey of Characteristics, Behaviors and Perceptions." The Executive Summary from this report is located in Appendix B. Winter recreation surveys were used to identify values, issues and desired winter recreation opportunities across the forest.

- **Values Meetings -** In January of 2008, forest employees representing recreation, wildlife, natural resources and management met to identify values for winter recreation. In March of 2008, members of the Deschutes Trail Users Group (TUG) met to identify values for winter recreation. The notes from these meetings are located in Appendix C and D. Values meetings were used to identify values, issues and desired winter recreation opportunities across the forest.

- **Interviews -** From March to May of 2008, forest staff, recreation user group members, and community members participated in semi-structured interviews about winter recreation opportunities and challenges on the Deschutes. Interviews were conducted with 14 forest employees representing recreation, resources and management. Interviews were conducted with 10 people representing recreation users such as snowmobiling, cross-country skiing and skiing with dogs, and community members including outfitter-guide permittees, local business owners and Bend Parks and Recreation. The summaries of these interviews are located in Appendix E and F. Interviews were used to identify values, issues and desired winter recreation opportunities across the forest.

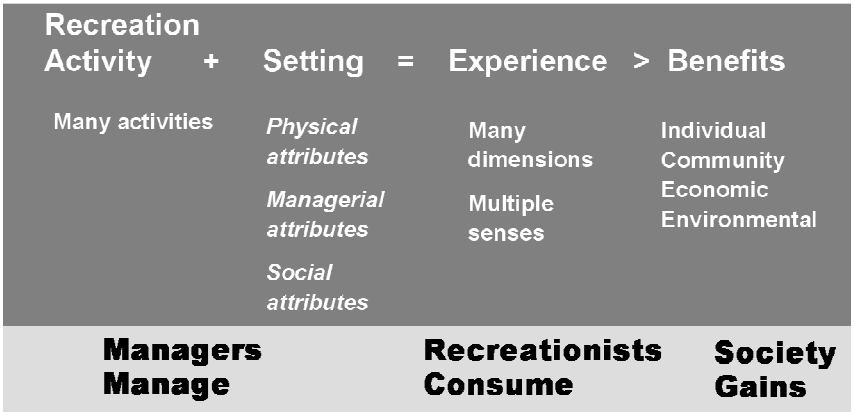
- **Supply and Demand Analysis** – An analysis of recreation supply and demand in central Oregon and its effects on winter recreation participation on the Deschutes National Forest was conducted. The full demand analysis is located in Appendix G. The supply and demand analysis was used to identify values, issues and desired winter recreation opportunities across the forest.

Existing Winter Recreation Opportunities

Visitors perceive recreation as more than activities such as snowmobiling, skiing, and snowshoeing. People choose a specific setting for a given activity in order to realize a desired set of experiences. For example, backcountry skiing in untracked snow in a remote setting may offer some visitors a sense of solitude, challenge, and self-reliance. In contrast, marked and groomed trails in an area with facilities and amenities may offer comfort, security, and social opportunities for other visitors.

Figure 1 illustrates the components of a recreation opportunity. The left side of Figure 1 shows that the combination of activities and settings influences recreation outcomes. The right side of Figure 1 shows experiences and benefits, or the outcomes of providing recreation opportunities. Examples of desired outcomes include enjoying nature, spending time with family and friends, or testing skills in the backcountry and come from public input from a variety of sources including market research (NSRE, NVUM, Census, SCORPs) and visitor feedback (surveys, interviews, focus groups).

Figure 1. A recreation opportunity.



Winter Recreation Settings

As mentioned above, winter recreation on the Deschutes occurs in two broad settings: Alpine Summit and Recreation Hubs. A range of recreation opportunities is found within these two settings; however, the Alpine Summit setting has less developed opportunities (primitive, semi-primitive non-motorized, semi-primitive motorized) while the Recreation Hubs setting has more developed opportunities (roaded natural, non-motorized social, motorized social, rural) . Specific areas of concentrated winter recreation use are described below.

The Existing Condition ROS map (Appendix H) depicts the current management scheme for winter recreation on the Deschutes. The existing condition inventory used traditional criteria as described in the 1986 ROS Users Guide.

Alpine Summit

The Alpine Summit lies along the crest of the Cascade Mountains. Its peaks provide the scenic backdrop for Central Oregon communities. Five wilderness areas comprise most of the Alpine Summit: Mt. Jefferson, Three Sisters, Mt. Washington, Diamond Peak and Mt. Thielsen. Non-wilderness areas are typically non-motorized or have limited accessibility to motorized use. Most of the Alpine Summit area provides opportunities for challenging backcountry experiences.

Traditional backcountry skiers access areas within designated Wilderness from sno-parks along the Cascade Lakes Highway, McKenzie Highway and Santiam Pass. These users are seeking opportunities to challenge themselves in areas with steeper terrain and untracked snow away from crowds and other users. Much of the interior of designated Wilderness (more than 5 miles from a sno-park), particularly on the north and south ends of the forest, receives little to no use in the winter. Areas in the Three Sisters Wilderness accessed from sno-parks along the Cascade Lakes Highway and Three Creek Sno-park tend to have moderate to heavy use.

Non-Wilderness areas in the Cascade Lakes/Three Creek corridor also receive moderate to heavy use. The majority of use is from backcountry skiers and hybrids who use snowmobiles as a form of access to reach remote areas more quickly. These users are seeking opportunities to get away from the crowds and challenge themselves in an undisturbed setting. Some marked trails offer access into the backcountry, but no trails are maintained and users must rely on their outdoor skills when traveling in the winter.

Currently winter recreation use in Wilderness outside the Cascade Lakes/Three Creek area is very light. Distance from population centers and less challenging terrain make these areas less popular. There is some backcountry skiing in the Mt. Washington and Three Sisters Wilderness areas accessed from McKenzie Pass on the north side of the forest. These areas offer opportunities for solitude and connection with the natural world.

Recreation Hubs

The Recreation Hubs are the heart of Central Oregon recreation opportunities where staging areas and facilities provide access to close-in trails for cross-country skiing, snowshoeing and snowmobiling. The heaviest winter recreation use occurs along the Cascade Lakes corridor. However, other popular recreation hubs including Newberry National Volcanic Monument (NNVM), Crescent, Sisters, and Santiam Pass offer similar opportunities.

Over the last decade, Bend has become the recreation hub for central Oregon. With consistent snow, outstanding scenery and easy access from town, the Cascade Lakes corridor is the major winter recreation destination on the Deschutes. From well-marked cross-country ski and snowshoe trails where users can develop their skills and recreate with friends and family to long-distance and loop trails that provide access to vast expanses of backcountry to both snowmobilers and skiers, the Cascade Lakes corridor offers a wide range of winter recreation opportunities. However, users seeking a lack of crowds and little noise must travel several miles away from sno-parks to get away from other users. The Mt. Bachelor ski area and Elk Lake Resort offer amenities and supplies. Several outfitter-guides take visitors on guided snowshoe, cross-country ski and snowmobile tours.

To the southeast of Bend, the incredible scenery of NNVM attracts many winter recreationists. While use is not as heavy as the Cascade Lakes corridor, Six Mile and Ten Mile Sno-parks provide access to over 100 miles of snowmobile trails and nine miles of Nordic trails. In contrast to dog-free cross-country ski areas on the north side of the Cascade Lakes corridor (Meissner, Swampy), dogs are allowed on ski trails in NNVM. The Paulina Lodge has amenities and supplies and an outfitter-guide takes visitors on snowmobile tours of NNVM.

The community of Sisters is quickly becoming another hub for winter recreation on the Deschutes. McKenzie Pass and Three Creek Lakes are the primary winter recreation areas accessed from Sisters. McKenzie Pass receives light use, primarily from snowmobilers recreating on the cross-district trail. Upper and Lower Three Creek Sno-parks are alternative to the Cascade Lakes area and use is moderate. Snowmobilers access Moon Mountain and play areas outside and adjacent to the Three Sisters Wilderness. Backcountry skiers access the Wilderness and some use snowmobiles as transportation to

reach the Wilderness boundary. An outfitter-guide also transports skiers to the Wilderness boundary via snowmobile.

Winter recreation on the north side of the forest is influenced by the Willamette Valley. The Corbett Sno-park on the Deschutes, and the Ray Benson Sno-park and Santiam Snow Play Area on the Willamette National Forest provide access to Santiam Pass. The Hoodoo Ski Area is also on the Willamette. Approximately 70 miles of motorized and Nordic trails are available in the Santiam Pass area. Winter recreation use is moderate to heavy. Cross-country skiing occurs primarily on designated trails while snowmobilers use trails and open areas for motorized snow play. To the east of Santiam Pass, the Suttle Lake area has approximately 20 miles of cross-country ski trails and winter recreation use is light.

The town of Crescent is a hub for winter recreation on the southern part of the forest. High lakes such as Crescent and Odell are accessed from Junction and Crescent Lake Sno-parks. Snowmobilers have outstanding opportunities for backcountry snowmobile riding on long-distance trails, but there are few opportunities for motorized snow play. To protect bald eagle nesting habitat, a closure limits winter use on and adjacent to Davis, Wiciup Reservoir and Crane Prairie Reservoir. Several Nordic trail systems near Highway 58 offer opportunities for beginner and intermediate skiers to build their skills.

Resorts and Outfitter-Guides

There are 7 resorts on the Deschutes that stay open year-round. These resorts offer opportunities for overnight visitors to experience the winter backcountry without the skills and equipment to camp in a harsh environment. Often, they are a destination for people recreating for the day and provide a place for fuel, supplies and a hot meal. During the winter, these resorts are the only source of civilization once recreationists leave the sno-parks. Table 1 shows existing resorts and the services they offer.

Table 1. Resorts on the Deschutes National Forest.

Resort	Location	Amenities	Activities
Mt. Bachelor Resort	Bend-Ft. Rock RD	Parking, lodge, restaurants, ski lifts	Downhill skiing, cross-country skiing
Crescent Lake Lodge	Crescent RD	Restaurant, gas, laundromat, groceries, cabins, snowmobile rentals	Groomed snowmobile trails, cross-country skiing, snowshoeing
Elk Lake Resort	Bend-Ft. Rock RD	Restaurant, cabins, snowmobile rentals, snowcat shuttle service	Groomed snowmobile trials, cross-country skiing, snowshoeing, downhill skiing (Mt. Bachelor)
Lodge at Suttle Lake	Sisters RD	Restaurant, cabins and lodge rooms, spa	Snowmobile and cross-country ski trails nearby
Odell Lake Lodge	Crescent RD	Restaurant, cabins and hotel rooms, cross-country ski and snowshoe rentals	Groomed cross-country ski trails, snowshoeing, downhill skiing (Willamette Pass)
Paulina Lake Resort	Bend-Ft. Rock RD	General store, restaurant, cabins	Groomed snowmobile trails, groomed cross-country ski trails, snowshoeing
Shelter Cove Resort	Crescent RD	Cabins, general store, cross-country ski and snowshoe rentals	Groomed cross-country ski trails, snowshoeing, downhill skiing (Willamette Pass)

Winter outfitter-guide use on the Deschutes occurs primarily in the Cascade Lakes area, Three Creek Lake area, and NNVM. Visitors are able to participate in a variety of guided winter activities including snowmobiling, snowshoeing, and cross-country skiing (Table 2). Outfitter-guides also offer avalanche education courses and motorized access to non-motorized areas that are difficult to access in the winter.

Table 2. Winter Outfitter-Guides on Deschutes National Forest[4].

Permit	Winter Activity	Area of Operation	District (administered)	User Days	Details
Silver Striders	non-wilderness snowshoe and hiking	various locations	Multi-district (Bend)	1144	772 (Bend) 372 (Sisters)
Three Sisters Backcountry Access	snowmobile, ski, avalanche education	Sisters RD (Three Creeks)	Sisters	???	
Timberline Mountain Guides	climbing, ski mountaineering, avalanche education	Forest wide	Multi-district (Zig-Zag-Mt. Hood)	20	
Central Oregon Adventures	snowmobile	all snowmobile trails west of Bend	Bend	1500	(have used up to 2,500)
Paulina Tours	snowmobile	Newberry Crater area	Bend	600	
Wanderlust	snowshoe	Bachelor and Kapka Butte	Bend	2000	(last year used 4530)
Bend Parks and Rec	snowshoe, nordic	various	Bend	3000	
COCC	snowshoe, nordic	various	Bend	3,000	
Wolftree	non-wilderness snowshoe and hiking	Sisters RD (No map provided)	Sisters	250	temporary
Northstar	limited winter use	various locations	Bend	400	
OMSI	very little winter use		Bend	4500	
SOAR	snowshoe	Sisters and Bend RD	Sisters	250	priority
Total (12 permitees)				**16664**	

Both resorts and outfitter-guides provide visitors to the Deschutes National Forest a unique opportunity. While many recreationists have the knowledge, skills, and equipment necessary to participate in winter recreation activities, resorts and outfitter-guides are able to assist those who are not specialized winter recreationists. Visitors who are unfamiliar with the area, terrain or winter conditions may not feel comfortable venturing into the backcountry on their own. Resorts and outfitters-guides provide safety, skill development, and conveniences to those visitors.

[4] Notes: Timberline Mountain Guides has requested an additional 50 user days in the Three Creeks drainage. User days for Three Sisters Backcountry Access are not available.

Values for Winter Recreation

Adjacent communities and visitors have a strong connection to the Deschutes National Forest and the winter recreation opportunities it provides. These connections translate to values, or the meanings that people associate with a particular recreation experience. Understanding community and visitor values helps managers determine what social, environmental and managerial conditions are appropriate and acceptable for different types of recreation experiences.

Social

Community values for winter recreation on the Deschutes are closely tied to issues such as quality of life, healthy citizens, a vibrant economy, and environmental stewardship. The Bend 2030 Community Vision, for example, discusses goals for connecting the city with adjacent wildlands, and promoting citizen wellness and access to parks and natural areas. All of the communities surrounding the Deschutes use recreation opportunities on the forest to promote tourism and attract visitors. Communities in central Oregon benefit from the variety of winter recreation opportunities and natural settings on the Deschutes.

Visitors' preferences for winter recreation span a range of values. Indeed, every person who recreates on the Deschutes is influenced by his or her individual and group experiences. As people congregate with like-minded individuals, common values emerge. Ultimately, these values represent the positive experiences that visitors receive from winter recreation opportunities.

For Deschutes winter visitors, common values include:

- Connecting with and being in nature
- Access to a variety of winter recreation opportunities
- Socializing with family, friends, and others they encounter on the trail
- Challenge and physical exercise
- Getting away from the regular routine

In addition to common values, there are differences among user groups' values for winter recreation. Key differences are highlighted below:

- Snowmobilers value the ability to easily access endless miles of powder on well-marked trails. The challenge of the sport and recreating with friends and family is important.
- Cross-country skiers and snowshoers value easy access to areas with well-marked trails and without motorized use. Physical exercise in a non-mechanized setting is important.
- Backcountry skiers, snowboarders and snowmobile-assisted skiers value exploring remote areas with undisturbed powder. Solitude and challenge in a non-mechanized setting is important.
- People who recreate with their companions dogs value groomed cross-country ski trails in a non-mechanized setting.

Most current winter visitors who recreate along the Cascade Lakes corridor feel that the expansiveness of the Deschutes is large enough to accommodate all users. The 2007-2008 winter recreation survey indicated that 80.2% of the visitors rated their experience 8 or higher on the 10-point satisfaction scale. Although some crowding occurs at sno-parks, visitors value opportunities for dispersal on trails and in backcountry areas. Less than 10% of visitors felt moderately or extremely crowded at sno-parks. Interviews and the values meeting confirmed that few visitors feel the number of either motorized or non-motorized users adversely affects the experience they seek. As one interview respondent stated, it is important for all recreationists, particularly those who are new or inexperienced, to get out on the forest in the winter.

Environmental

While communities rely on the Deschutes for quality of life and economic viability, they also depend on the forest's natural resources such as clean air, clean water and wildlife habitat. In the Bend 2030 Community Vision, "A Quality Environment" describes Bend as a community defined by and connected to its unique natural environment. Many communities adjacent to the Deschutes recognize that providing opportunities for winter recreation must be balanced with protecting the natural resources that sustain their inhabitants.

For many visitors, environmental values are closely associated with the social experiences they receive while recreating on the Deschutes. According to the International Snowmobile Industry Association, two of the top five reasons people snowmobile are related to the environment: view scenery and be close to nature. Similarly, almost all survey respondents said the reason they recreate on the Deschutes was to be outdoors (96%) and to experience natural surroundings (93%). Several interview respondents stated that sustainability of resources is important to them. This indicates that connecting with nature is very important to winter visitors and, therefore, protecting and enhancing the natural environment is important.

Managerial

Visitor values for national forest management inputs are not often well understood. On the Deschutes, however, several interview respondents and values meeting participants specifically mentioned the positive relationship with the Forest Service as something they value. Visitors also value on-the-ground presence and dedication by forest staff. Visitors' values help determine which managerial actions they will support[5]. Because of this, the Deschutes National Forest staff has an opportunity to find solutions that are based on multiple common values.

Winter Recreation Issues

Although enjoying winter recreation is often viewed as a way to escape daily pressures and renew ones spirit, it is not immune from the social, political and legal environment in which people dwell. In fact, problems facing recreation planners and managers are often messy due to the turbulence and uncertainty that surround them[6].

Social

Differences in visitors' values for recreation experiences are at the core of recreation planning and management issues. These differences in values often lead to conflict between user groups. Recreation conflict is inherently a social impact where a person's perceptions and expectations of a recreation experience define what that experience means to them. For some, quiet, solitude, and a peaceful setting are the definition of a quality recreation experience. For others, adventure, thrill, and challenge are what make the recreation experience acceptable. In many cases, the same setting attracts different user groups with different expectations of an acceptable recreation experience. Generally, these differences in expectations manifest as 'conflict' in areas where non-motorized and motorized users share the same geographic area[7]. Often, these are not simply cases of one activity versus another, but of how different

[5] Borrie, Freimund, and Davenport, 2002, *Winter Visitors to Yellowstone National Park: Their Value Orientations and Support for Management Actions.*

[6] McCool, Clark, and Stankey, 2007. *An Assessment of Frameworks Useful for Public Land Recreation Planning.*

[7] Jackson and Wong, 1982. *Perceived Conflict between urban cross-country skiers and snowmobiles in Alberta.*

people value and define their recreation experiences, and how they differ in their perceptions of what are acceptable experience conditions.

For many recreationists, the setting is not merely the physical landscape. Specific places offer recreationists the opportunity to achieve the goals they have set for a desired recreation experience. The social environment and managerial actions influence the way in which the place is experienced by recreationists[8]. Conflict, then, may be greater for recreationists who are attached to a particular recreation setting.

The 2008 Winter Survey highlights some of the social issues associated with winter recreation. For example, many survey respondents feel that the forest is not providing adequate parking for increasing recreation demand. By far, the most important need expressed by those recreationists was for more parking capacity (67.6% rated extremely important). While most visitors were satisfied, 56% of non-motorized respondents said that some winter activities are more disturbing than others. In general, non-motorized visitors are more disturbed by motorized use than by other non-motorized users.

Conflict on the Deschutes is relatively low but does occur in these areas:

- Providing adequate parking for all users. Sno-parks along the Cascade Lakes Highway are often full or overflowing at peak use times. Use is increasing across the forest and visitors want adequate parking to accommodate current and future use.
- Providing and maintaining opportunities for quiet recreation. Many non-motorized visitors, whether they are seeking a solitude or social experience, want opportunities to recreate in areas where motorized use does not occur and cannot be seen or heard.
- Providing opportunities for recreating with dogs. Some non-motorized visitors want opportunities to ski or snowshoe with their dogs in areas where motorized uses do not occur and on groomed non-motorized trails.
- Maintaining opportunities for recreating without dogs. Other non-motorized visitors do not want dogs on designated ski trails because dog prints can cause damage to ski tracks and owners who do not control or pick up after their dogs.
- Providing and maintaining opportunities for snowmobile riding on and off trails. Motorized visitors want to ensure they have opportunities to snowmobile in desirable areas of the forest along a system of well-maintained trails and in open play areas near sno-parks.

