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Forest
Service

**Southwestern
Region**

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Wallow Fire Changed Condition Assessment

Forest Plan Revision

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Content

Background

In early May, the Apache-Sitgreaves National Forests' (ASNFs) planning team was hard at work completing the proposed plan and the Draft Environmental Impact Statement (DEIS). The next step in the forest plan revision process was to submit these documents to the Regional Office for review with a goal of releasing them for public 90-day review and comment by late summer of 2011.

The forest plan revision schedule experienced an abrupt change when the 538,000-acre Wallow Fire burned on the ASNFs during the height of the 2011 summer fire season. As planning team members were reassigned to suppression and BAER activities, it was evident to the Forest Supervisor that work on the forest plan revision would need to be postponed. The Forest Supervisor also decided that we should postpone additional work until we understood the impacts from the fire, in particular the affects to the vegetation.

This document summarizes the changed condition assessment conducted by the planning team in light of the Wallow Fire.

The Wallow Fire

The Wallow Fire began on May 29, 2011. The fire was determined to be human-caused and occurred in Apache, Navajo, Graham, and Greenlee Counties in Arizona and Catron County, New Mexico (15,400 acres in New Mexico). It also spread to the Fort Apache Indian Reservation and San Carlos Indian Reservation. By the end of July, the fire had grown to become the largest fire on record in the Southwestern Region at 538,000 acres.

Impacts in the burned area range from low to heavy, with little to total tree mortality. The fuel conditions in some areas of low forest mortality have been improved due to the fire through removal of some surface and vertical fuel loads. In areas of total mortality, the fuel loads are now in the form of horizontal dead trees which are vulnerable to the risk of wildfire. The standing dead trees (snags) will act as hosts to bark beetles, which could create an epidemic condition that could spread to live trees. Changes in available habitat have occurred for both terrestrial and aquatic wildlife species.

Changed Condition Assessment

New Existing Vegetative Condition[1]

Since the Wallow Fire burned area encompasses approximately ¼ of the ASNFs, it was determined that there was a need for updated data reflecting the changed condition of the vegetation. The Regional Office Remote Sensing department (Tom Mellin) developed a new existing condition dataset based on mid-scale existing vegetation data products and the Rapid Assessment of Vegetation Condition (RAVG 2) remote sensing imagery (see Appendix A for more details).

As the planning team evaluated the vegetation data, two additional issues arose.

[1] See also vegetation changed condition discussion notes dated 12/11/2011 in Plan Set of Documents.

- Aspen – our current models do not account for aspen in the dry mixed conifer PNVT. The Wallow Fire affected a large percentage of this vegetation type and we expect a substantial amount of aspen regeneration to occur.

- Riparian – the regional office released an updated inventory of riparian areas (RMAP) in November 2011. This new inventory depicts over twice the amount of riparian acres than the data we were using for revision.

After further investigation of the terrestrial ecosystem units (TEUs or soil types) that were originally classified as dry mixed conifer, it was determined that they should have been classed as wet mixed conifer based on their ecological attributes. This was verified with the regional office ecologist (Jack Treipke) and soil scientist (Wayne Robbie). Jerry Simon (timber), Pam Bostwick (fire), and Linda Wadleigh (fire) from the Regional Office were also involved in the discussions. Since the wet mixed conifer PNVT model includes considerations for aspen – this resolved concerns related to be able to model aspen.

The team discussed the pros and cons of converting to the riparian RMAP data for forest plan revision:

> **Pros** – It would reflect the best available science. It would represent what is out there on the ground. From a vegetation management viewpoint – if it's out there – we should reflect it. Riparian areas and water are part of the forests' niche – this will better reflect.
>
> **Cons** – Big change from what we have now (30,000 acres) to 60,000 acres. Also raises questions about the need to update TEU – since that was what the PNVTs are based on. It may take a good amount of time (2 weeks+) to update data layers.

The team recommended using the RMAP data because it reflects the best available science.

The Forest Supervisor was kept informed on these issues and concurred with changes made by the planning team.

Changes by PNVT from the vegetation data prior to the Wallow Fire and after the fire are exhibited in Appendix B. Appendix D displays the amount of lands within the Wallow burned area by burned severity and RAVG (Rapid Assessment of Vegetation Condition) mapping classes. The DEIS affected environment will be updated to describe this new existing condition.

Proposed Plan Decisions

The planning team systematically reviewed the impacts of the Wallow Fire on the current proposed plan decisions (desired conditions, standards and guidelines, management areas, suitability, objectives, and monitoring strategy). *Overall, there was no need to change the proposed plan decisions.* There was a recommendation to add a new section entitled landscape scale disturbance events (see the standards and guidelines discussion below).

The following sections summarize the assessment of the current proposed plan decisions.

Desired Conditions

It was assumed that there was no need to change desired conditions. The proposed plan contained long-term desired conditions for all forest resources that include disturbance processes. The major

consideration was the concept that, *whether burned or not*, PNVTs *do not change* because they are an expression of soils[2], topography, and climate; although burning may result in changes to states (seral stages) within PNVTs.

Standards and Guidelines[3]

The team reviewed the existing standards and guidelines considering whether the Wallow Fire caused a need to change or remove them or whether there was a need to add additional standards and guidelines.

The team was made aware of a section in the draft plan for the Kaibab National Forest that covered large scale disturbance. The team reviewed their direction and agreed that it would be valuable to add a similar section to the ASNFs plan because of the occurrences of large scale fires on the forests over the last decade (Rodeo-Chediski and Wallow).