Environmental

Impacts to resources from increasing winter recreation use on the Deschutes are a concern for both managers and visitors. Although visitors accrue many benefits from recreating on the forest, recreation also creates impacts to air and water quality, to wildlife and their habitats, and to special areas such as Wilderness and inventoried roadless. While some impacts from recreation can be diminished through careful planning and design, others are difficult to mitigate. Any additional recreation use on the forest has to be balanced with long-term effects to natural resources. Environmental issues include:

- In areas that currently provide continuous habitat for flora and fauna, the primary habitat fragmentation concerns are related to the infrastructure that supports winter recreation use such as new facilities, roads or trails. There are both direct and indirect effects to habitat disturbances. Direct effects include physical habitat destruction where vegetation and sessile organisms are destroyed or damaged. A change in habitat along the edges of fragments is also likely. The remaining

[8] Gibbons and Ruddell, 1995. *The Effect of Goal Orientation and Place Dependence on Select Goal Interferences Among Winter Backcountry Users.*

habitat is reduced and/or fragmented into smaller patches. Indirect effects may include introduction of non-native or invasive species and facilitation of off-trail use into areas or terrain with sensitive species and/or habitats.

- Recreation use may stress wildlife and affect their ability to meet basic needs. A major concern is how the year-round presence of humans impacts wildlife. As recreation use increases and becomes more prevalent in the winter, wildlife may have a reduced ability to cope.

- Water quality issues associated with winter recreation are mainly associated with motorized use. Many snowmobile exhaust byproducts are known carcinogens and tend to accumulate in the surrounding snowpack which then leach into water supplies. Effects of snowmobile emissions on water chemistry are not well understood. The few existing studies show that impacts by snowmobile emissions, although present, are below levels which would likely harm humans or aquatic systems. Forest order DES-2003-04 restricts uses in the Bend Municipal Watershed area to maintain a safe water supply for the city of Bend.

- Winter recreation impacts to air quality are related to combustion engine pollution emissions. Emissions occur when users are driving to the sno-park or winter trailhead and again when motorized users recreate on their machines. One study suggests that running a two-stroke engine for 7 hours emits more pollutants than running a modern car for roughly 100,000 miles[9]. Snowmobiles that utilize four-stroke technology have much better emissions than two-strokes. The Clean Air Act directs land managers to ensure that air within class 1 airsheds is not degraded beyond background levels. Effects of emissions on surround air quality are determined by large and micro scale meteorological events. Studies indicate that frequent and large numbers of snowmobile activity relate directly with increases in airborne pollutants but not enough to cause human health risks.

- Winter recreation impacts to Wilderness are related to human disturbance of natural areas. The Wilderness Act defines Wilderness as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." While winter recreation is an acceptable use in Wilderness, it has the potential to affect Wilderness qualities. Moreover, there is a history of documented illegal motorized use within Wilderness areas on the Deschutes. Most incursions occur in the Three Sisters Wilderness area from Ball Butte to Tam MacArthur Rim and where easily accessible snowmobile areas are adjacent to Wilderness.

- Roadless areas contain much of the most contiguous and un-fragmented habitat on the forest outside of Wilderness. Winter recreation impacts to roadless are associated with building and maintaining new trail systems. There are currently no restrictions on building or maintaining authorized motorized or non-motorized trails within roadless areas. However, some see these lands as potential wilderness areas while others would like to see more diverse recreation opportunities offered in roadless areas.

- Compacted snow from skiers and snowmobiles may alter snow densities and snow to water equivalents. Compacted snow can reduce winter habitat for small mammals surviving underneath the snow[10]. Micro-topography plays an important role in determining how much space is available and how winter recreation impacts affect these habitats over space and time.

[9] CEPA 1999; California Environmental Protection Agency 1999; Fact Sheet -- New Regulations for Gasoline Engines http://www.arb.ca.gov/msprog/marine/facts.pdf (accessed 03-15-2008)

[10] Sanecki, Green, Wood, Lindenmayer, 2006, The implications of snow-based recreation for small mammals in the subnivean space in south-eastAustralia.

Managerial

The forest cannot accommodate increasing use with current funding and staffing levels. There is a strong reliance on the knowledge and experience on long-term employees. As these employees retire or move to other positions, their collective knowledge is difficult to replace. At the same time, changing dynamics between the forest and its communities has put a greater emphasis on collaboration. This translates into an increased reliance on volunteers and partnerships to deliver recreation opportunities. Some employees have not been trained to manage partnerships and others find it difficult to focus on collaborative efforts because they have multiple duties.

Many employees recognize that the winter recreation program is resource intensive due to the safety and liability concerns of working in a winter environment. The majority of trails and facilities on the Deschutes support non-winter recreation opportunities[11]; however, the winter program is primarily dispersed and requires heavy on the ground presence to enforce existing boundaries and regulations. Appropriated funding does not cover all the costs of signing and patrolling boundaries, maintaining signs and markers on winter trails, and coordinating partnerships to assist with program delivery.

Managerial capacity issues include:

- Lack of staffing for winter program. Staffing for the winter program is not at a level to manage for quality recreation opportunities. While the forest relies heavily on volunteers and partners to deliver the winter program, inadequate staffing hinders employees' abilities to take full advantage of these partnerships.

- Lack of funding for the winter program. Recreation use on the Deschutes occurs year-round and winter use is as heavy as summer use. Winter use also tends to be more concentrated because access and snow availability limit where visitors can go. Forest employees estimate that 75% of the forest's recreation budget goes for summer program management while only 25% goes to winter program management.

Indicators and Standards

The next section, Desired Future Condition, outlines the desired physical, managerial and social aspects of the winter recreation opportunity settings on the Deschutes. Indicators are specific elements of the biophysical or social setting selected to represent the conditions deemed appropriate and acceptable in each opportunity class. However, it is not possible to measure every indicator for each opportunity class so one or two *key indicators* represent the overall desired condition. Monitoring of these key indicators allows managers to determine how well the desired future condition is being achieved and if any management actions are necessary.

Standards are the maximum permissible conditions that will be allowed in a specific opportunity class. Standards are not necessarily limits or desired conditions. Ideally, they represent acceptable conditions for an opportunity class. If monitoring shows that a standard is being approached or exceeded for a key indicator, management action may be necessary to prevent violations of that standard.

According to McCool et al[12], good indicators and standards have the following characteristics:

- Quantitative – specific measurable outputs.
- Reliable – difference are due to real changes and not measurement error.
- Sensitive to change – to measure effectiveness of management actions.

[11] Trails: 37% winter, 63% non-winter; Facilities: 7% winter, 93% non-winter

[12] McCool, Clark and Stankey, 2007. *An Assessment of Frameworks Useful for Public Land Recreation Planning.*

- Administratively feasible – not costly to implement, do not require highly skilled individuals to measure.
- Related to important objectives and issues – provide feedback on how well management actions to maintain or improve desired conditions are achieved.

The Winter ROS table (Appendix J), contains physical, social, and managerial indicators and standards for each opportunity setting. However, it is not feasible to monitor every indicator. One or two key indicators are identified to represent acceptable conditions for each opportunity setting.

Social

Social indicators are based on the values and preferences visitors have for winter recreation experiences. While a visitor's experience is unique to that individual, similarities can be found among visitor preference groups. These preference groups correspond to recreation opportunity settings (primitive to rural) as described in the Desired Future Condition section.

Visitor satisfaction is a common way to monitor how well visitors are achieving their desired experiences. The Deschutes already measures visitor satisfaction through the National Visitor Use Monitoring (NVUM) process. Using FY 2008 survey data as a baseline, the Deschutes can continue to monitor general visitor satisfaction with winter recreation through NVUM.

Indicator – Percent of visitors satisfied with winter recreation opportunities.

Standard – Percent of visitors satisfied with winter recreation opportunities is the same as or better than FY 2008.

Key Opportunity Settings

To further describe the range of recreation opportunities available, five opportunity settings were developed. The opportunity settings correspond with variations in visitors' desired recreation experiences. For each opportunity setting, the following key indicators are used to represent the acceptability of conditions in that setting. These key indicators will be monitored by forest staff as outlined in a monitoring plan.

I. Alpine Solitude (ROS: primitive and semi-primitive non-motorized)
Visitors prefer opportunities for challenge and self-reliance in a wilderness setting. Untracked snow and no facilities or services are highly desirable. A small amount of non-motorized forest visitors prefer this type of opportunity.

Indicator – Percent of visitors who were dissatisfied with their experience in Alpine Solitude areas due to crowding or behavior of other visitors.
Standard – No more than 10% of visitors are dissatisfied with their experience in Alpine Solitude areas due to crowding or behavior of other visitors.

Indicator – Availability of untracked snow.
Standard – Untracked snow is available to 90% of users on non-peak days (up to a week after the last significant snowfall).

II. Backcountry (ROS: semi-primitive non-motorized and semi-primitive motorized)
Visitors prefer opportunities for challenge and self-reliance in a backcountry setting. Untracked snow and marked but not groomed trails are highly desirable. A small amount of non-motorized and motorized forest visitors prefer this type of opportunity.

Indicator – Percent of visitors who were dissatisfied with their experience in Backcountry areas due to crowding or behavior of other visitors.
Standard – No more than 10% of visitors are dissatisfied with their experience in Backcountry areas due to crowding or behavior of other visitors.

Indicator – Availability of untracked snow.
Standard – Untracked snow is available to 80% of users on non-peak days (up to a week after the last significant snowfall).

III. Alpine Challenge (ROS: semi-primitive non-motorized and semi-primitive motorized)
Visitors prefer opportunities for challenge and low to moderate social interaction in an alpine setting. Good access via marked trails and a variety of terrain features are highly desirable for motorized and non-motorized users. Some non-motorized visitors also want areas where motorized use is not present. A small amount of motorized and moderate amount of non-motorized (mainly backcountry skiers) prefer this type of opportunity.

Indicator – Availability of untracked snow.
Standard – Untracked snow is available to 70% of users on non-peak days (up to a week after the last significant snowfall).

Indicator – Percent of visitors who feel physically challenged during their visit to Alpine Challenge areas.
Standard – At least 80% of visitors report feeling physically challenges during their visit to Alpine Challenge areas.

IV. Motorized Social (ROS: roaded natural and roaded modified)
Visitors prefer safe and family-friendly opportunities on motorized trails. Well-marked and maintained trails and adequate parking and staging facilities are highly desirable. Non-motorized visitors expect to see and hear over-snow vehicles. Most motorized and a small to moderate amount of non-motorized forest visitors prefer this type of opportunity.

Indicator – Availability of parking.
Standard – Designed parking capacity accommodates visitor demand on 100% of non-peak and 95% of peak days[13].

V. Non-motorized Social (ROS: roaded natural and roaded modified)
Visitors prefer safe and family-friendly opportunities on non-motorized trails. Well-marked and maintained trails and adequate parking and staging facilities are highly desirable. Areas for exercise and dog-bonding are also important to some users. Most snowshoers and cross-country skiers prefer this type of opportunity.

Indicator – Availability of parking
Standard – Designed parking capacity accommodates visitor demand on 95% of non-peak and 85% of peak days.

[13] Peak days include holidays (Christmas, Martin Luther King Day, President's Day) and associated weekends.

Environmental

Environmental indicators are specific to issues identified above. The following indicators do not replace monitoring required by federal law or monitoring associated with the Deschutes Land and Resource Management Plan. These indicators will be used to assess winter recreation impacts on natural resources at the program level.

1. **Habitat fragmentation**
   Indicator – Net increase in habitat fragmentation at the subwatershed level.
   Standard – No net increase in habitat fragmentation at the subwatershed level.

2. **Wildlife**
   Indicator – Adverse impacts to TES and indicator species.
   Standard – No adverse impacts to TES and indicator species.

3. **Wilderness**
   Indicator – Amount of motorized use within designated Wilderness.
   Standard – Illegal motorized use is reduced by 50% by 2014.

4. **Bend Watershed**
   Indicator - Amount of motorized use within watershed boundary.
   Standard - Illegal motorized use is reduced by 50% by 2014.

5. **Air quality**
   Indicator - Number of days exhaust haze is present at sno-parks.
   Standard – Less than 10% of days between December 1 and March 31 where exhaust haze is present[14].

Managerial

These indicators support a financially viable and managerially feasible winter recreation program.

1. **Funding Mix**
   Indicator – Forest management feels that funding mix (appropriated, partnerships, volunteers, etc.) supports a sustainable winter recreation program.
   Standard – Annual staff survey results show at least 75% of managers indicate that funding mix supports a sustainable winter recreation program.

2. **Management Capacity**
   Indicator – Forest management feels that winter recreation program services are sustained or improving.
   Standard – Annual staff survey results show at least 75% of forest staff indicate program services are sustained or improving.

[14] Actual monitoring locations will be developed in the Winter Recreation Monitoring Plan.

3. **Enforceability**

Indicator – Relative effort involved in implementing and enforcing boundaries.
Standard – Annual staff survey results show at least 90% of forest staff indicate that relative effort involved in implementing and enforcing boundaries is decreasing.

Indicator – Understanding of winter recreation signs and boundaries.
Standard – 90% of winter recreationists understand on-the-ground signs and boundaries.

Desired Future Condition

The desired future condition ROS is a planning framework used to match desired recreation experiences with available opportunities. Informed by public values, the demand analysis, and resource and managerial needs, ROS gives managers the tools to make informed decisions about what types of future opportunities to provide and where. A comparison of *what is* (the existing condition) with *what ought to be* (the desired future condition) allows managers to make choices about when, where and how to provide quality recreation opportunities that meet visitor expectations.

Managers cannot dictate what type of experience visitors will have. They can provide opportunities for certain activity-setting combinations that lead to satisfying experiences for visitors. If individuals receive a satisfactory recreational experience, benefits will result[15]. The ROS allows managers to provide a range of recreation opportunities in which variances in the activities and setting (physical, managerial, social) meet the needs of different recreationists. In essence, by allowing visitors to make decisions about the settings they seek, there will be a closer match between the expectations and preferences visitors hold and the experiences they realize[16].

The desired future condition for winter recreation on the Deschutes is described by ROS class on the map (Appendix I) and the corresponding Winter ROS table (Appendix J). The Winter ROS describes the physical, social and managerial setting components for each ROS class. Key indicators and standards from above for each opportunity setting are shown in italics. These indicators will be monitored to determine whether the forest is providing recreation opportunities that visitors prefer.

Using the Desired Future Condition Winter ROS

The Winter ROS is designed to assist managers when they make site-specific decisions. It is not a substitute for environmental analysis. As a planning framework, the ROS helps managers plan for the right recreation in the right places. Using the Winter ROS as guidance, managers work with visitors and communities to identify recreation needs and determine appropriate proposals to take forward for site-specific analysis.

The Winter ROS is also a tool for public information and engagement. As an information tool, the Winter ROS is used to manage visitor expectations and help visitors match their desired experience with the appropriate setting. The Winter ROS is built on public values and demand for recreation opportunities. As the Deschutes works with communities and partners to deliver these recreation opportunities, the Winter ROS can be expanded beyond the forest's boundaries. This type of collaboration helps ensure that a full range of recreation opportunities are provided across jurisdictional boundaries.

[15] McCool, Clark and Stankey, 2007. *An Assessment of Frameworks Useful for Public Land Recreation Planning.*
[16] Stankey, 1999. *The Recreation Opportunity Spectrum and Limits of Acceptable Change planning systems: A review of experiences and lessons in ecosystem management.*

The Winter ROS can also be used for marketing recreation opportunities to help ensure visitors choose the right setting for the experience they want. In this sense, marketing refers to information found on web sites, brochures, maps, and other printed materials. It also refers to one-on-one contact and outreach efforts that occur between the Deschutes and its visitors. The Winter ROS can be developed into an information tool used by public and private entities across central Oregon.

Monitoring and adaptive management are key to successfully using the Winter ROS to plan for winter recreation opportunities. If monitoring shows that a standard is being approached or exceeded, adaptive management will be required to continue managing for sustainability and providing quality recreation opportunities. As conditions change and new information becomes available, the forest may also need to adjust indicators and standards.

The Winter ROS helps managers make choices such as:

- Where and what type of facilities and amenities are appropriate
- What activities are appropriate
- What visitors can expect in a setting and/or opportunity zone
- Where and what types of outfitter-guide activities are appropriate
- Where and what types of visitor services are appropriate

The Winter ROS is not a substitute for site-specific planning and analysis. It does not:

- Prescribe site-specific management actions
- Replace NEPA or public involvement
- Limit use

Ultimately, the Winter ROS is a planning framework to help managers provide recreation opportunities that meet visitor needs and protect natural resources. The emphasis of the Winter ROS is on providing a range of recreation opportunities across the forest. However, providing a range of opportunities does not equal providing every opportunity in every setting across the forest. In some cases, users will need to choose a different opportunity setting than in the past in order to achieve their desired recreation experience.

Winter ROS Settings

Approximately 78% (1,457,995 acres) of the Deschutes National Forest is available for winter recreation opportunities (Table 3). Portions of the forest are not considered suitable for winter recreation due to lack of consistent snow cover and are not included in the Winter ROS. The Winter ROS also depicts a "snow line" at an elevation of 5000 feet. Above the snow line, the forest can reasonably expect adequate snow cover on an annual basis and manage winter recreation opportunities accordingly. Below the snow line, adequate snow cover may not be available on an annual basis.

Approximately 8% of the forest is in the primitive ROS class. Traditional backcountry skiers and "hybrid" skiers/snowboarders[17] access areas in and near Wilderness boundaries from sno-parks along the Cascade Lakes Highway, McKenzie Highway and Santiam Pass. These users are seeking opportunities to challenge themselves in areas with steeper terrain and untracked snow away from crowds and other users. Much of the interior of designated Wilderness (more than 5 miles from a sno-park), particularly on the north and south ends of the forest, receives little to no use in the winter. This setting primarily supports Alpine Solitude opportunities.

[17] Hybrid users only use snowmobiles outside designated Wilderness as a form of access.

Table 3. ROS Class - Percent of Forest.

ROS Class	% of Total Forest	% of Winter ROS
Primitive	8	10
Semi-primitive Non-motorized	7.5	10
Semi-primitive Motorized	23	29
Roaded Natural	29	37
Non-Motorized Social	.6	.8
Motorized Social	8	11
Rural	1.7	2

Approximately 7.5% of the forest is in the Semi-primitive Non-motorized ROS class. The majority of use is from skiers and hybrids seeking an opportunity to get away from the crowds and challenge themselves in an undisturbed setting. Some marked trails offer access into the backcountry, but no trails are maintained and users must rely on their outdoor skills when traveling in the winter. This setting primarily supports Alpine Solitude and non-motorized Backcountry and Alpine Challenge opportunities.

Approximately 23% of the forest is in the Semi-primitive Motorized ROS class. These areas have marked and maintained motorized and non-motorized trails. Visitors here include snowmobilers, traditional cross-country skiers, snowshoers and other users who are seeking opportunities to experience nature and find areas of untracked snow while having the reassurance of trail systems in some areas. Designated non-motorized areas require travel on ungroomed trails. This setting primarily supports Backcountry and Alpine Challenge opportunities.

Approximately 29% of the forest is in the Roaded Natural ROS class. Plowed winter roads provide access to the forest and moderate-sized sno-parks allow visitors to stage before entering the forest. A variety of winter visitors are seeking opportunities to be with family and friends for social bonding and skill development. Well marked and maintained motorized and non-motorized trails allow visitor to frequently interact with each other. Open areas near groomed trails provide opportunities for motorized snowplay. Designated non-motorized areas are easily accessed from sno-parks. This setting primarily supports Motorized Social and Non-motorized Social opportunities.

Approximately .6% of the forest is in the Non-Motorized Social ROS class. This ROS class emphasizes social interaction in a non-motorized setting. Visitor use and interaction is higher than in roaded natural areas. Some trails are designed to allow beginners an opportunity to learn skills before venturing into more difficult terrain. Designated non-motorized areas are easily accessible from sno-parks.

Approximately 8% of the forest is in the Motorized Social ROS class. Social interaction is frequent and visitors expect to see others on designated motorized trail systems. Some trails are designed to allow beginners an opportunity to learn skills before venturing into more difficult terrain. This setting includes resorts such as Elk Lake, Paulina, and Crescent Lake.

Approximately 1.7% of the forest is in the Rural ROS class. Major highways and other roads provide winter access to passenger vehicles. This setting supports developments that facilitate access to other settings. Sno-parks are large and can generally accommodate use on peak days. Visitors have an opportunity to gather and stage before participating in their preferred experience.

Issue Analysis

Parking Capacity

One of the major drivers for the Winter Recreation Sustainability Analysis is the demand for additional parking capacity, particularly along Cascade Lakes Highway. Several issues surround proposals to increase parking capacity:

- Social - Quality recreation opportunities may be diminished with increased parking capacity; some visitors will not be able to find solitude.
- Environmental - Larger parking capacity and increased visitor use may adversely affect natural resources, particularly wildlife habitat and air quality at sno-parks.
- Managerial - More violations of Wilderness, watershed and non-motorized boundaries may occur.

The majority of all winter recreation use is concentrated along the Cascade Lakes Highway corridor. Due to its proximity to Bend, visitors can easily access the high country in a short amount of time. As the demand analysis and visitor surveys indicate, visitors participate in non-motorized activities on the Deschutes more often than motorized activities. However, differences in visitation patterns between motorized and non-motorized users suggest differences in parking needs:

- Non-motorized users typically participate in shorter duration trips, which translate to a higher turnover rate at sno-parks. Exceptions include backcountry skiers who spend 4 or more hours away from the sno-park.
- Motorized users typically participate in longer duration trips. They use parking spaces for a longer period of time.
- Motorized users also participate in their activity more frequently, i.e. the same visitors participate on a more regular basis than non-motorized users.

The Deschutes has 14 sno-parks across the forest, with 6 located along or near Cascade Lakes Highway[18]. Table 4 shows existing sno-parks. Forestwide, 62.8% of sno-park capacity is open to mixed use and 38.2% is non-motorized[19]. On Cascade Lakes Highway, 38.5% is open to mixed use and 61.5% is non-motorized. In effect, 100% of sno-park capacity is available to non-motorized users while motorized users are limited to certain sno-parks.

[18] Cascade Lakes corridor sno-parks include: Wanoga, Wanoga Snowplay, Meissner, Sawmpy, Duthman and Edison.
[19] Non-motorized sno-parks are legally open to over-snow vehicles. However, motorized use is not allowed on trails accessed from these sno-parks so they are effectively non-motorized only.

Table 4. Existing sno-park capacity.

Name	Type of use	parking spaces	PAOTs[20]	acres	sq ft
Meissner[21]	non-motorized	120	360	1.5	65340
Dutchman Flat	mixed	26	78	0.7	311720
Crescent Lake	mixed	30	105	2.0	87120
Lower Three Creek	mixed	60	180	1.5	674000
Edison	mixed	114	342	2.6	113256
Swampy Lakes	non-motorized	130	390	1.7	750000
Upper Three Creek	mixed	60	180	2.4	105325
Skyliner	mixed	16	48	0.3	12243
Junction	mixed	60	180	5.0	213445
6 Mile	mixed	30	90	0.6	26136
10 Mile	mixed	70	210	3.2	140000
Wanoga	mixed	76	265	3.0	130680
Wanoga Snowplay	non-motorized	95	285	1.5	66020
Vista Butte	mixed	15	45	.2	8712
Total		**902**	**2,758**	**26.2**	**2,703,997**

Some users disagree that 100% of sno-park capacity is available to non-motorized use because sharing parking areas with motorized vehicles does not meet their experience expectations. Based on existing sno-park capacity, however, the Deschutes is providing a full range of sno-park conditions to meet most users' expectations. Almost 40% of sno-park capacity forestwide is managed solely for non-motorized use. With a higher turnover rate, non-motorized users have a greater chance of finding available parking, particularly in the non-motorized only sno-parks along Cascade Lakes Highway.

The Deschutes has collected use data at sno-parks since the mid-1990s. Information about the number of vehicles, license plate origin and for mixed use sno-parks, whether vehicles were associated with non-motorized (skier, snowshoe or snowplay) or motorized use was collected during winter patrols. The data was not collected in a systematic, random fashion so it is difficult to compare on a year-to-year basis. However, comparisons of non-motorized and motorized use of sno-parks shows varying use patterns.

[20] Assumes 3.0 people per vehicle
[21] Capacity is based on 2008 expansion decision

Many conditions may have affected this use pattern including weather, winter patrol days or time of day that winter use data were collected.

Social

Current sno-park capacity does not always accommodate existing use and likely will not accommodate future demand. Deschutes' visitors cite lack parking availability as one of the major barriers to obtaining desired recreation experiences. Approximately 87% of survey respondents indicated that parking was very or extremely important and another 43% said improved parking was the item they would like to change on the Deschutes. Interview and values workshop respondents expressed similar concerns about the availability of parking along Cascade Lakes Highway.

The Deschutes National Forest is located in a hot spot for recreation activities and Deschutes and Crook counties were identified several times as high priority counties in the 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan (2008 SCORP)[22]. Much of the increase in visitation will be from non-motorized users and particularly Baby Boomers who are seeking accessible and convenient activities. With the focused attention of the 2008 SCORP on the Pre-Boomer and Boomer generations, respondents were asked to rank activities they believe they will participate more in over the next 10 years. Within the top 10 activities for Boomers and Pre-Boomers in terms of percent increase in number of days in the next 10 years, winter activities made the number 1, 2, and 8 places:

1. Snowshoeing- 404%
2. Cross Country Skiing- 247%
8. Snowmobiling- 145%

Many winter recreation visitors feel that increased parking capacity will not adversely affect their ability to find their desired recreation experiences. While some crowding and congestion occurs at sno-parks, visitors said that the number and variety of trails lets people spread out. According to one interview respondent, providing opportunities for more people to get out and experience the natural world is worth seeing a few more people on the trails. Nearly half (49%) of survey respondents said that crowding was about what they expected, while 26% said they saw a little or a lot or less than expected and 23% said they saw a little or a lot more than expected. Moreover, the majority of respondents stated that they did not feel crowded by any group at trailheads or beyond. Both values workshop participants and interview respondents indicated that the existing trail system can accommodate increased use and still allow visitors to achieve their desired experiences.

Sno-parks are located primarily in the Rural ROS setting and adjacent to Motorized Social, Non-motorized Social, and Roaded Natural settings (see Appendix I). These settings are managed for social interaction, family bonding and connection with nature. The key social indicator for these settings is availability of parking spaces. Visitors will expect to encounter other people on trails and sno-parks are moderate to large. As visitors travel farther from sno-parks, and move into the semi-primitive motorized, semi-primitive non-motorized and primitive settings, social interaction becomes less acceptable and solitude more important. For these settings, then, availability of parking determines the quality of the recreation experience, rather than encounters on trails, group size, noise or other social indicators.

Non-motorized recreationists typically travel within a 2-5 mile radius of a sno-park while motorized recreationists can easily travel within a 10-40 mile radius. The travel radius includes use of loop trails, out and back trails, destinations and non-trail areas. Actual distances traveled range from less than 10 miles for backcountry skiers, less than 5 miles for cross-country skiers and snowshoers[23] to over 50 miles for snowmobilers. Table 5 shows the miles of trails available from each sno-park based on the average

[22] Outdoor Recreation in Oregon: The Changing Face of the Future: The 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan.
[23] Winter Recreation on Western National Forest Lands, Winter Wildlands Alliance, 2006.

distance a visitor may travel. Travel patterns and how visitors disperse from each sno-park has a greater impact on the quality of the recreation experience than how many people are in an area at one time. Non-motorized visitors have access to 10-70+ miles of trail from each sno-park while motorized users have access to nearly 400+ miles of trail from each sno-park.

Table 5. Miles of trail available by sno-park.

Sno-park	Non-motorized Footprint[24] (5 mile radius)	Motorized Footprint (40 mile radius)
Crescent Junction Snopark	13.12	405.71
Crescent Lake Snopark	11.65	387.23
Dutchman Snopark	34.52	455.82
Edison Snopark	43.33	481.66
Kapka Butte Snopark - Proposed	77.31	456.04
Lower Three Creeks Snopark	10.40	393.66
Meissner Snopark	59.38	N/A
Six Mile Snopark	4.28	470.23
Swampy Snopark	72.81	N/A
Ten Mile Snopark	9.85	452.20
Upper Three Creeks Snopark	11.68	400.16
Vista Butte Snopark	82.90	455.18
Wanoga Snomobile Snopark	65.25	451.77
Wanoga Snowplay Snopark	63.02	N/A

Some non-motorized visitors feel that increasing parking capacity will only exacerbate existing issues such as conflict in mixed use areas and illegal use of Wilderness and watershed areas. Past attempts to reduce conflict around Tumalo Mountain, for example, have had marginal success. Adding parking capacity to already contentious areas will only diminish some non-motorized visitors' experiences and possibly displace them from the Cascade Lakes corridor. By managing for a range of recreation opportunities as outlined in the Desired Future Condition section of this document, the Deschutes is providing most visitors opportunities to achieve their desired recreation experiences. The vast majority of the Deschutes National Forest has little to no conflict issues and some visitors displaced from the Cascade Lakes corridor may find acceptable recreation opportunities in these other areas. However, increasing use across the forest will eventually affect existing low-conflict areas.

Environmental

Increased parking capacity and visitor use has the potential to impact natural resources on the Deschutes. Adding parking capacity would require ground disturbance with effects such as habitat fragmentation, loss of individual trees, and edge effects. As noted in Table 4, existing sno-park capacity

[24] Only includes designated non-motorized trails (cross-country ski and snowshoe).

disturbs 26.2 acres, or .0000014% of the forest. Adding or expanding parking capacity has a low potential to impact natural resources on a landscape scale.

One concern with increased visitation is a subsequent increase in trail expansion. Adding parking capacity by building or expanding existing sno-parks does not mean a net increase in trail expansion. Both visitors and managers feel the current trail system can handle a moderate increase in visitation. However, modifications to the existing trail system may be necessary to provide recreation opportunities that meet desired future condition objectives. To reduce impacts to resources, the forest should consider opportunities to close existing trail segments in exchange for new segments that better meet setting objectives.

Potential trail impacts to roadless areas on the forest are also a concern. New trail corridors in roadless areas could cause disturbance and edge effects. While motorized use is not prohibited in inventoried roadless areas, motorized trail expansion in roadless may affect roadless values and encourage illegal summer use on winter trails. However, design criteria such as felling trees into the trail corridor to discourage summer use may mitigate these impacts.

Another concern is decreased air quality from sno-park expansion. Idling snowmobiles emit exhaust which can settle in pockets around the sno-parks. Newer snowmobile technology (i.e., 4-stroke engines) emits less exhaust, but this technology is not standard on new machines and most visitors own 2-stroke machines. In a 2007 decision, Yellowstone National Park required all machines entering the park meet Best Available Technology (BAT) for air and sound emissions[25]. This requirement is combined with an intensively managed winter program that limits visitor freedom (all use is guided, use restrictions, etc.). Similar national forest winter use plans have not required BAT for snowmobiles, but have implemented monitoring programs for air quality.

Finally, sno-park expansion may increase impacts to Wilderness and watershed areas. Currently, illegal snowmobile use in closure areas is common and well-documented. Although it is likely a small percent of motorized users who illegally use these areas, their tracks may encourage other users to follow suit. These impacts are social and environmental. Illegal motorized use negatively affects visitors who seek solitude and quiet. It also compromises Wilderness values and increases disturbance to wildlife that use these areas as a haven. In the Bend watershed, exhaust and fuel leakage from snowmobiles may adversely affect water quality.

Managerial

Increasing parking capacity has several implications for management of the winter recreation program. Many of these implications are connected to social and environmental concerns: managing conflict, managing illegal use and increasing stewardship of natural resources. In addition, funding and management capacity of the forest to handle additional visitor use is a major concern for managers and visitors alike.

As mentioned above, user conflict stems from a difference in values for recreation experiences. Although winter survey results indicate that 80% of visitors are very satisfied with their recreation experiences on the Deschutes, another 20% are only moderately or not satisfied. By managing for a range of recreation opportunities based on what visitors value (i.e., ROS), managers are providing visitors with choices on when, where and how to recreate. Some visitors will have to choose an alternate setting to achieve their desired recreation experiences.

Illegal use of restricted areas is a common management dilemma on national forests. Several managers on the Deschutes estimated a 90-95% compliance rate with current restrictions. Increasing this

[25] Yellowstone National Park Winter Use Plans Record of Decision, 2007.

compliance rate would likely take intensive field presence and patrols in conjunction with education efforts to reach the additional 5-10% of users who do not respect closures.

Increasing the intensity of management would also require a shift in funding of the winter recreation program. The program currently lacks the funding and staff to be to provide a sustainable winter recreation program. Managers and visitors alike are concerned that adding parking capacity will only overburden the already stressed management capacity of the forest. Recreation use occurs year-round on the Deschutes, yet most funding and resources goes toward the summer program. Forest staff recognizes the need to elevate the priority of the winter recreation program and align the forest's recreation budget and staffing to match that priority.

Partners such as outfitter-guides and resorts play a key role in addressing management capacity issues. These permittees are often the eyes and ears for the forest. Permittees can help maintain the facilities and trails they use as well as report social and environmental issues to the forest. These permittees have a vested interest in providing the best possible experience to their customers and can likely assist the forest in many ways.

Visitor use will inevitably increase on the Deschutes in the winter. Managers have to balance between accommodating additional use with increased parking capacity or maintaining use at current levels with increased restrictions on visitor use and thus more intensive management. Use restrictions could also conflict with the forest's and visitors' values of connecting people with the land. These connections are what create long-term stewardship and an environmental ethic among forest visitors.

Solitude and Quiet Recreation

The fact that central Oregon is experiencing a population boom is undeniable. Despite economic downturns and a slowing economy, the population in central Oregon is expected to continue to grow. Natural amenities such as scenery, climate and recreation opportunities that enhance residents' quality of life are the major driver for this immigration.

Most recreationists agree that connecting with nature, getting away from the regular routine, and challenging themselves are important aspects of winter recreation opportunities on the Deschutes. Many non-motorized recreationists also prefer to recreate in areas where motorized vehicles cannot be seen, heard or smelled. As mentioned above, most current visitors do not feel crowded at trailheads or on trails and are able to get the experience they seek.

As the population in central Oregon grows, providing and maintaining opportunities for solitude and quiet recreation will likely be more difficult. Additionally, advances in technology for both motorized and non-motorized equipment will help more people access the forest. Designating areas where higher use and motorized equipment is appropriate will help protect those areas designated for solitude and quiet recreation.

Providing opportunities for solitude may require more intensive management. Primitive, Semi-primitive Non-motorized, and Semi-primitive Motorized settings that provide opportunities for Alpine Solitude and Backcountry experiences are identified in the Winter ROS. Maintaining these settings will require routine user education and enforcement. Moreover, visitors who are seeking experiences that do not depend on these settings (e.g. Alpine challenge, Non-motorized Social) should be encouraged to use settings that are more appropriate.

Dogs and Winter Recreation

People who recreate with dogs fall into two categories: working/training with animals and exercising/spending time with companion animals. Recreationists who train with their animals such as dog sledders and ski jourers obtain a permit to travel on snowmobile trails with their animals. There are few conflicts with these types of recreation activities.

Recreationists who enjoy exercising with their companion dogs are typically non-motorized visitors who want opportunities to ski or snowshoe with their dogs in areas where motorized use does not occur. Currently, dogs are not allowed on trails in designated non-motorized areas on the north side of the Cascade Lakes corridor. These areas accessed from Meissner, Swampy, and Dutchman Sno-parks have an extensive system of groomed cross-country ski trails. Dogs are allowed on cross-country ski trails south of the Cascade Lakes Highway and on non-motorized trails in other areas of the forest.

Some non-motorized visitors do not like dogs on ski trails because dog prints can cause damage to ski tracks and some owners do not control or pick up after their dogs. Conflict between visitors who do and do not like recreating with dogs led the Deschutes to close the north side of the Cascade Lakes Highway to dogs in the 1980s for the following reason:

- To prevent collisions between dogs and people on trails.
- To reduce sanitation problems on the trails and at shelters.
- To reduce conflicts between users over dog behavior.

Overall, recreationists can have their companion dogs on 53% of the forest's designated cross-country ski trails. Recreationists can also take their dogs to dispersed areas across the forest. Indeed, the vast majority of the Deschutes has no restrictions on dogs in the winter. However, the 53% of cross-country ski trails open to dogs is not preferred by recreationists for several reasons:

- The non-motorized trails are within or adjacent to mixed use/motorized trail areas.
- The cross-country ski trails open to dogs are not groomed.
- Some non-motorized areas open to dogs have poor snow quality (e.g. Edison, Skyliner).

There is a need to provide opportunities for visitors who like to recreate with their companion dogs in areas with quality snow conditions and groomed trails. There is also a need to maintain areas where dogs are not allowed. Visitor use and demand in the Cascade Lakes corridor is already high, so providing dog-friendly groomed trails should avoid areas that would likely lead to conflict. See Strategies section below for recommendations on appropriate areas for dog-friendly ski trails.

Impacts to Other Resources

One of the major concerns about increasing winter recreation use is the potential adverse effects it will have to natural resources. Habitat fragmentation from additional roads and trails, decreased air quality from additional snowmobile exhaust, and decreased water quality from recreation use in municipal watersheds are key issues. Yet, failing to accommodate increasing use has its own issues such as overflow parking that damages natural resources and user created trails that are not located in appropriate areas. Finding a balance between accommodating increasing use and protecting natural resources is often difficult.

Perceptions of crowding and conflict vary widely among user groups and between users groups and managers. For example, the 2008 winter recreation survey found that over 80% of visitors to the Cascade Lakes corridor were very satisfied with their recreation experience and less than 3% said they were not satisfied. Another 82% did not feel crowded at trailheads or beyond. Deschutes recreation managers, however, have expressed that the amount of use along the Cascade Lakes corridor is creating unsatisfactory experiences among many visitors.

When crowding or conflicts become issues in an area that receives heavy use, managers often try to disperse use to areas that receive little use. While this seems like an intuitive way to reduce crowding and conflict, it generally does not achieve those goals. In reality, perceptions of crowding and high use affect a small percent of visitors. Interviews and meetings with TUG members and recreation stakeholders indicate that additional use will not adversely impact the ability for people to be satisfied with their recreation experiences. Encouraging use in places that currently receive little use carries a huge risk of creating additional social impacts in low use areas. Visitors in low-use areas are more interested in experiencing solitude and are more sensitive to crowding at relatively low-use levels, compared to visitors in high-use areas[26].

Increasing use still impacts natural resources whether it occurs in areas that already receive high use or whether new areas are developed to accommodate more use. However, the relationship between use and impacts is curvilinear meaning that most impacts occur with relatively low use. Resource impacts from increasing use in high use areas will be minor while resource impacts in low use areas will be significant. Thus, dispersing use from high use to low use areas may actually increase resource impacts on a landscape scale.

Focusing improvements in areas that already receive moderate to high use will help protect areas that receive low use from additional impacts. High use winter recreation areas on the Deschutes like the Cascade Lakes corridor and NNVM account for a small percent of the total resource base. The Winter ROS outlines where facilities such as sno-parks and trails are appropriate. For example, large sno-parks would only be built or expanded in the Rural ROS setting. This desired condition allows social and resource impacts to be minimized in settings that are sensitive to high use and concentrated in settings where additional use will create few new impacts.

[26] Blahna, D. Introduction: Recreation Management. In: Proceedings: National Workshop on Recreation Research and Management. PNW-GTR-698, 2007.

Strategies and Recommendations

The following strategies and recommendations are designed to help move the Deschutes' winter recreation program toward the desired future condition as described in the Winter Recreation Opportunity Spectrum table (Appendix H) and map (Appendix I) .

Social

1. **Understand visitor use patterns, demand, and visitor satisfaction.**
   The demand analysis included in this Winter Recreation Sustainability Analysis is a snapshot in time of predicted use and demand. It is based on the best available information. Recreation use patterns are dynamic and require frequent validation to understand how past trends affect current use and how current use may change in the future. National programs such as National Visitor Use Monitoring (NVUM) and National Survey on Recreation and the Environment (NSRE) help managers understand larger scale trends. Local trends can be assessed through rapid social assessments and site-specific monitoring.

   Understanding recreation demand in the broader outdoor recreation context of the region is equally important. In a given area, the Forest Service is one of many providers of outdoor recreation opportunities. The forest and other recreation providers should comprehensively assess the range of outdoor recreation opportunities and the role of each provider in meeting visitor demand.

   Many times, recreation managers are overwhelmed with a few vocal unsatisfied visitors and do not hear from the satisfied majority. As the 2008 winter survey indicated, the majority of visitors are satisfied with existing recreation opportunities. However, conditions can change rapidly. Long-term monitoring of visitor satisfaction will help managers assess how well they are providing the recreation opportunities visitors' desire.

   Recreation setting management objectives as outlined in The Winter ROS will allow managers to ask visitors how satisfied they are with specific recreation opportunities in specific settings. Key indicators are designed to assess overall satisfaction of a setting. Visitor satisfaction assessment does not require extensive surveys; rather, managers should devise a monitoring plan that takes advantage of existing resources to be efficient and effective.

   Recommendations
   - Assess recreation trends and demand on a regular basis.
   - Monitor visitor satisfaction as outlined in the Winter ROS.

2. **Provide adequate parking along Cascade Lakes corridor and other areas of the forest.**
   The Deschutes must be prepared to accommodate predicted increases in winter recreation use across the forest. The demand analysis indicates that participation in non-motorized winter activities is growing at a faster rate than participation in motorized activities. However, snowmobile registrations increased 6% in Oregon and 32% in Deschutes County from 2000 to 2006. Approximately 18% of the snowmobiles registered in Oregon are in Deschutes County. While more visitors are expected to participate in non-motorized winter recreation on the Deschutes, participation in motorized winter recreation will continue to increase.

   The 2008 winter recreation survey shows that 25.7% of winter visitors to the Cascade Lakes Highway corridor are snowmobilers, 65.8% are non-motorized (cross-country skiers, snowshoers, snowplay) and 6.3% participate in both motorized and non-motorized activities. 33% of non-

motorized winter survey respondents said that they were bothered by hearing snowmobiles or smelling snowmobile exhaust. Most non-motorized users desire separate parking areas so they do not have to experience the noise, smell and air quality issues associated with motorized use.

Table 6 displays existing non-motorized and mixed use parking capacity forestwide and for the Cascade Lakes Highway (CLH) corridor.

Table 6. Parking Capacity

		PAOTs	Design Capacity	Percent of Total
Forestwide	Existing non-motorized	1035	345	38.2%
	Existing mixed	1671	557	61.8%
Cascade Lakes Highway	Existing non-motorized	1035	345	61.5%
	Existing mixed	648	216	38.5%

Parking capacity is adequate at most sno-parks outside the CLH corridor, but areas such as McKenzie Pass and Newberry Crater and communities such as Sisters, Sunriver, La Pine and Crescent will likely see more demand. Forest staff have identified several areas where expansion of winter recreation opportunities is desirable. These areas are considered "zone of influence" and are located near or adjacent to communities mentioned above. Areas for high growth potential include:

- Ten Mile Sno-park often reaches or exceeds capacity on holiday/peak weekends. It provides access to Newberry Crater and is the only area east of Highway 97 that has consistent snow. Its proximity to La Pine and Bend and outstanding scenery make it a popular destination, particularly for people seeking Motorized Social opportunities.
- Communities south of Bend along Highway 97 are growing rapidly. Several new developments and resorts adjacent to the forest (west of the highway) have a potential to impact winter recreation use. Many of these new visitors will seek easily accessible Non-motorized Social and Motorized Social opportunities.
- McKenzie Pass is one of the few winter recreation access points on Sisters RD. The area is known by local snowmobilers who like to access the Sisters cross-district trail and the McKenzie Highway. The attractiveness of this area is highly dependent on snow depth. Except for Highway 242, most of the area west of the 1028 road and above 4500' in elevation is Wilderness. For this reason, it is not desirable to encourage expanded snowmobile use in this corridor; however, additional Alpine Solitude and Non-motorized Social opportunities may be appropriate.
- The Cascade Lake corridor has the highest use and thus highest demand on the forest. Ease of access from Bend, higher elevations and a variety of opportunities make this corridor a winter recreation destination. A planned expansion of Meissner Sno-park will provide additional access Non-motorized Social opportunities. The proposed Kapka Butte Sno-park will provide additional access to Motorized Social and Alpine Challenge opportunities.

Adding parking capacity on the forest has several implications on visitors' winter recreation experiences. Visitors seeking Motorized Social opportunities will benefit from increased parking

capacity. Additional and/or larger sno-parks would meet their needs for adequate parking and staging facilities while providing access to a large network of motorized trails. Motorized visitors seeking an Alpine Challenge opportunity would also benefit from adequate staging and parking facilities from increased parking capacity. However, the availability of untracked powder for both motorized and non-motorized visitors would likely be affected by an increase in parking capacity. Non-motorized visitors seeking an Alpine Challenge opportunity would likely be most affected by increased parking capacity. Any increase in parking capacity will potentially increase motorized use of non-motorized areas. Mitigation measures such as alternate routes to motorized play areas, education and patrols of non-motorized areas will be necessary.

Recommendations

The following criteria should apply to increased sno-park parking capacity:

- Only expand or build sno-parks located in Rural or Motorized Social/Non-motorized Social ROS settings.
- Increased parking capacity should primarily provide access to Motorized Social and Non-motorized Social opportunities (including snow play areas).
- Consider increased parking capacity for non-motorized visitors first.
- Only increase snowmobile parking capacity in areas that primarily access Motorized Social opportunities.
- Assess actual use and days that exceed capacity prior to increasing parking capacity.

3. Protect opportunities for solitude and self-reliance for both motorized and non-motorized visitors.

In the face of increasing use, opportunities that rely on solitude and self-reliance are often lost more quickly than opportunities that are more social in nature. Although many current winter visitors are satisfied with their recreation experience, building and expanding sno-parks and providing access to an increasing number of visitors has the potential to decrease the availability of Alpine Solitude and Backcountry areas.

In the Winter ROS, 38.5% of the forest is primitive, semi-primitive non-motorized, or semi-primitive motorized. The forest must monitor use in these less developed areas and take the necessary management actions to ensure quality recreation opportunities are available in these settings.

Recommendations

- Only provide facilities in Semi-primitive settings that are critical for user safety or resource protection.
- Do not provide facilities in Primitive settings.
- Monitor acres (% of total forest) for each ROS class.

4. Provide dog-friendly winter recreation areas.

One of the main user groups who feel left out of current recreation opportunities are dog owners who desire to recreate with their companions. These non-motorized users want to be able to cross-country ski or snowshoe on a groomed trail system with their pets. While dog owners are currently able to take their pets on ungroomed non-motorized trails and areas that do not have groomed trails, this is not desirable.

A long term solution is to create an area where traditional skiers, skate skiers and snowshoers can exercise with their dogs on groomed trails. Like other non-motorized areas, it should be easily accessible and have a groomed trail system. Due to the intense winter recreation pressure

along the Cascade Lakes corridor, non-motorized dog-friendly areas may be more appropriate along Road 40/45 corridor, adjacent to the Skyliner Sno-park, or in the NNVM area.

Recommendations

- Seek partnerships with local community to groom cross-country ski trails where people can recreate with their dogs.

Environmental

5. **Provide alternative transportation to non-motorized use areas on the Cascade Lakes Highway.**

The demand analysis indicates that visitor use will continue to increase on the Deschutes. Much of the predicted increase is from visitors who prefer Non-motorized Social opportunities. These visitors are also more likely to participate in short duration trips whereas other visitors may spend four or more hours on the forest.

One of the greatest impacts from adding additional parking capacity is the disturbance footprint created by new or expanded sno-parks. This footprint contributes to habitat fragmentation, edge effects and may encourage summer use on winter trails. As winter recreation use increases, alternative transportation to and from sno-parks along the Cascade Lakes Highway will assist the Deschutes in meeting visitor demand while protecting natural resources. Non-motorized Social opportunities located are particularly suited for alternative methods of transportation.

Recommendations

- Engage the community and business partners in determining ways to provide alternative transportation to high use areas.

6. **Institute minimum snow depth for over-snow vehicles.**

The greatest impact on resources from winter motorized use usually occurs when machines are used on less than adequate snow cover. Adequate snow cover is needed to help protect soil and vegetation from damage caused by the track and runners of snow machines. For example, the Mount Baker – Snoqualmie NF uses a minimum snow depth of 24" at the trailhead; the Routt NF uses a minimum snow depth of 12" of uncompacted snow for general use and 18" for outfitter-guide operations and grooming. It is the responsibility of the user to observe this regulation. The forest should inform the public when snow depth requirements are met via trailhead postings, the internet and front desks.

Instituting minimum snow depth for over snow vehicles will have the following implications:

- Consistent requirement for operating over-snow vehicles.
- Helps winter recreationists to rely on actual snow depth instead of opening and closing dates that vary year-to-year.

Recommendations

- Determine appropriate minimum snow depth for the Deschutes and institute forestwide.

7. **Build monitoring into daily winter recreation management.**
The Deschutes must make informed choices about the types and degree of impacts to natural resource from winter recreation. Any activity – whether it is use of a snowmobile trail or removing trees for a timber sale – has the potential to affect resources. To manage for environmental sustainability, the forest has a responsibility to weigh the costs and benefits of providing certain recreation opportunities.

Having accurate data about visitor use impacts to natural resources is crucial to making informed choices. Without baseline data and subsequent monitoring, it is impossible to assess recreation's true impacts on the environment. Monitoring programs are often cumbersome and costly, and may take years to provide useful data. As mentioned above, monitoring of the winter recreation program should take advantage of existing resources.

Recommendations

- Develop a monitoring plan that is a part of day-to-day winter recreation management.
- Work with National Oceanic and Atmospheric Administration (NOAA) and other partners to institute an air quality monitoring program.

Managerial

8. **Consider alternatives to state sno-park system.**
The Oregon sno-park system is managed by the state Department of Motor Vehicles. A valid sno-park permit is required for any vehicle parked in a designated winter recreation parking area. The program provides funds for snow removal in sno–parks and enforcement of the permit requirement. Any money remaining may be used for maintenance and development of sno–parks or carried over for use in a following year.

The Forest Service also has the authority to charge for facilities that benefit users under the Recreation Enhancement Act (REA). REA allows the forest to collect user-generated revenue at standard amenity or expanded amenity sites that have the required number of amenities. REA also allow forests to collect fees for special recreation permits in areas that require intensive management investments. Winter recreation areas such as Vail Pass on the White River NF have instituted a special recreation permit. Benefits to forest when collecting user-generated revenue under REA include:

- Revenue collected stays at the forest for operations and maintenance, education, law enforcement, signing and information, and investments.
- Greater flexibility for spending user-generated revenue on forest priorities.
- Leverage revenue for special emphasis projects in cooperation with partners.

National forests do not receive funds from the State to manage day-to-day operations of sno-parks such as enforcement of parking capacity and maintenance of toilets and shelters. The Deschutes and other national forests in Oregon have an opportunity to work with the State to revise the sno-park program to share the burden of sno-park management between the two agencies. Existing models such as the Washington and Oregon recreation pass combine agency passes to give visitors access to state and federal lands with one pass.

Recommendations

- Work with the State of Oregon and other national forests to revise sno-park pass program.
- Assess the feasibility of operating some or all sno-parks under REA.

9. **Consider management alternatives for Dutchman Flat.**
   Much of Dutchman Flat is managed for Non-motorized Social opportunities and is adjacent to the Mt. Bachelor Nordic Center which provides similar opportunities. In addition, Dutchman Flat Sno-park provides access to the non-motorized Alpine Challenge opportunity zone around Tumalo Mountain. While motorized users also need access to Alpine Challenge opportunities, motorized trails through the Non-motorized Social opportunity setting is not desirable.

   Non-motorized Social: *Visitors prefer safe and family-friendly opportunities on non-motorized trails. Well-marked and maintained trails and adequate parking and staging facilities are highly desirable. Areas for exercise and dog-bonding are also important to some users. Most snowshoers and a moderate amount of cross-country skiers prefer this opportunity setting.*

   Alpine Challenge: *Visitors prefer opportunities for challenge and social interaction in an alpine setting. Good access via marked trails and a variety of terrain features are highly desirable for motorized and non-motorized users. A small amount of motorized and moderate amount of non-motorized (mostly skiers) prefer this opportunity setting.*

   Managing the sno-park and surrounding area for Non-motorized Social opportunities will greatly reduce managerial impacts. For example, requirements for posting boundary and trail signs would be reduced and would allow the forest to focus on other high-use areas.

   Recommendations
   - Manage Dutchman Flat for Non-motorized Social opportunities.
   - Provide alternative access and trails to Motorized Social and Alpine Challenge opportunities that avoid the Dutchman Flat area.

10. **Continue to build constituent support for the recreation program.**
    The Deschutes has a dedicated and involved group of users who want to work with the forest and each other to ensure all users have satisfying recreation experiences. The forest has done an excellent job of working with various user groups to address issues and concerns. However, this takes a commitment from the forest to maintain these relationships and strengthen coalition-building.

    Long-term success of any recreation plan depends on the support of the people affected by decisions. Managers need support not only from recreation users, but also from the communities, local governments and businesses that depend on the satisfaction of national forest visitors. Partnership building with each of these entities is at the core of successfully delivering the recreation opportunities that people desire. Ultimately, a constituency of visitors, partners and communities will collaborate with the forest in shared stewardship of recreation and natural resource values.

    Creating constituent support requires developing and supporting employees who have the appropriate skills. Building relationships, managing volunteers and engaging constituents takes a different skill set than marking and maintaining trails, cleaning restrooms, and patrolling boundaries. Each skill set is necessary for a sustainable winter recreation program and each must be fostered to be successful.

    Recommendations
    - Identify various constituencies and develop engagement strategies for each.
    - Train and/or recruit employees skilled in constituent building.
    - Assess winter recreation sustainability with communities.

11. Provide management for winter recreation that is commensurate with use.

The Deschutes has a dedicated recreation staff that spends an extraordinary amount of time and energy ensuring that winter recreation opportunities on the forest are desirable. Many of the employees have spent a number of years on the forest and have a deep internal knowledge database. While some of this internal knowledge is captured "on paper," there is a high likelihood that much of it will be lost as employees retire or move to other jobs.

The current winter recreation boundaries around Dutchman Flat and Tumalo Mountain are an example of intensive management for little return. The management and maintenance of those boundaries require an inordinate amount of time and effort and have not yielded a reduction in conflict or an increase in visitor satisfaction.

Boundaries need to be easy to recognize and manage. Using prominent geographic and development features (i.e. ridges, trails and roads) that are easily recognizable and make sense to users in the field will likely increase compliance and make education and enforcement streamlined. Having clearly defined and identifiable boundaries helps recreationists find and stay within appropriate areas and helps to decrease unintentional trespass. This in turn, may decrease the potential for conflict.

The forest must dedicate adequate resources to ensure a viable and sustainable winter recreation program. These resources fall into two categories: staff and funding.

- Staff – Traditionally, the Forest Service has relied on paid employees to perform day-to-day management tasks such as setting boundary markers, cleaning restrooms and making visitor contacts at sno-parks. While employees are still needed to do some of these tasks, the Deschutes must also invest in employees who are dedicated to coalition building. As use increases and diversifies, it will become more important to look to business, non-profit and volunteer partners to help the forest deliver the winter recreation program. Only by committing internal resources to fostering these relationships will the forest have the momentum to make them truly effective.
- Funding – Traditional funding sources are not enough to provide and maintain outstanding winter recreation opportunities. Currently, forest staff estimate that 75% of appropriated recreation funding goes to the summer program and 25% goes to the winter program. There is a need to analyze the mix of appropriated funds and build a forest allocation model to support recreation priorities forest wide.

Recommendations

- Assess staff needs to provide a sustainable winter recreation program.
- Develop a funding strategy that includes appropriated dollars, partnerships, grants and other sources to provide a sustainable winter recreation program.

Conclusions

The Deschutes National Forest has many of the elements necessary to manage winter recreation sustainably for current and future generations. The majority of current visitors are satisfied with their overall winter recreation experiences. However, the Deschutes, like many national forests, struggles with managing for diverse user groups who have conflicting goals.

The Winter Recreation Sustainability Analysis gives the Deschutes tools to move toward sustainability. The Winter ROS Table and accompanying map allow the forest to make informed decisions about where to invest infrastructure and people to provide quality recreation opportunities. It also helps managers make choices about providing the right recreation opportunities in the right places. The recommendations and strategies from this Winter Recreation Sustainability Analysis will help the Deschutes implement a sustainable winter recreation program. Managing for sustainability, however, requires flexibility. As conditions change and new information becomes available, the forest will need to make adjustments to the physical, managerial and social components of winter recreation settings to continue to provide quality recreation opportunities, protect natural resources and ensure economic viability.

The success of managing the winter recreation program for sustainability lies in the forest's ability to continually adjust the program to meet the needs of visitors and local communities. Central Oregon is a desirable place to live, and has one of the fastest growth rates in the United States, largely because of the natural amenities available on the Deschutes. Both residents and visitors enjoy the year-round recreation opportunities and many make it part of their identity. These recreationists can be the forest's biggest advocates through shared stewardship and lasting support. The forest has a responsibility to commit resources to building and maintaining these long-term relationships. Together, the Deschutes and its partners can be leaders in "caring for the land and serving people."

Appendix A: Analysis Environment

Federal Laws and Guidance

National Environmental Policy Act of 1969 (NEPA)
The NEPA requires that federal agencies prepare detailed statements on proposed actions that significantly affect the quality of the human environment.
NEPA's requirement is designed to serve two major functions:

1. To provide decision makers with a detailed accounting of the likely environmental effects of a proposed action prior to its adoptions; and
2. To inform the public of, and allow comment on, such efforts

Wilderness Act
Much of the area within the Alpine Summit is designated Wilderness. There are five Wilderness areas within the Deschutes National Forest.

Mt. Jefferson	32,734 acres (shared with Willamette and Mt. Hood NF)
Three Sisters	92,706 acres (shared with Willamette NF)
Mt. Washington	13,563 acres (shared with Willamette NF)
Diamond Peak	32,964 acres (shared with Willamette NF)
Mt. Thielsen	6,400 acres (shared with Umpqua and Winema NF)

36 CFR 261 prohibits mechanized and motorized equipment in wilderness areas. This means snowmobiles are not allowed in wilderness areas. Many groomed snowmobile trails on the Deschutes run parallel, or nearby Wilderness boundaries.

- Wildernesses are designed to protect public purposes of "recreational, scenic, scientific, educational, conservation, and historical use," but designation does not identify individual or more specific values (or priorities) for any given wilderness. The overarching concept is to preserve natural conditions and wilderness character.

- The Wilderness Act specifically prohibits some uses and development. With some exceptions, prohibitions include motorized and mechanized vehicles, timber harvest, new grazing and mining activity, or development. These restrictions do not apply to trails and bridges used to access these areas for "wilderness purposes."

- The Wilderness Act specifically identifies "outstanding opportunities for solitude" and "primitive and unconfined type of recreation" as management goals. However, it does not further define these terms.

- Most types of recreational use are allowed in Wilderness, "except those needing mechanical transport or motorized equipment, such as motorboats, cars, trucks, off-road vehicles, bicycles and snowmobiles." Commercial services may be offered for activities "proper for realizing the recreational or other wilderness purposes" (Section 4(d) (5)).

Executive Orders 11644 and 11989
Source: The provisions of Executive Order 11644 of Feb. 8, 1972, appear at 37 FR 2877, 3 CFR, 1971-1975 Comp., p. 666, unless otherwise noted.

The widespread use of off-road vehicles (ORVs) on public lands--often for legitimate purposes but also in frequent conflict with wise land and resource management practices, environmental values, and other types of recreational activity--has demonstrated the need for a unified Federal policy toward the use of such vehicles on the public lands. As it applies to winter recreation, this EO categorizes snowmobiles and other over-snow vehicles (OSVs) as ORVs.

EO 11644 establishes policies and provides 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.

These regulations direct agencies to protect resource values, preserve public health, safety, and welfare, and minimize use conflicts. They also direct managers to locate areas and trails 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. EO 11644 also ensures public participation in the designation process.

Other legislative guidance
Organic legislation that provides general *guidance for forest management* (e.g., 1960 Multiple Use Sustained Yield Act or MUSY; 1976 National Forest Management Act or NFMA) do not overrule more specific direction in the other legislation. However, these laws provide several complementary management principles, including:

- The "multiple use" concept in MUSY suggests that forests in general cannot be managed for a single purpose, but priorities can be established for sub-areas within a forest.
- The "sustained yield" concept in MUSY requires "achievement and maintenance of a high level regular output of the renewable resources." Applied to recreation, this generally suggests a non-degradation standard regarding high quality recreation opportunities.
- MUSY by itself does not assign "weights" to specific values or uses, and the mix of uses for any particular area is "left to the sound discretion and expertise of the Forest Service" (Sierra Club v. Hardin, 1971). However, MUSY and NEPA direct agencies to document rationales for decisions so they are not "arbitrary or capricious."
- NFMA recognizes the complexity of managing renewable resources. The law requires periodic monitoring, re-assessment, and planning to determine the best mix of "goods and services" to be produced from the nation's forests, which are understood to change over time.

Forest Planning Documents

The Land and Resource Management Plan (LRMP, originally done in 1990), is the main forest management guide for the Deschutes National Forest. This document categorizes 28 different Management Areas (MAs) within the forest. It sets standards and guidelines (S&Gs) for each

management area in alignment with the goals for each area. In 1994, an interagency effort to address concerns over dwindling Spotted-owl and old-growth habitat was created in what is commonly known as the Presidents Forest Plan (PFP). This guiding document categorizes the federal land within the scope of the document into 7 different land allocation units, each with unique standards and guidelines. The S&Gs of existing plans (i.e. LRMP) apply where they are more restrictive or provide greater benefits to late-successional forest-related species than the PFP. Within the PFP, Both the LRMP and PFP guide winter recreational uses on the forest.

General forest guidelines that relate to winter recreation include:

- Trails will be monitored for conflicts among users. When conflicts arise, all avenues of resolution will be explored, while trying to minimize regulation.
- Priorities will be based on responses to increased use, need for resource protection and availability of funds.
- Formal and informal public involvement will be an on-going part of the trail planning process to assure NEPA compliance and that users needs are being met.
- Volunteer groups and individuals will be encouraged to maintain and construct parts of trail systems.
- As a general rule, the Forest will be open to all modes of trail travel except where specifically closed[27].
- The Forest Travel Plan will identify areas, roads, and trails which are open and closed

The LRMP specifically addresses winter trail use and generally states the following S&Gs in regards to winter recreation:

- Nordic trail system needs to be expanded on all Districts, but not at the expense of reducing snowmobiling opportunities. This expansion should also provide for separation of uses.
- The majority of snowmobile trails will be open to ATV's as well.
- The Forest will work with the State Sno-park committee on the designation of additional parking lots.

Where conflicts arise between motorized and non-motorized users groups the following sequence of steps will generally be taken:

1) Trails will be designed to encourage the intended user and discourage others. Inviting trail systems will be provided for both user groups.
2) Intensify educational and indirect management efforts to resolve conflict.
3) Restrict motorized use of Nordic trails.
4) Close the area where conflict is occurring to motorized use.

Other Winter Recreation Planning Efforts

Sawtooth NF - *Wood River Valley Winter Recreation Coalition*

In 1999, a group of winter recreationists was formed to address escalating conflicts between motorized and non-motorized users. Most conflicts arose out of an ever increasing number of recreationists using the area in addition to technological advancements that allowed snowmobiles to get further and higher than ever before. One of their missions given by the Forest Supervisor was to either come up with an agreement on winter use areas within a year or the forest would do it for them. The group utilized a third

[27] This guideline is superseded by the 2005 Travel Management Rule.

party facilitator that was paid by the forest. After many hours and meetings, they finally came up with a recommendation that was adopted by the Forest Supervisor which outlined areas that would be open to motorized and non-motorized use.

Overall, the results have been a success. There have been some violations, but generally the public seems to be satisfied. One key to the success of this collaborative effort was the size of the area they were working on. The managers on the Sawtooth felt that it was easier to deal with the areas with most conflict rather than deal with much larger areas.

Chugach NF - *Kenai Winter Access*
The process in the Kenai Peninsula was brought about by attempting to address winter travel allocations in their 2002 forest plan. It was appealed by the public mainly because of disagreement in the Kenai area. They started the process in 2004 and ended December of 2007. The Forest encountered an intense and acrimonious public when they tried to encourage public participation. In an effort to create a more productive public involvement process, they decided to hire a third party facilitator.

One of the unique strategies the forest adopted as a result of the process was to temporally separate users. Management agrees that it is not a perfect solution, but in general it has been reasonably successful. Critical to the success of the spatial segregation component is setting boundaries that make sense on the ground. Using natural terrain or development features, such as ridges, drainages, roads and trails to define boundaries makes it easier for users to comply and for managers to enforce. Because the limited access or 'portal' areas made segregation more difficult, the forest is in the process of increasing the number of such areas. Another strategy implemented was to provide downloadable GPS maps of the boundaries to users on the forests website.

In hindsight, management would have preferred to complete the process in a timelier manner. The drawn out process was hard on both the public and the agency. A shorter and more intensive process would have been more ideal and likely would have reduced public frustration.

Medicine Bow-Routt NF - ***Winter Recreation Management Forest Plan Amendment***
The Medicine Bow-Rout National Forest had been using a winter recreation community 'task force' to help monitor and come up with 'suggested' use areas. Because there was no legal means of enforcing the suggested uses and the community task force could not resolve certain conflicts within the group, the forest decided to use the NEPA process to resolve user conflicts. They started looking at a very large portion of the forest, but decided to focus on problem areas since these were the areas that were causing problems. Managers found that the data to support safety or environmental concerns were lacking in both strength and numbers and hence primarily was a social issue.

Within their forest plan were standards and guidelines that allowed them to create non-motorized areas. Managers found NEPA to be inadequate tool to deal with purely social issues. Part of this difficulty was the fact that the group who was working on the amendment was removed from the realities of conditions in the field. Overall, the outcome of the process has led to reduced conflict and compliance.

Management felt it important to have a strong and clear proposal with alternatives that was supported by line officers before going to public for input and beginning the NEPA process. The informational meeting with write-in comments was the preferred avenue for soliciting public comment. It reduced grandstanding and conflict and increased productivity. A free mandatory permit system was implemented in one highly used area. Its purpose was to provide education on boundaries and mutual co-operation to users as well as enforcement capabilities for field rangers. They have drawn on permitees and volunteers to help with signing and education. The forest dealt with early and late season resource damage by issuing an amendment to the forest plan that defined conditions suitable for snowmobile use and minimum snow depth requirements.

Appendix B: 2007-2008 Winter Survey Executive Summary

Visitor Profile and Demographics:

- The typical Deschutes National Forest winter visitor is a repeat visitor who has been visiting the recreation area for a long period of time.
- More than three-fifths of the respondents were males, with an average age of 45.5 years. Nearly all of the respondents were Caucasian.
- Most of the visitors reported that they were in a group composed of family, or family and friends.
- Visitors recreated at Deschutes National Forest throughout the year; the majority used the area for winter (91%) and summer (83%) recreation, while three-fifths of the visitors also recreated at the area during the spring and fall seasons.
- The respondents typically spent a little less than two weeks at the Deschutes National Forest area each winter, and slightly over five weeks at the area during other seasons.
- The visitors were categorized into two distinctly different user groups, based on the activity they participated in on this trip to Deschutes National Forest. The two groups were:
    - Non-motorized Users (mostly people skiing/snowshoeing/etc.); nearly two-thirds of the respondents were of this type.
    - Motorized (mostly visitors who were snowmobiling), the remaining respondents belonged to this group.
- Both non-motorized and motorized users included a much higher proportion of males.

Satisfaction of Experience, Services and Facilities:

- The majority of the visitors rated their overall satisfaction with their visit to the Deschutes National Forest area very highly, with over four-fifths rating their experience 8 or higher on a 10 point scale.
- The highest quality levels for the five Meaningful Measures satisfaction domains were seen for the recreation setting.
- Non-motorized visitors reported higher satisfaction scores for three of the five satisfaction variables (health and cleanliness, condition of facilities, and trail conditions).

Place Attachment and Reasons for Recreating:

- Most Deschutes National Forest visitors feel that Deschutes National Forest is a good place to do the outdoor activities they enjoy. They were less likely to go to the National Forest for the reason of spending more time with their companions.

- The most important reasons or motivations for visiting the Deschutes National Forest area were to experience natural surroundings and to be outdoors and get away from the regular routine.
- Physical exercise and challenge also played a role in the visitors' reasons for recreating at Deschutes National Forest areas.
- Both motorized users and non-motorized visitors were most likely to be at the Deschutes National Forest because it was a good place to do the outdoor activities that they enjoyed.

Activity Participation and Primary Activity:

- The respondents in this study were participating in three main recreation activities:
  - Cross country skiing
  - Snowmobiling
  - Snowshoeing , sledding/tubing and other non-motorized recreation activities
- The primary activity reported by these respondents also fell into the same three categories:
  - Cross country skiing
  - Snowmobiling
  - Snowshoeing , sledding/tubing and other non-motorized recreation activities
- Most respondents reported that if their primary activity was not available during this visit they would go somewhere else to do the same activity, which portrays an activity-driven visit. About 12% of the visitors said they would stay at Deschutes National Forest and participate in another activity.
- The vast majority of visitors did not use a commercial guide for the activity they participated in at the Deschutes National Forest.

Potential Problems:

- Respondents were asked how often they encountered, and how much they were bothered by, various potential types of interactions between motorized and non-motorized users. All user groups frequently heard snowmobiles and smelled their exhaust. However, the non-motorized users were much more likely to be bothered by these interactions.
- Motorized users were more sensitive to recreation courtesy issues; they were more likely to have observed and been bothered by these problems.

Crowding:

- Most respondents saw about as many people as they expected or a little less while recreating at the Deschutes National Forest area, and most felt not very crowded at the trailhead or beyond the trailhead.

- Non-motorized users and motorized users felt about the same degree of crowding by either skiers/snowshoers/snowboarders or snowmobilers at both the trailheads and beyond the trailheads.

Opinions about Winter Activities at Deschutes National Forest:

- Although conflict is low at this time, results show that there are potential conflicts between different user groups at Deschutes National Forest. Most respondents agreed that it is generally acceptable to have skiers, snowshoers, snowboarders use areas within the Deschutes National Forest area, but their attitudes toward snowmobiling and sledding/tubing in the same area were ambivalent.
- Respondents generally thought that skiers, snowshoers and snowboarders are not the same kind of people as snowmobilers.
- In general, non-motorized visitors were less supportive of anything related to snowmobiling.

Appendix C: Values Meeting with Forest Staff

Prework Questions

What kind of experiences does the public seek by recreating in the winter?

- Adventure, thrill seeking
- Different from the norm
- Quiet, solitude
- Marked and maintained trails
- Family time
- Scenery
- Exercise
- Time outside, nature
- Social time w/ group
- Practice skills
- Separate areas
- Adequate parking
- Ski. snowshoe opp 2-5 miles from TH
- Snowmobile play areas
- Long distance snowmobile trails
- Diversity of landscape
- Off-forest amenities, convenience
- Affordable
- Good weather, climate
- Good snow conditions
- Access and location – central
- Community marketing to bring people here

What kinds of winter activities occur here?

- XC-skiing
- Backcountry skiing
- Snowshoeing
- Snowmobiling
- Winter camping
- Sledding/snow play
- Dog sledding
- Ski jouring
- Ski mountaineering
- Winter lodges
- Scenic driving
- Being in snow
- Downhill skiing/riding
- Events
- Extreme sports
- Ice climbing
- Guided opportunities
- Family – opp for everyone (on and off forest)
- Not snow based – mtn biking, bird hunting, lava tubes, fly fishing Big game hunting

What is unique about the forest?

- Easy access
- Good snow – consistent
- More open, x-country travel
- Facilities
- Parking
- Trail system
- Community influence
    - Chamber – marketing, selling forest opp
    - Volunteer support
    - Watchdog groups
    - Political pressure
    - Grant opportunities
- Variety of opp on and off forest, town vs. forest
    - Urban interface
    - Backyard
- Geologic features – monument, volcanoes
- Scenic byways

How does winter rec benefit the forest?

- Helps create support for the forest – stakeholders, grants, volunteers
- Quality of life – attracts people who enjoy outdoor lifestyle, top quality employees
- Forest sustainability

How does winter rec benefit local economy?

- Visitors purchase supplies
- Combine visit w/ activities off forest
- Recreation opp beyond Mt. Bachelor
- Quality of life
- Housing
- Affordable?
- Local org use forest (community college, Parks & Rec)

User Group Values

Group brainstormed various values for winter user groups and then used dots to indicate which values were most important to each group.

Snowplay

Top Values:

- Family connection, social
- Low cost
- Close to parking

Other values:

- Safety
- Amenities and facilities (toilets, warming huts)
- Close to town
- Designated parking
- Thrill seeking, sense of adventures
- Not as restrictive as commercial snowplay areas (e.g. Mt. Bachelor)

Who are they?

Families, groups

More intermittent
Holidays
Kids, youth groups
Locals

Snowmobile assisted skier/snowboarder (hybrid)
Top values:

- Untouched snow
- Backcountry
- Solitude, away from crowds
- Extreme
- Access

Other values:

- Touring opp
- Transportation, not recreation (snowmobiles)

Who are they?
Crossover alpine
Younger
Move here for rec opp
Year-round activities
Not as much discretionary income

Motorized
Top values:

- Endless miles of powder
- Easy to extreme
- Adequate parking
- Social/group experience
- Well-marked trails

Other values:

- Family experience, groomed trails
- Hill climbing, highmarking
- Guides, rentals
- Facilities – warming huts, sno-parks, trails
- Maps and signs

Who are they?
Families
Boomers
Extreme riders – mostly younger
Year-round motorized
Middle-upper class
Not skiers
Passionate, dedicated – volunteers, well supported groups
Local, State, Pacific NW

Dog sledders/Ski Jouring
Top values:

- Connectedness w/ pet, bonding

- Groomed trails
- Long trails, cover miles

Other values:
- Competitions, training
- Sightseeing
- Quiet, solitude

Who are they?
Dog lovers
Guided, commercial
Serious trainers
Competition
Middle class
Local teams, some statewide

Snowshoers
Top values:
- Sightseeing, scenery and wildlife
- Be outside
- Snow hiking
- Access
- Solitude
- Not a lot of skill
- Marked trails

Other values:
- Low cost
- Easy
- Don't need a trail
- Family, kids
- Not as demanding
- Social
- Dogs
- Destination
- Not crowded
- Adventure
- Snow camping

Who are they?
Families
Seniors, Boomers
Transitional skiers
Not as expensive
Group, guided opp – interp
Locals
Easy for non-locals to do

Skiers - broken into 4 groups
Common values:
- Untracked snow
- Solitude

- exercise

Traditional top values:
- Blue diamond trail
- Untracked snow
- Solitude

Other values:
- Ungroomed
- Majority of skiers
- "Swampy" skier

Backcountry top values:
- remote, solitude
- undisturbed

Other values:
- get away
- challenge
- views, scenery

Groomed top values:
- groomed trails
- exercise
- easier, beginner, user-friendly
- social

Other values:
- athletes – training
- skate skiers
- classic
- dog skiers
- no trail fees
- kids
- not as demanding

Extreme top values:
- thrills
- untracked snow
- solitude

Other values:
- yo-yo's
- elevation
- get away
- scenery
- exercise
- similar to hybrid

Who are they?
Anybody
Full economic range
Young to old
Families
More educated
"Tree hugger"

Don't like motorized
Locals, west coast, destination

Misc Winter Users (snow kiters, paragliders, mountaineering)
Top values:

- challenge
- access
- outside the norm
- "summer on snow"

Other values:

- solitude

Who are they?
Younger
Locals, State

The group looked at similarities across user groups. Similar values include:

- access
- untracked snow
- social, family time
- quiet, solitude

Resource Concerns
The group brainstormed resource concerns related to winter recreation. These include:

- water quality
  - soils and erosion
  - fuel spills
  - changes to hydrologic conditions
- air quality – snowmobile exhaust
- watershed and Wilderness – increase in impacts, illegal use
- early season moto use – topping trees, soil compaction
- roads – early/late season moto use on dirt, mud bogging
- recreation impacts to habitat fragmentation, loss; year-round impacts, no break from recreation use
- trails, corridors make it easier for predators to travel
- presence of humans, impacts to wildlife
- garbage
- riparian and other vegetation impacts
- crossover summer use
- ungulates, winter range
- soundscapes
- viewsheds

Impacts to wildlife:

- Fisher – candidate for Federal listing
- Marten (and Fisher) – year-round coniferous zone
- Predators – cougars, bobcats, coyotes – travel corridors, confrontations?
- Spotted owls – begin courtship in early March, disturbance from grooming
- Boreal owl, Boreal habitat – year-round
- Subnivean species – rabbits, rodents

- Eagles – courtship begins in early Jan
- Grouse – winter habitat ay higher elev
- Wolverine – winter habitat at higher elev, some x-country travel
- Deer and elk – winter ranger, some year-round herds
- Great Grey owl – early courtship season, hunt in open areas
- Bear dens – coniferous zone

Northwest Forest Plan:

- Late successional reserves
- Riparian reserves
- Aquatic conservation strategy

Appendix D: TUG Values Meeting Notes

Objective: To gather input from TUG representatives about values for winter recreation on the Deschutes National Forest.

Exercise 1: Values for Winter Recreation
The group brainstormed responses for each questions and used sticker dots (one per question) to choose which response best described what they value about winter recreation opportunities on the forest. Responses that two or more people chose are in bold below.

Question 1: Outstanding winter recreation opportunities on the forest

- Good trails
- Snow
- World class vistas
- Easy access
- Close to town
- Variety – types of trails
- Attempt at good FS management
- **Expansive area – lots of room**
- **Away from parking lot - get a feeling of aloneness, one with nature, special feeling of completeness**
- Church of the great outdoors, spiritual connection
- Incredible scenery
- Natural beauty
- Well signed system
- Good early and late snow
- Longer season than other places
- One of largest trail systems in the State
- 1st dog use area in the State
- Weather

Question 2: How are you satisfied with winter opportunities?

- **Strong grooming program (volunteers)**
- **Can of worms**
- **Ski flat trails, high country, go cross county - wide variety**
- Very satisfied with what we have
- **Unlimited opportunities**
- Sufficient but fearful of reduction
- **Appreciate opportunity for input – give & take**
- **Easy access – close to town**

Question 3: What's missing?

- **Increased population growth, recreation demand, tourism – not enough parking for everyone**
- **Financing for current operations and maintenance**
- No mechanism to fast-track actions to meet needs, solve problems
- Century Dr. is a bottleneck for access
- **Lack of flexibility to accommodate new uses**
- Lack of security with what we have – will it be here for my kids?

Question 4: Perfect solution for all winter recreationists to have a positive experience?

- **Open mind**
- **Working together – users come up with solutions, respect**
- **Each group try out others activity**
- Consistent funding/resources to be sustainable
- Ensuring forests are still there
- FS approves project – users/volunteers/partners get funding
- **Reduce confusion on funding sources (alphabet soup), streamline process**
- Include Deschutes County more

Exercise 2: Mapping

The group completed a mapping exercise where they placed dot stickers on a map and then filled out a sheet about the place where the dots were placed. One dot represented a special place and one dot represented a place where winter recreation could grow. The dot locations will be entered into GIS to create a map of special places and growth potential.

Exercise 3: Discussion about winter recreation growth

The group was asked how much more growth the forest could accommodate and what winter recreation on the forest would look like in 2030.

- More parking areas – dispersed
- 10x more than now
- Pay to play
- Potential/reason to support the opportunity
- Depends on snow
- Gas prices?
- Won't need permit to fill out or purchase
- Alternatives to Century Dr: Rd 45, Sunriver cutoff, 46/13, 42/43
- Freedom
- Still lots of area without crowds – find with a little effort
- Will be crowded, relatively
- Be more flexible to accommodate growth
- Bus to sno-parks
- Mt. Bachelor factor?

Appendix E: Winter Recreation Staff Interview Summary

Highlights of working in winter recreation

- Educating the public
- Appreciating diverse experiences
- Interacting with the public (in the field and at the table)

Things the Forest is doing well

- A very small dedicated workforce is good at leveraging our limited resources to get things done.
- Utilizing volunteers and partnerships (i.e. shelter building, sno-park expansions, trails, grooming, and maps).
- Facilities are generally well maintained (trails, signage, restrooms)
- Meeting users needs (i.e. snowplay park, snowshoe trails)
- Maintaining good relations with the community (public service ethic)
- Providing diverse experience opportunities
- Special Uses

Staff Concerns

- Management doesn't fully understand what's happening on the ground.
- Understaffed and underfunded.
- Growing population = growing use and impacts (overuse)
- Lack of strong and healthy public land ethic. (especially younger generations)
- Management is beyond capacity
- Closure violations (motorized, wilderness, dogs)
- Managing user expectations (providing high quality, accessible experiences)
- Catch up on Planning (develop a sustainable winter recreation program)
- Loosing day to day contact with public
- Safety (within and between user groups, children, vehicles, parking)
- Limited resources (area size, parking, water, air, scenic vistas)

Trends

- increased pressure on resource (more users in same amount of space)
- changing expectations
- climate change (possible reduction in suitable winter recreation land)
- User displacement (users don't find what they expect and change behaviors, a perceived decrease in access to undeveloped experience, solitude, quiet)
- User adaptation (users become more accustomed to changes and shift expectations as a means to cope with change)
- Increase in proportion of aging recreationists
- Youth increasingly disconnected to a land ethic (caring for the land)
- Inconsistency of rising user demands and less funding for programs

What the Forest could do better

- Partnerships, volunteers, grants, etc. (explore creative options)
- Increase public awareness of challenges to managers
- Increase education efforts (especially youth education - 7-12 grade)

- Be more black and white to the public in what we can and cannot not provide (ROS map). (more direct with public – less grey areas – use boundaries that are geographical in nature and that make sense on the ground for both the user and the management)
- Facilitate expansion where appropriate
- Match facilities and services to budgets
- Need management objectives with standards to obtain desired future conditions (monitoring changes in experiences – facilities)
- Use of media – marketing to get education to users more efficiently

Can the forest accommodate more winter recreation?

- Yes.
- Must be in balance with capabilities (currently over capacity)
- If we utilize collaboration, volunteers, planning, and grants
- If we focus on providing what is most enjoyable to most users
- with appropriate regulations
- In certain areas (Crescent, Newberry, Sisters, 12 mile, Metolious)

Sustainable recreation?

- community involvement
- An economic, ecological, and socially on-going conversation with the landscape.
- Which uses belong on the FS? Those with the maximum sustainability.
- dynamic, flexible, adaptable planning
- funding must be there to have adequate presence on the ground
- strong land ethic (responsible use)
- public stewardship of public lands
- Matching of facilities and services provided to budgets
- what we believe the land can handle without detriment in the long run
- needs to address the amount and type of use to occur
- Conflicts are minimal/ manageable
- monitoring program
- separation of uses that don't mix well
- shared use of uses that do mix well
- Take asymmetrical nature of user impacts into account (default to least impact)

Useful products of this process

- A thought provoking discussion on winter recreation resulting in long term strategies for managing current and future use
- Something that captures the unique qualities of different sites (zones, etc.).
- A good guidance document.
- An element of nostalgia in order to be more effective
- Emphasis on family time, clean air and water and healthy in mind, body and spirit
- Emphasis on education and developing strong land ethics and responsible use among current and future users.
- An allocation of land based on ROS allows users to have a reasonable opportunity of meeting expectations
- Prioritizing what we are and are not going to provide and follow through. (i.e. Recreation Niche.)

Appendix F: Winter Recreation User Interview Summary

Winter recreation experience highlights:

- Snow quality is good in relation to other areas
- Weather quality is exceptional (nice in town, winter in the mountains)
- Access (roads, trails, parking)
- Incredible scenery
- Diversity of available experiences
- Solitude

Concerns:

- Unmanaged expansion (i.e. new/improved access w/out proper management standards)
- Dog owners need a more permanent/ appropriate area(s)
- Growing population = growing use and impacts (overuse)
- Kapka Butte proposed sno-park (size)
- Adequate separation/ designation between potentially conflicting user groups
- Lack of community recreation education
- Access – Parking
- Balance of user experiences (developed, un-developed, backcountry)
- Sustainability of air, water, wildlife quality (ensure healthy forest)
- Safety (between and among users)
- Sign Pollution

Aspects of a sustainable winter recreation program:

- Adequate parking and facilities
- Maintenance of trails, shelters, facilities
- Good access
- Separation of uses
- Clear and concise standards and indicators.
- Experiential expectations being met
- Dialog – ongoing communication – mutual respect
- Educating people where to go what they can do, and how they need to be prepared
- Good management processes
- Inter-intra group collaboration for similar use areas (i.e. Winter and summer trails)
- User respect of resource and others experience

Growth:

- Kapka Butte sno-park
- Paulina
- Crescent
- Plow century drive further

Useful products of this process:

- Tie values to indicators, standards and monitoring
- Recreation zones

Other Ideas:

- Sno-park passes available at trailheads
- Stronger winter safety/educational program (avalanche, winter safety)
- If Kapka Butte, then Dutchman Flats non-motorized

- Carpooling service for non-motorized users
- Kapka – Elk Lk. trail?
- Free sno-play areas
- Synthesize winter and summer programs, trails

Appendix G: Demand Analysis

Due to the significant population growth of the Central Oregon area, the Deschutes National Forest is expected to witness an increase in all recreation activities. With the natural amenities and reliable snowfall that grant numerous winter opportunities, the Deschutes is expected to see a high increase in winter activities. This report is focusing on demand for winter activities and briefly discusses settings/opportunities.

Supply

The federal land management agencies account for approximately 94% of all outdoor recreation resources in land acres in Oregon[28]. For winter recreation, federal land is even more dominant due to elevation and terrain. The Deschutes National Forest is a large component of that supply base in Central Oregon.

The 2003-2007 Statewide Comprehensive Outdoor Recreation Plan (2003 SCORP) asked providers to judge the role their agency played in providing these opportunities in what the 2003 SCORP called the Private/Public–Sector Recreation Roles Matrix. The Forest Service, Bureau of Land Management, and Oregon Department of Forestry (ODF) perceive themselves as major providers in motorized trails (including snowmobiling). For cross-country ski trails, the Forest Service, National Park Service, and private sector [generally resorts on Forest Service land] perceive themselves as major providers, with BLM, Army Corps of Engineers, US Fish and Wildlife Service, and counties as secondary providers.[29]

The Oregon Department of Transportation (ODOT) administers a sno-park program at many winter recreation trailheads around the state. Of importance, "While the Sno- Park program is administered by ODOT, the responsibility for recreational facilities, resources, and programs remains with the land manager"[30]. This reinforces the emphasis on the role of the Forest Service in providing these opportunities.

There are more miles of designated snowmobile trails as there are designated cross country ski trails in the state; however, there are many trails that are not designated as cross country ski trails, but can be used for that purpose. In the Central Oregon area (SCORP Region VII), the same pattern exists.

Due to the cost of land acquisition, it is unlikely that private providers are eager to add supply in any significant amount. The Oregon Trails 2005-2014: A Statewide Action Plan (2005 Oregon Trails Plan) emphasized trail linkages between counties and local provides and federal lands[31]. To a large extent, this responsibility of trails is placed on the federal public lands including the Deschutes National Forest.

The Deschutes National Forest is truly a year-round destination as well as the surrounding communities (these are the recreation hubs). There is a significant draw to winter sports in this area, and the forest has one of the most popular destination resorts in the Northwest, Mt. Bachelor. In the forest's Recreation Facility Analysis (RFA) niche bridge, skiing, snowshoeing, and snowmobiling appear to receive as much emphasis as summer activities.

[28] 2003-2007 Statewide Comprehensive Outdoor Recreation Plan. 2003. p. 2-11.
[29] 2003-2007 Statewide Comprehensive Outdoor Recreation Plan. 2003. p. 6-4.
[30] Ibid. p. 6-16.
[31] Oregon Trails 2005-2014: A Statewide Action Plan. 2005. p. 21.

Demand

Population Growth

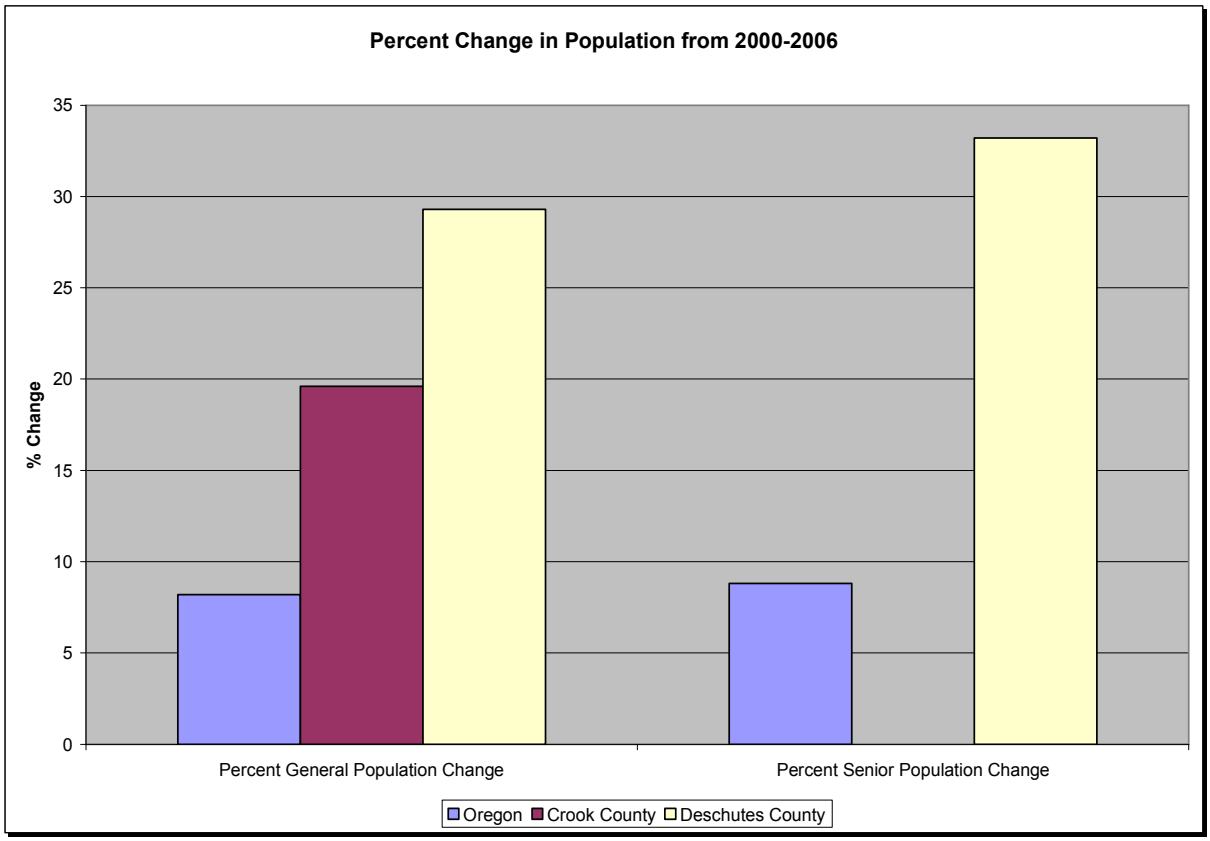
Population growth is the primary driver for outdoor recreation activity growth. "Population has been, is, and will be the major driver of outdoor recreation participation in this country"[32]. Central Oregon is a major hot spot for population growth with Deschutes County continuing to top the US Census Bureau charts for fastest growing counties in America. This large growth in population can in part be attributed to the natural amenities the area has to offer. These natural amenities are driving factors for people moving to the state from out of the area, especially with retirees. "In recent years, amenities such as scenic beauty, climate and recreational opportunities have lured large numbers of people to areas of the state such as Bend, Ashland, and the south coast"[33]. Unlike the Pre-Boomers who flocked to the sunny and warm climates of the southern parts of the US, there is a higher priority for Boomers to be near winter recreation opportunities and to have four seasons[34]. These factors make the Central Oregon area a prime destination for this very influential demographic. Additionally, "Retiree recruitment has become an acknowledged economic development strategy"[35]. Therefore, the financial opportunities will promote the continuation of this trend and amplify the population growth.

Along with this population growth, participation in outdoor recreation will increase. The Deschutes National Forest is located in a hot spot for recreation activities and issues as Deschutes and Crook counties were identified several times as high priority counties in the 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan (2008 SCORP). As mentioned above, the senior populations of Oregon and the target counties are increasing significantly. Previously, participation in outdoor activities decreased with age; however, in terms of Boomers and activity participation, "It is difficult to quantify the size of the net effect, by the general direction of the effect is that there will be more demand for activities than in the past."[36]

Figure 1 shows this trend in increasing population figures with the focus on Central Oregon. The state as a whole and the two primary counties of Crook[37] and Deschutes are all showing significant population increases in overall population and the senior population (aged 65 and over).

[32] Cordell, Ken. Outdoor Recreation for 21st Century America. 2004. p. 21.
[33] Outdoor Recreation in Oregon: The Changing Face of the Future: The 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan. p. 35
[34] Ibid. p. 52.
[35] Ibid. p. 35.
[36] Ibid. p. 32.
[37] Senior population figures were not available for Crook County.

Figure 1 Percent Change in Population from 2000-2006 for State of Oregon, Crook County, OR and Deschutes County, OR.†

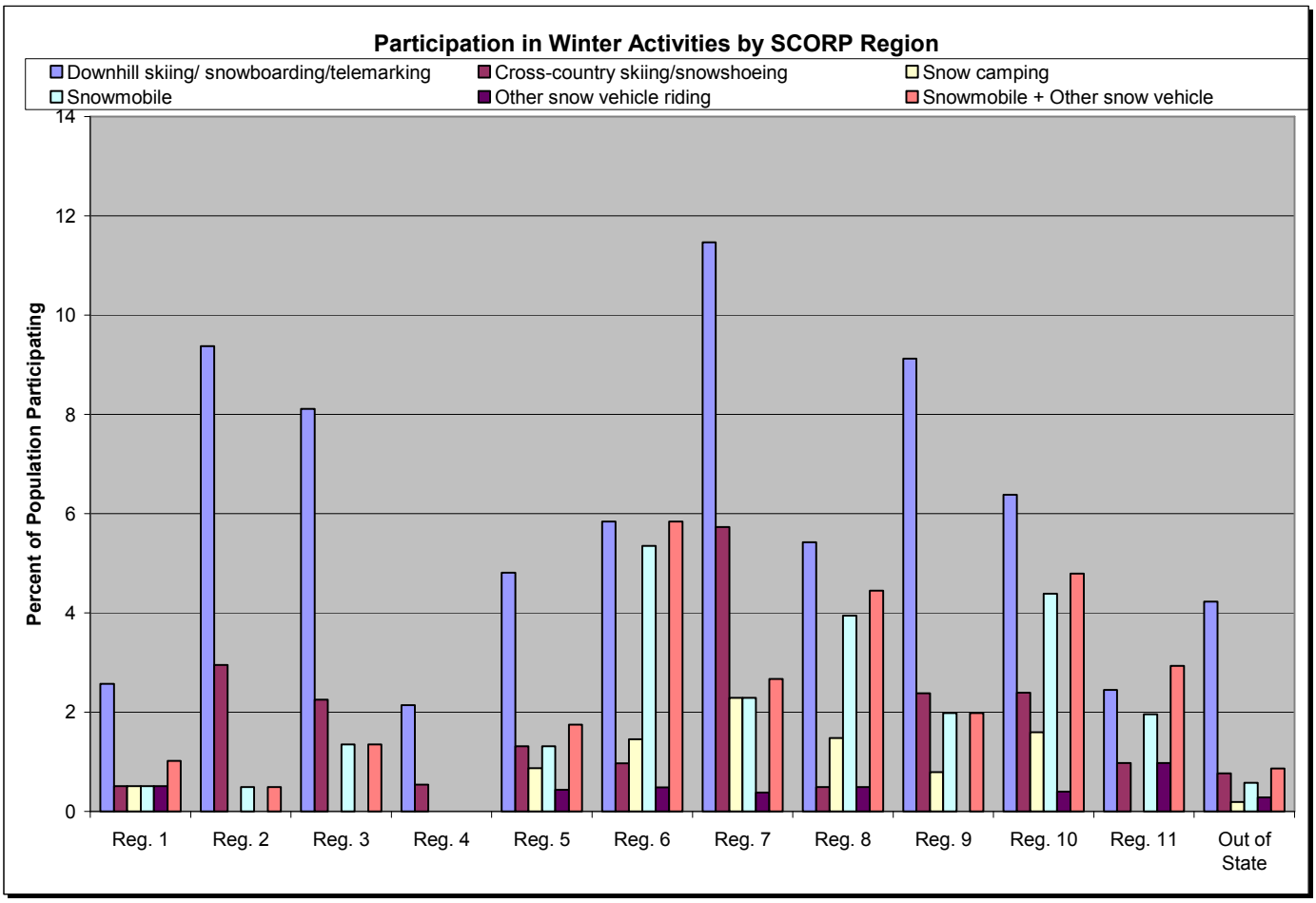


Current Conditions

The table below has participation rates for activities broken down by SCORP region. The general pattern for the state shows a higher participation in cross-country skiing/snowshoeing than in motorized snow travel. This pattern also holds true in Region VII, with twice as many participants in cross-country skiing/snowshoeing than motorized snow travel. The 2005 OR Trail Study also shows a similar pattern of participation[38].

The data also suggests that the frequency of participation in snowmobiling is higher than those who participate in cross country skiing which leads to a high number of activity days. In other words, there are less people who snowmobile, but the number of days spent snowmobiling is close to the number of days spent cross-country skiing and snowshoeing.

[38] Oregon Trails 2005-2014: A Statewide Action Plan. 2005. pp. 15-24.



Activity Growth

Given that the number one driver of recreation demand is population growth, it is no surprise that these winter activities will be increasing as well. However, there are also factors beyond population growth that can increase participation such as the popularity of particular activities, demographics, and opportunities (adequate supply).

National Trends

Snowmobiling is witnessing a strong growth, as the National Survey on Recreation and the Environment (NSRE) data shows snowmobiling growing significantly. A Montana Tourism report suggests that the rise in registered motorized off-road recreation vehicles in the state [MT] can be attributed to the "aging Baby Boomers, who have time and money to spend on leisure activities, and who are beginning to experience physical limitations affecting their ability to enjoy strenuous non-motorized recreation activities"[39].

The NSRE data shows a moderate increase in cross-country skiing. The NSRE data does not offer a growth rate for snowshoeing; however, the Outdoor Industry Foundation (OIF) states that snowshoeing

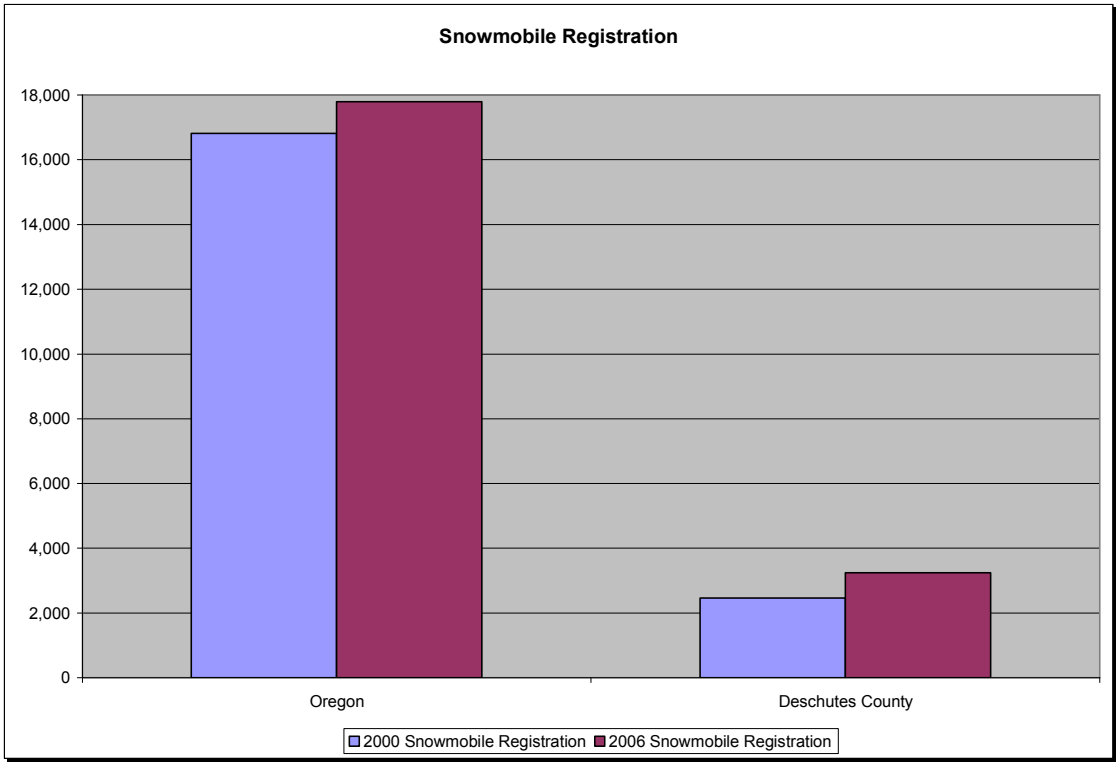
[39] Montana Tourism and Recreation Strategic Plan 2008-2012. 2007. Chapter 2, p. 18.

has one of the highest increases in participation incidence over its eight year study period with an 83% increase[40]. According to a representative from the Snowsports Industries America (SIA), research suggests that there is a strong growth in cross-country skiing and especially snowshoeing. The OIF (and SIA concurs) suggests that activities that are easy to learn, "done in a day", and are less commitment heavy, like snowshoeing, have broader appeal and will grow more rapidly.

Oregon Trends

From the 2003 SCORP report, Oregon saw a 97.2% change in snowmobiling from 1982-2002[41]. The following key points are from registration statistics[42] for snowmobiles:

- From 2000 to 2006, the state of Oregon has seen a 6% increase in snowmobile registrations (Deschutes county has seen a 32% increase).
- Deschutes and Crook counties have about 20% of registered snowmobiles in the state with Deschutes county accounting for 18%.
- From 1990-2004, Oregon sales of Class I (quads) and Class III (motorcycles) OHVs have increased over 400%.



The 2005 OR Trail study expressed a need for more sno-parks as current sites are at capacity.

Unfortunately, the 2003 SCORP report did not breakdown trail activities to define a change in cross country skiing and snowshoeing; therefore, there are no equivalent numbers available for those activities.

With the focused attention of the 2008 SCORP on the Pre-Boomer and Boomer generations, respondents were asked to rank activities they believe they will participate more in over the next 10 years. Within the

[40] Outdoor Recreation Participation Study. Outdoor Industry Foundation. 2006. p.11
[41] 2003-2007 Statewide Comprehensive Outdoor Recreation Plan. 2003. p. 4-12.
[42] Oregon Department of Transportation—Vehicles registered to out-of-state addresses are not included.

top 10 activities for Boomers and Pre-Boomers in terms of percent increase in number of days in the next 10 years, winter activities made the number 1, 2, and 8 places:

1. Snowshoeing- 404%
2. Cross Country Skiing- 247%
8. Snowmobiling- 145%

Snowshoeing tops the charts, and could possibly correlate to the aforementioned "done in a day" concept. However, all of these activities are expected to grow with this key demographic.

Settings and Opportunities

In the 2003 SCORP, one section of the document speaks to Outdoor Recreation Resource Settings.[43] This section breaks out specific activities into nine different settings and summarizes the data in a table. Non-motorized snow activities were combined as one activity, and demonstrated a high propensity towards a highly developed (non-urban) setting, which would capture the ski resorts. Looking at the raw dataset of the survey, the downhill skiing respondents dominated this response, and thus influenced the outcome. Additionally, the question asked the respondent to list their favorite activity that they participated in the past three months; therefore, information specific to winter activities was limited depending on the time of year the respondents answered the survey. This does show a high response for ski resorts and downhill skiing. Concerning snowmobiling, in a separate section the reports shows that about "53% of snowmobile use was reported to take place on designated snowmobile trails" and the remaining off trail.[44]

The International Snowmobile Industry Association (ISMA) has the following information available:
The top five reasons people snowmobile are:

1. To view the scenery
2. To be with friends
3. To get away [from] the usual demands of life
4. To do something with my family
5. To be close with nature

Additionally, the study suggests that snowmobiling is a social activity, and did not speak to experiences of solitude.

According to a representative from the Snowsports Industries America (SIA), the following information was gleaned from their existing research:
Cross Country Skiing:

- Backcountry is a great venue and preferred
- There generally is not as much demand for groomed skate ski opportunities
- Parallel tracks created by users are sufficient
- Well marked trails are recommended

Snowshoeing

- Prefer trails, especially those around resort/warming hut
- Well marked trails are recommended
- Have options especially low strenuous options

Alpine backcountry (telemark, backcountry snowboarding, etc.)

- No trails/signage needed
- "Blazing" their own trails is part of the experience

[43] 2003-2007 Statewide Comprehensive Outdoor Recreation Plan. 2003. p. 3-25.
[44] Ibid. p. 3-19

From the 2005 OR Trail report[45], non-motorized trail users were asked what kind of trails they preferred. Short, day-use trails; trails to destination; and loop trails were ranked the highest. Multi-day trails were ranked the lowest. Additionally, trails that were more remote were described as their favorite. The report also asked about barriers to recreation with time being the biggest for all users, and proximity to trails being a major obstacle for motorized users. Non-motorized users generally have to travel far less than motorized users to find trails. The following key message that can be applied to all trail users: "These findings suggest that efforts to provide a compressible trail experience – especially one taking less time in getting to the trail and other non-trail activities like seeking information, packing, and securing permits – would be welcomed by users"[46].

[45] Oregon Trails 2005-2014: A Statewide Action Plan. 2005. p. 279. Non-motorized trail user category was not exclusive to winter use, as it is open for all non-motorized trail use. These questions were not asked for motorized trail users.
[46] Ibid. p. 277.

Appendix H: Existing Condition Map

This document is a separate file.

Appendix I: Desired Condition Map

This document is a separate file.

Appendix J: Winter ROS

This document is a separate file.

Appendix K: Monitoring Recommendations

Indicator: Percent of visitors satisfied with winter recreation opportunities.
Method: Question in NVUM surveys about overall satisfaction and by ROS class.

Indicator: Availability of untracked snow.
Methods: Field reports by volunteers and forest staff. Question in NVUM survey about the availability of untracked snow.

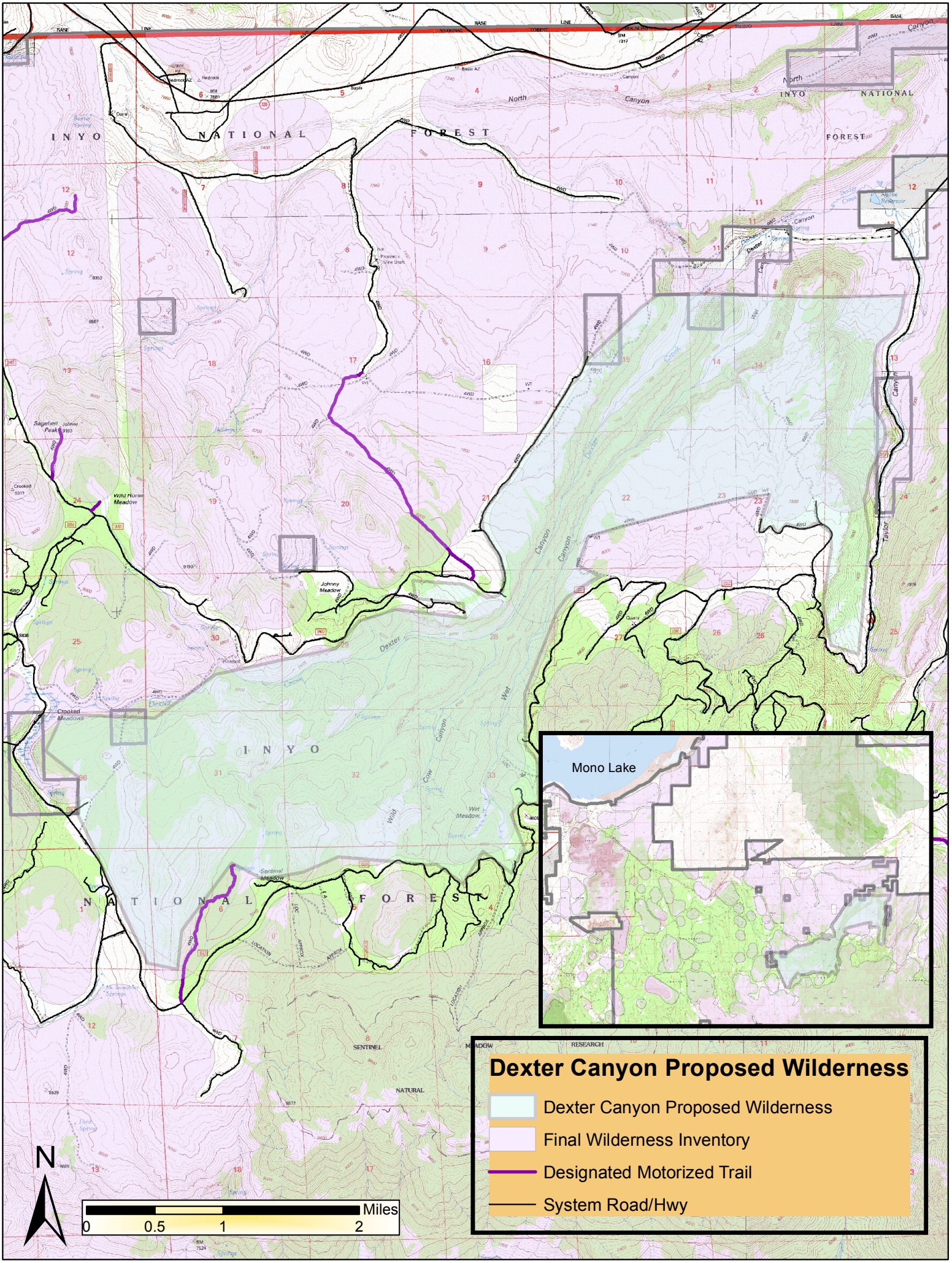
Indicator: Percent of visitors who feel physically challenged during their visit to Alpine Challenge areas.
Method: Question in NVUM survey about opportunities for challenge by ROS class.

Indicator: Availability of parking.
Method: Field reports by volunteers and forest staff about availability of parking with focus on peak use days.

Indicator: Acres (% of forest) by ROS class.
Method: ROS mapping every 5 years.

Indicator: Air quality.
Method: Reports from existing air quality monitoring stations in vicinity. Devise a schedule to randomly sample days throughout winter season.

Indicator: Managerial capacity.
Method: Annual staff and partner survey about managerial capacity.


Mono Lake
Dexter Canyon Proposed Wilderness
Dexter Canyon Proposed Wilderness
Final Wilderness Inventory
Designated Motorized Trail
System Road/Hwy
N
Miles
0
0.5
1
2

Timestamp	What is your full name?	Please enter your address.	How do you use the forest? (Check all that apply)	Where do you spend time on the Inyo National Forest? (Check all that apply)	Where do you recreate on the Inyo National Forest?	What do you care about when you think about public lands?	What do you think are the priorities for management on the Inyo National Forest?	Do you have any concerns about how the forest is managed?	What do you think is important for the future of the Inyo National Forest?	The Inyo National Forest is accepting comments on their Draft Land Management Plan that covers all aspects of the forest. Do you have any additional comments?	Optional: Age Range	Optional: Annual Income	Optional: Ethnicity	How did you hear about this survey?	Please enter your email if you wish to be entered in our drawing for a free Patagonia item.
5/6/2016 21:18:14	Annette coussan	286 south third street bishop, ca 93515	Climbing, Day Hiking, Fishing, Photography, Water Play	Developed Campgrounds and Recreation Areas, Backcountry (Primitive 4WD Routes), Wilderness	Pine creek Owens river gorge bishop creek table lands mammoth lakes buttermilks	Access, protection and preservation	Access and protection	I moved to bishop California from Texas about10 months ago and I am impressed abut the amount of preserved land	Limiting motorized vehicles and amount of visitors		41-45	>$100K	Caucasian		Acoussan@gmail.com
5/6/2016 21:21:53	Mike lowden	1349 Glenwood lane	Backpacking, Camping, Climbing, Day Hiking, Fishing, Mountain Biking, Photography, Snowmobiling	Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Lakes/Rivers	Valley, passes, lakes	Care of trash	Trail maintenance, trash	No	Leaving nature as is	No	31-35	$50K-$100K	Mix		Know1Mc@gmail.com
5/6/2016 21:25:21	Patrick	286 s 3rd bishop	Camping, Climbing, Day Hiking, Mountain Biking	Backcountry (Roadless), Wilderness	Buttermilks	Development on lands	Land use				46-50	$50K-$100K	Caucasian		
5/6/2016 21:30:17	Andrew Wilson	sowhatwilson@msn.com	Backpacking, Birdwatching, Camping, Day Hiking, Fishing, Photography	Backcountry (Roadless), Wilderness, Lakes/Rivers	Treasure Lakes	Leaving it better than you found it.	Keeping it accessible to public and clean.	A little.	Preservation	Not at this time.	31-35		Caucasian		sowhatwilson@msn.com
5/7/2016 15:28:53	Tom GRundy	512 N 2nd St Bishop, CA 93514	Backpacking, Birdwatching, Camping, Climbing, Day Hiking, Mountain Biking, Photography, Skiing, Water Play, adventuring	Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers, cliffs	mostly along the eastern sierra edge	I like free access for all, muscle powered access. relatively undeveloped is good - trails and bridges, fixed anchors, etc. are ok. roads, parking lots, pay campgrounds etc. not so much.	I would like to see the #1 priority to be keeping access for muscle powered recreation and conservation of resources.	I dislike the concession run stuff in general	conservation of resources, keeping access open	beware the temptation to become trapped by the thinking of the extractive and destructive but potentially lucrative industries.	46-50	<$20K	Caucasian		grundyman@gmail.com
5/7/2016 15:51:43	Lindon	Wiebe	Backpacking, Climbing, Day Hiking, Mountain Biking, Photography, Skiing, Water Play	Frontcountry, Backcountry (Roadless), Wilderness, Lakes/Rivers	Bishop Creek/Lakes, Big Pine Creek/Lakes, Pine Creek/Lakes, Rock Creek/Lakes, Mammoth Lakes and surrounding area, Glass Mountain, Whites/Inyos	Ecosystems and conservation of natural resources	Return fire into the ecosystem, fuels management, recreation (non-motorized), wilderness	Lack of funding (thanks to Congress) to manage the Forest (Law Enforcement, Wilderness Rangers, etc), OHV oversight. Fire Management needs to be more progressive.	See above	Need to read the draft first.	> 60	$50K-$100K	Caucasian		wiebenjamin@gmail.com
5/7/2016 20:03:55	Erin L. Elliott	618 Keough St.	Backpacking, Birdwatching, Camping, Climbing, Day Hiking, Mountain Biking, Photography, Picnic	Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	All over.	I care that they are there, and hope that they will continue to be accessible and available to be appreciated by many generations to come.	Ideally the priorities of the Inyo National Forest would be the conservation, and preservation and sometimes restoration of relatively pristine "wild", and beautiful places and their natural resources.	I am concerned that the forest is cared for in a way that tends to the drought, as well as beetle kill and potential fuels (removing fire danger). I also hope that visitor use and recreation is managed in such a way that the beauty of natural landscapes and a sense of "wildness" is maintained to a high degree. I hope that local resources are managed in such a way that sees past the here and now and plans for a sustainable future.	Please refer to my answers to the previous two questions.		26-30	<$20K	Caucasian		elouiseebee@gmail.com
5/13/2016 21:44:35	Hillary Behr	262 N. 3rd St. Bishop, CA 93514	Backpacking, Birdwatching, Camping, Day Hiking, Fuel Wood Collecting, Skiing	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Roadless), Wilderness, Lakes/Rivers	I ski in the Mammoth area, hike out of Bishop Creek, Big Pine Creek, Onion Valley, the White Mountains, all around the Bishop area.	I care about wildlife habitat and scenery. I think the land should be managed primarily for those values. I think grazing is fine as long as it is very regulated and for short periods of time so native plants, stream banks, and water quality are not damaged.	Wildlife, water quality, scenery, public education			Please email me when the draft plan comes out and I will comment more extensively...	31-35	$20K-$50K	Caucasian		hillarybehr@yahoo.com
5/14/2016 13:22:04	Jessica Haist	P.O. Box 8143, Mammoth Lakes, CA 93	Backpacking, Camping, Climbing, Day Hiking, Mountain Biking, Skiing, Working - guiding	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	All up and down the Eastern Sierra from Mammoth to Mt. Whitney. To Lee Vining? Not sure how far north it goes. I have used most of the major drainages trail heads to access the backcountry and climb in the Rock Creek, Pine Creek and Whitney Portal/Alabama hills areas.	Wilderness, natural beauty and access to a degree - but it makes me sad to see a lot of off road vehicle trails.	Recreation and resource management.	I hope there is a greater focus on using the forest for recreation versus resources (isn't that what the BLM is for?).	I'd like to see a recreation management plan that balances the impact of users versus allowing lots of people to use our national forest. I think that guide services have a generally positive impact on the Forest because they bring users in, but teach them how to respectfully recreate in the area, teaching people LNT principles. I would be interested too see how mountain biking plays into the plan as well - I think bikes have far less impact than motorized vehicles and horses and it would be great to see more bike trails.		31-35	$20K-$50K	Caucasian		jess.haist@gmail.com
5/25/2016 9:52:16	Hari Nam Kaur Elliott	618 Keough Street Bishop CA 93514	Birdwatching, Day Hiking, Photography, Picnic	Frontcountry, Backcountry (Roadless), Lakes/Rivers	White Mountains and Sierra Range in Inyo and Mono counties	Quiet. Undisturbed lands.	Security from profit seeking endeavors (i.e. mining, etc), maintainIng access to areas for low impact recreation, containment of OHV use.	Not at this time.	Fire management, health of ecosystems.	No	> 60		Caucasian		hariname@gmail.com
6/1/2016 16:26:16	Richard Woolsey	4466 Rayburn Street, Westlake Village, (	Backpacking, Birdwatching, Camping, Day Hiking, Photography	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Roadless), Lakes/Rivers	Yosemite, Sequoia, Kern and Inyo . . . most recently, primarily the later	Protection and preservation . . . sustainability; wildlife, backcountry including wild horses and burros	Mono Lake and Owens River; keeping Inyo wild and inaccessable. In other words, I am not in favor of creating greater access into Inyo in response to changing demographics, which generally leads to abuse and degradation.	not really; with respect and forethought	See comments above.	Thank you for this extensive work. That said, I personally found the report overwhelming and difficult to get my arms around. A summary with bullets denoting the essence of the report/changes, would be helpful. That said, I presume that is (in part) the purpose for your scheduled public meetings	> 60		Caucasian	Friends of the Inyo's website	richardwoolsey@me.com
6/12/2016 13:58:57	Georgette Theotig	P.O. Box 38, Tehachapi, CA 93581	Backpacking, Birdwatching, Camping, Day Hiking, Photography, Skiing	Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness	Wilderness and cross-country skiing in Mammoth Lakes area	I care about protecting public lands for the health of the environment and future generations.	Low-impact recreation should be the priority. Also, I would like to see less ORV trails and more wilderness. The future of the forest depends on what we do now.	Yes. I feel that special interest groups such as ORV and snow-mobile groups, have a strong and loud voice, often at the expense of forest resources. Staff decisions should be based on what is best for forest health, not what interest groups want.	Leadership that puts natural resources first, and decisions should consider the impacts of climate change.	I support wilderness additions and less intrusions into the front country.	> 60	$50K-$100K	Caucasian	Friends of the Inyo's website	gtheotig@sbcglobal.net
6/27/2016 14:58:37	Edie Warkentine	2733 Underwood Lane, Bishop CA 9351	Backpacking, Day Hiking, Fishing, Photography, Snow-shoeing	Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	Primarily on trails out of North Lake, South Lake and Lake Sabrina	Preserving this gorgeous country for posterity for others to enjoy as we do	Develop objectives and standards to assure adequate protection and maintenance of national forest recreation areas; provide improved education and interpretation so that visitors can better understand how to act responsibly	We need more backcountry rangers to check permits and over-use of backcountry; we need to improve fire management	Designating additional wilderness and providing for stewardship of the lands	I am submitting separate comments	> 60			Friends of the Inyo's website	
7/2/2016 11:11:41	Marian Seiter	155 n my Whitney dr lone pine	Birdwatching, Day Hiking, Fishing, Photography, Picnic, Water Play, Painting	Frontcountry, Backcountry (Roadless), Wilderness, Lakes/Rivers, Horseback riding	High Sierra - June lake	Accessible and no use of poisons or weed poisons to keep our water safe to drink	Accessibility	Use of chemicals to kill flora and fauna that is deemed non native	No road closures for vehicles or horses		> 60	$50K-$100K	Caucasian	Friends of the Inyo's website	Mariansect@gmail.com
7/3/2016 6:23:46	Jan Rhoades	286 North Tumbleweed Road Bishop, C	Backpacking, Birdwatching, Camping, Day Hiking, Fuel Wood Collecting, Mountain Biking, Picnic, Skiing	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	All over	Solitude rejuvenation enjoying appreciating gratitude	providing an experience that moves the soul	I know there needs to be a balance to address equal access for all	preservation		> 60	$20K-$50K		Friends of the Inyo's website	
7/5/2016 21:00:39	Joseph P. Biondo	P. O. Box 10376 San Rafael, CA 94912	Backpacking, Birdwatching, Camping, Day Hiking, Photography, Picnic	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness	My favorite places are the tops of the White Mountains, (Ancient Bristlecone Pines, Boundary Peak Wilderness) and the eastern slopes down to Fish Lake Valley. I also enjoy the area along Hwy 120 from Benton to and all around Mono Lake.	I care about the condition of my surroundings-is it free of traces of man, such as mechanized vehicles in the wrong places, damage to the flora and wildlife being scared off. I believe these lands should be as untouched by man as possible so we can all enjoy the natural splendor.	The biggest problem I see on my hikes is bicycles and motorcycles being used on foot-only trails, and ATV's plus other 4-wheeled vehicles wandering off the designated roads, tearing up the fragile brush and causing environmental degradation that may take decades to recover. There needs to be more enforcement of the vehicle laws so none are where they should not be. I also feel that gathering of dead and down wood should be more limited, as this is how the forest regenerates and new soil is created.	I have been concerned for a long time about the continued decline in funding to protect our national forests. I hope the upcoming elections will bring about a change in Washington DC, so more funds are appropriated. This is of great help to hire more rangers, biologists and other scientists and reduce the need to lease timber and grazing rights to generate revenue.	More money-see previous answer	I own property on the eastern slope of the White Mountains at 7,000 feet elevation. I've been visiting these mountains for nearly 30 years. While the Bristlecone Pines are awesome trees and deserve protection, as well as the Boundary Peak Wilderness, there are also many thousands of acres at lower elevations in these mountains that deserve protection just as much. I see pronghorn antelope, bighorn sheep, wild horses, mountain bluebirds and many other wildlife species that need their homes to be left alone. I feel the best solution is to acquire more land and designate it as wilderness so access is available only by foot and the experience is maintained.	56-60	$50K-$100K	Caucasian	Friends of the Inyo's website	jpbiondo87@yahoo.com
7/31/2016 19:02:09	Margaret Verba	P.O. Box 88, Lee Vining, CA 93541	Backpacking, Camping, Day Hiking, Fuel Wood Collecting, Skiing	Backcountry (Roadless), Wilderness, Lakes/Rivers	Mostly in wilderness all up and down the Sierra; the White Mountains; the Glass Mountains	Preservation; How fortunate we are to have public lands, and that we must take care of them. I wish no one wanted to practice destructive activities on our public lands (e.g. grazing, mining, etc.). I have traveled all over the world, and our vast public lands are really unique to the U.S.	Managing existing wilderness. Perhaps due to the movie "Wild" backcountry access has increased exponentially. Yet, we have no wilderness rangers anywhere on the Inyo. While I am thrilled to see more people enjoying the wilderness, I am terribly concerned with the amount of human waste and other poor practices. And there is no one to educate or enforce backcountry regulations. And everyone knows it. I am concerned with creation of illegal roads...again, we have an enforcement issue. Everyone knows how understaffed the FS (I think the problem is more general than the INF). I would like to see roadless areas with wilderness characteristics included in the preferred alternative.	See above	Recognizing that access is increasing and staffing accordingly so that our wilderness areas to not become more disgusting than they already are. Human feces and way too much trash.		56-60	$20K-$50K	Caucasian	Social media	margyverba@hotmail.com
8/1/2016 18:53:39	Mike Johnston	mikzemail@gmail.com	Birdwatching, Day Hiking, Fishing, OHV Recreation, Photography, Picnic	Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Lakes/Rivers	Love it all	Access and preservation, now and in the future.	Help our lands survive these stressful times of pollution, climate change, beetles, wildfires etc.	I wish they would listen to me more but I understand there are many viewpoints	We all work together to keep it a wonderful place.	see above-	> 60		not relevant- stop it	Friends of the Inyo's website	mikzemail@gmail.com
8/13/2016 13:46:09	Signe Swenson	2879 Walnut Blvd	Backpacking, Camping, Climbing, Day Hiking, Mountain Biking, Photography	Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness	All trails	Protection of the environment	protection of the environment	Too many horse trips on some of the trails. I was shocked recently, when going over Mono Pass and into Pioneer Basin, how torn up the trail was from horse traffic. On our 5 day trip we saw an average of 3 horse trips per day, some pack trains being 20 horses, including riders and pack animals. The manure and flies was almost unbearable, but the poor condition of the trail from what it used to be was shocking.	Limit horse trips and/or number of horses and riders. There is quota on hikers, so there should be one for horse traffic as well.	United States	56-60	$20K-$50K	Caucasian	Friends of the Inyo's website	signeswenson@sbcglobal.net
8/13/2016 14:34:22	James E. Varnam	325A Shepard Lane, Bishop, CA 93514	Birdwatching, Camping, Day Hiking, Photography	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Roadless), Wilderness, Lakes/Rivers	Bishop Creek Area Up To Bishop Pass /Piute Pass Mostly, Big Pine Creek Trails	Remain Undeveloped, Intact, Limit Destructive, Unsustainable Forms of Recreation	Add Wilderness Designated Areas, Protect Native Flora and Fauna, Minimize Impact of Overcrowding	Above Mentioned Need to be of Higher Priority	Addition of More Wilderness Areas, Control Degradation Caused by Over-Use	Favor Alternative C	> 60	$20K-$50K	Caucasian	Friends of the Inyo's website	
8/13/2016 15:19:06	Kimberlee E Kelly	917 tamarisk ridgecrest, ca 93555	Backpacking, Camping, Day Hiking, Fishing, OHV Recreation, Photography, Picnic, Water Play	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers		The balance between access and protection.	Conservation with and emphasis on retaining access via foot and limited and managed roads .				36-40	$50K-$100K	Caucasian	Friends of the Inyo's website	kikelly@cerrocoso.edu
8/13/2016 15:37:52	Rayni Melkonian	Bishop , CA	Backpacking, Birdwatching, Camping, Day Hiking, Mountain Biking, Photography, Picnic, Skiing, Water Play	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	From Cottonwood Lakes to Yosemite in the summer. Mammoth mountain bike park. Mtn biking and running the lower rock creek trail almost every day in the winter.	Respect. Leave no trace ethics. Quiet, clean air, use existing trails only. Respect wilderness and do NOT allow wheels of any kind on it.	Manage heavy areas of impact (climbing, mountain biking, ohv). Having back and front country Rangers monitoring permits, use and illegal fires. Keeping ohv users out of wilderness areas (i.e. Dirt bikers riding up sand canyon and thru meadows and into Dorothy and tamarack lake trails)	Yes. Lack of management. Over flowing trash bins throughout forest at rock creek lake and earthquake fault in mammoth. No management of heavily used lower rock creek trail for mountain biking and the impact on it in recent years. Disrespect of mountain bikers that high mark the trail and intentionally run over veg. Poor (aka no) response from forest service regarding rct. Use signs have been taken from top of trail and trail etiquettes sign is hidden by veg. Lack of management in pine creek climbing areas. Local climbers that are developing pine creek for their guide book are trundling rocks onto the trail while people are hiking below. Very unsafe. Human waste all over and climbing areas being developed with no respect for plants and animals habitating the area. Local climbers shooting fireworks off at pine creek climbing area. Educating locals and visitors to pick up feces from their dogs on trails.	Rangers. Both front and backcountry. Especially in high impact areas i.e. Rock creek canyon little lakes valley, bishop creek, duck pass trail. Keep ohv use contained to designated areas only. Do not allow rock creek pack station or any stock in little lakes valley. Designate as a hike only trail. Cross country team training should not be allowed on heavy use trails and they should be educated on trail etiquette and required to obtain a permit.	Now that I filled this form out I need to read the draft plan. Will do that and submit additional comments.	41-45			Friends of the Inyo's website	Wildrunnergal@gmail.com
8/13/2016 15:57:08	John Cole		Backpacking, Camping, Climbing, Day Hiking, Fishing, Mountain Biking, Photography, Skiing	Developed Campgrounds and Recreation Areas, Frontcountry	Mammoth	safety, clean, beauty, natural	Keep it safe from fires and development	no	do not mess with the streams and rivers, flow natural		46-50	$50K-$100K	Caucasian	Friends of the Inyo's website	
8/14/2016 9:44:12	Matt Barnes	PO BOX 1103, Lone Pine, CA 93545	Backpacking, Birdwatching, Camping, Climbing, Day Hiking, Photography, Picnic, Skiing, Water Play	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	I mostly recreate on the wilderness trails in the summer, hiking and backpacking. Then in the winter I snowshoes and cross-country ski in the wilderness, and recreate on the dirt roads at the lower elevations of the forest.	Maintaining a sense of solitude in the wilderness, equal access for all levels of income, managed by the Forest Service who takes visitor feedback into account when making decisions.	Making access to the forest equally available for low-income visitors, unifying wilderness regulations with surrounding wilderness areas managed by other agencies (Sierra & Sequoia NF/ SEKI), improving the dissemination of forest regulations through the website and visitor centers.	The continuing allowance of campfires outside of developed campgrounds is concerning given the many wildfires this season and the potential for wildfires due to drought, high-temperatures, and increased visitation. I would be in favor of blanket campfire restrictions during summer hiking seasons in wilderness and non-wilderness recreation areas.	Preserving wilderness character in the face of growing populations and interest in backcountry experiences, but still making these areas available for proper usage by the public.		15-25	$20K-$50K	Caucasian	Friends of the Inyo's website	chicken.scratch21@gmail.com
8/14/2016 11:34:26	chris johnston	chris.j.therapy@gmail.com	Birdwatching, Climbing, Day Hiking, Mountain Biking, Picnic	Frontcountry, Wilderness, Lakes/Rivers		preservation	preservation and maintanence				56-60	$50K-$100K	Caucasian		chris.j.therapy@gmail.com
8/14/2016 21:19:41	Michael Melkonian	5173 Westridge rd. Bishop ca 93514	Backpacking, Camping, Climbing, Day Hiking, Mountain Biking, Picnic, Skiing	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	Cottonwood, Whitney, shepherds, kearsarge, big pine, bishop creek, pine creek, rock creek, etc...	Preservation, protection, education and restoration	Preservation, protection , education and restoration	Yes	Forest service personnel in the forest and out of the office.	Get into the great outdoors to better understand the resources you manage for us. Enforce the laws that are put in place, or don't have laws. The ignorant and deviant visitors that freely violate the rules and regulations Of the Inyo expose the ineptitude of land managers and the inadequate resources they are provided to manage such a huge forest. A focus on basic mantanence would be a great place to start. Twice this summer I have encountered the human waste disposal bins overflowing onto the ground at the Whitney trailhead. if waste recepticles are provided, they need to be emptied. Often, trash bins and dumpsters are flowing over on the ground at many trailheads. It seems as if land managers are not aware of the usage that has boomed in recent years. We have exceeded capacity at many trailheads in regards to parking and trash. Notably south lake and rock creek canyon. I have often encountered vehicles parked upon vegetation in "no parking" areas. Not once in 31 years have I seen or heard of a parking citation issued for such infractions. the popularity of outdoor pursuits is growing at a rapid pace as the financial resources to manage the forest shrink. I long for the days of forest service operated campgrounds with interpretive Rangers teaching us the value of our public lands and how to care for them. The people visiting our forests and parks need to be educated and held accountable for abuses to our public lands. This is a tall order I realize, so maybe we should just clean up our act a bit to start.	46-50	$50K-$100K	Caucasian	Social media	Treeandski@gmail.com
8/15/2016 11:11:20	Michael Sean Splain	PO Box 66882 Scotts Valley, CA 95067	Backpacking, Birdwatching, Camping, Day Hiking, Photography, Picnic, Water Play, Study of one of California's last remaining intact (uninvaded) natural systems	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Roadless), Wilderness, Lakes/Rivers	Everywhere possible, but most often the High Sierra and White Mountains	Public lands make me proud to be American. However, current political efforts to starve the agencies that manage them out of funding, with a long game intent to privatize them- that makes me very ashamed to be American.	Priorities should be protecting ecosystem services, retiring inappropriate roads, mining claims and grazing allotments, preserving wilderness (and candidate wilderness) and most importantly, providing plants and wildlife with high-quality habitat.	My biggest concern is the lack of management and the severe impacts of unmanaged recreation. This is no fault of the agency. The blame belongs squarely with the US Congress for consistently cutting FS and other land management agency budgets.	Most important is management using the best available science, without regard for politics. Just because a stock operation or grazing allotment holder has "always had access" to the Forest doesn't mean that access should continue. Management decisions should be based on what's good for the land, not what appeases stakeholders.	I generally support Alternative B, but strongly urge consideration of additional wilderness recommendations.	41-45	$50K-$100K	Caucasian	FoI email	mike@ventanawild.org
8/15/2016 13:17:07	Gary Felsman	1266 Sumac Court, San Luis Obispo, C	Backpacking, Camping, Day Hiking, Photography	Developed Campgrounds and Recreation Areas, Frontcountry, Wilderness, Lakes/Rivers	Palisade Glacier Area,	Environmental Protections while allowing limited public use.	Habitat, resource protection.	It may be overused in some areas, In particular the Mt. Whitney Zone. Not sure how well the wag bag system is working.. The human impact is quite high in this area. Not sure if returning to outhouse system would actually be better especially at the lower camps.	Managing access while protecting its resources.		56-60	$50K-$100K	Caucasian	Social media	backpackingary1@gmail.com
8/15/2016 17:01:37	Shelley Brent Effinger	7550 Sierra Dr Granite Bay 95746	Backpacking, Camping, Day Hiking, Mountain Biking, Photography	Backcountry (Roadless), Wilderness, Lakes/Rivers	On top of a mountain	Clean Water	Waste mgt.	Horse and Mule waste on the trails can be very overwhelming esp when your dog likes to roll in it.	Limiting overuse, enforcing permits.	Have signs about water sources on trails.	36-40	$50K-$100K	Caucasian	Social media	shelleyeffinger@gmail.com
8/15/2016 19:12:16	Mike Shannon	1223 Miles Ave	Backpacking, Camping, Day Hiking	Developed Campgrounds and Recreation Areas, Backcountry (Roadless), Wilderness, Lakes/Rivers	Hiking the backcountry	Keeping it safe and clean.	Making sure it's not being improperly used.	No	Keeping it the way it is.	No	41-45	>$100K	Caucasian	Social media	mshannondrums@gmail.com
8/16/2016 1:26:38	Eric Hunter	Po box 7953 mammoth lakes ca 93546	Backpacking, Birdwatching, Camping, Climbing, Day Hiking, Fishing, Mountain Biking, OHV Recreation, Photography, Picnic, Skiing, Snowmobiling, Water Play, Paddleboard	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	All over	Exploring the front country, backcountry, wilderness weather Motorized, human powered, or by foot depends on day and time.	Recreation	Yes, I am concerned user groups are going to be disallowed to recreate .	Access		41-45	$20K-$50K	Caucasian	Social media	Wrightwoodfilms@yahoo.com

8/16/2016 12:03:11	Gregory M. Taylor	685 Van Fossen, Paradise, CA	Backpacking, Camping, Climbing, Day Hiking, Fishing, Mountain Biking, Picnic, Skiing, Water Play	Developed Campgrounds and Recreation Areas, Frontcountry, Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	Trails, dirt roads, streams, rivers, campgrounds, lakes	Keeping open and available, clean and undeveloped for recreation and ecological preservation.	Limiting resource extraction influence on the management.	Preservation of the recreational and ecological resources.	Preservation of the recreational and ecological resources.	Please allow the one that allows the most recreational and ecological resources to be preserved for future generations. Motorized and mechanical access OK but manage so impact is minimized.	51-55	>$100K	Caucasian	Friends of the Inyo's website	gmt8801@aol.com
8/17/2016 9:36:50	Anthony Slocum	tj_slocum88@yahoo.com	Backpacking, Camping, Day Hiking, Skiing	Backcountry (Roadless), Wilderness	White Mtns. Skiing east side of the Sierra down there, Backpacking entry into Yosemite and day hikes on the east side.	Having areas that do not have motorized access that are accessible for nice day hikes, as well as longer stretches.	maintaining high value wilderness experiences. Now that we have kids, we do appreciate camping access to quality sites. It is really nice t have car camping without being surrnounded by RV's.	I do not know enough.	Preservation. I am darn concerned about the rate of climate change and the impact it may have.		46-50	>$100K	Caucasian	Social media	tj_slocum88@yahoo.com
8/17/2016 18:16:32	Dylan Neubauer	2026 Back Ranch rd.	Birdwatching, Camping, Day Hiking, Photography, Botanizing	Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness	The White Mountains		I am concerned about the health of the wet/riparian meadows in the subalpine regions of the White Mountains. The hydrology is changing rapidly due to drought, and a weedy native (Cirsium scariosum var. congdonii) is rapidly taking over the habitat, smothering rare plants and more mesic species. Given the rapid drying of the habitat (and the drying of many springs that have been flowing since time immemorial), it does not seem appropriate that the remaining water be consumed in part by cattle--rather than native plants and their habitats and wildlife. Grazing seems inappropriate in the subalpine of the White Mountains. There are no weeds to control, and they do not accomplish any conservation goals. Cows are known to spread weedy natives like Cirsium scariosum var. congdonii.	Yes	More personnel, better management		51-55		Caucasian	Social media	
8/19/2016 17:06:34	Kevin Corcoran	Valencia, CA	Backpacking	Wilderness	in the backcountry wilderness, throughout	Conservation		would like to see more backcountry rangers	preservation of wilderness character		51-55	>$100K	Caucasian	Friends of the Inyo's website	
8/20/2016 22:19:21	Sue Burak	1335 Rocking W Drive #139 Bishop, CA	Backpacking, Climbing, Day Hiking, Fishing, Mountain Biking, Skiing	Backcountry (Primitive 4WD Routes), Backcountry (Roadless), Wilderness, Lakes/Rivers	John Muir Wilderness	Lack of funding for wilderness rangers and trail maintenance and obsolete wilderness permit system continues to degrade front country and backcountry natural resources. Why do a Forest Plan when there is no money to manage the existing resources.	Revise the wilderness permit system to account for overnight stays in zones- it is time to assign campsites and require people to stick to approved itineraries.	There is little backcountry management because there are no rangers, no FS presence. Middle and upper management do less with less and it shows in the pervasive overcrowding and trash in front country areas, along trails and in illegal campsites. Backcountry areas such as Duck Lk, Purple Lk, Little Lakes Valley, Bishop Pass and Whitney are filled with more people that the resource can sustain.	More funding for seasonal wilderness rangers and trail workers and reclaim the backcountry. Get rid of the wilderness permit system and start managing where and how people enter a zone, how long they stay and where they go. It's not wilderness anymore in LIttle Lakes Valley, the Mammoth watershed and Middle Fork San Joaquin River- in fact the entire John Muir wilderness is showing the effects of management wringing their collective hands as budgets are cut and more numbers visit the wilderness.	Climate change is not considered - if the various preferred alternatives do not integrate the changing climate conditions, and if the Forest budget continues to be cut, there will be little money to implement and the current dismal state of affairs will continue to devolve.	51-55	$50K-$100K	Caucasian	Friends of the Inyo's website	