A new section entitled 'Landscape Scale Disturbance' has been added to the proposed plan. It contains standards and guidelines that will guide managers if they face another 10,000 acre or greater disturbance event. Direction includes focus on human safety and property, erosion control, felling of hazard trees, soil stabilization, reforestation, wildlife needs, and scenery and removal of temporary mitigation features when no longer needed.

As the team considered the need for additional guidelines, they discussed the following:

- Emphasizing native vegetation for inclusion in erosion prevention seed mixes. This was already addressed in the plan under the soils section.
- Protect regenerating aspen, oak, or other deciduous tree species from ungulate damage and fire. This was already addressed in the plan under the aspen section.
- Concerns about regeneration – if we're investing in regeneration, we need to protect it. There are guidelines in all vegetation than address this.
- Concerns about using appropriate fire regime and post-disturbance seral successional status for reforestation. Language was added to the management approach of the Landscape Scale Disturbance section.
- Concerns about excessive snag/log/tree salvage and leaving enough ground cover and woody debris. Guidelines were added under the Landscape Scale Disturbance Section.
- Since there is a good chance for abundant aspen regeneration; need to focus on restoration and *retention* of aspen. Guideline was updated in aspen section.

[2] As a consequence of extremely severe fire and flooding, soil change or loss over the long term could be significant enough to affect a PNVT change; however, it is not known if this will be the case for the Wallow Fire.

[3] See also planning team meeting notes from 11/7/2011, 11/29/2011, 12/08/2011.

Management Areas[4]

The team reviewed the existing management areas that coincided with the Wallow Fire burn area and evaluated whether there was a need to change.

Wilderness (Escudilla Wilderness) - although affected by the Wallow Fire, cannot change, because of Congressional designation. *No need to change management area*.

Recommended Wilderness – There is *no need to change* because of the fire.

The main consideration was that fire is considered a natural process and would not affect the area's potential wilderness character.

Evelyn Treiman and Michelle Davalos contacted the Regional Office (Matt Turner and Michelle Aldridge) to ask if there was a need to update the wilderness evaluation that had been conducted for forest plan revision. It was determined that the evaluation was still valid based on the assumption that fire does not change potential wilderness character.

Although not related to the fire, the southwest boundary of the Escudilla recommended wilderness was modified to move it off of a motorized trail (so that future hazard tree removal activities could be completed) and move it onto natural contours so that the area could be better managed (making it easier for the public to recognize the boundary).

Research Natural Area and Recommended Research Natural Area – The team assessed whether recommended research natural areas were still valid in terms of meeting regional needs and providing potential research needs. It was determined that the recommended research natural areas were still valid and there is *no need to change*.

Because PNVTs do not change with burning, these areas could still contribute where the region is lacking representation in certain PNVTs. The team evaluated each recommended research natural area. The area that was of most concern was Corduroy. There were concerns that the District may plan salvage activities that could affect potential RNA characteristics. Michelle Davalos contacted Rick Davalos, Alpine District Ranger to discuss. Rick felt that there was a high probability that the area would remain untreated because other areas were higher priority and the forest had limited capacity for treating acres. There were also concerns whether the Corduroy RNA would provide research opportunities related to mature aspen. It may not, however the area would provide ample research into aspen regeneration and non-livestock herbivore effects.

- **Phelps Cabin** – no change, very little effect from burning, if any. Support *continuation of existing RNA designation*.
- **Three Forks** – although watershed burned in the wildfire, the unique aquatic habitats (fens) are still present. These areas still provide a good representation for research and study. Support *continuing RNA recommendation*.
- **Lower Campbell Blue** –although area burned during Wallow, riparian areas are especially resilient and are expected to fully recover. Represents ungrazed area affected

[4] Also see planning team meeting notes from 11/01/2011 and 11/7/2011 and notes from discussion with Forest Supervisor on 1/20/2012 in Plan Set of Documents.

by the fire which may present additional research opportunities. Support *continuing RNA recommendation*.

- **Sandrock** – not affected by Wallow Fire. Support *continuing RNA recommendation*.
- **Corduroy** - because of aspen component and fire severity variability, opportunities for long-term research about fire and aspen. Support *continuing RNA recommendation*.
- **Escudilla** – although affected by Wallow Fire, support *continuing withdraw* because ecological types are well-represented in Region.
- **Thomas Creek** – currently have long-term fire effects studies within this currently proposed RNA (P. Robechau study). Also serves as a control watershed. Support *continuing RNA recommendation*.
- **Wildcat** – not affected by Wallow Fire. Support *continuing withdraw* based on previous rationale.
- **Hayground** - although affected by Wallow Fire, support *continuing withdraw* because ecological types are well-represented in Region.

High Use Developed Recreation Area – Luna Lake not affected by fire. Developed areas around Big Lake were not affected. Greer Lakes was partially affected by the fire with some sediment effects and hazard trees. Once these hazards are mitigated, these areas should be fully capable of being managed as highly developed recreation areas. If future restoration treatments are needed, they would be allowed in this management area. There is *no need to change* management area.

Wildlife Quiet Areas (WQA) – There is *no need to change* the wildlife quiet areas.

The team identified the need to consider the status of WQAs as a consequence of the Wallow Fire relative to possible change in wildlife use and potential post-fire treatments.

The fire impacted five of the WQAs proposed in the DEIS alternatives. About one-third of the acreage in the Hidden Lake and Hulsey Bench WQAs, and about one-half of Open Draw WQA burned at high severity. Very little of Middle Mountain and Upper Coyote WQAs burned at this level.

In 2012, forest and AZGFD biologists reevaluated all WQAs. The question asked was “Are the WQAs still needed or useful, especially given the 2011 Wallow Fire?” Following are the conclusions of this effort:

- Fire facilitates habitat renewal and not loss, especially in the fire adapted ecosystems of the Southwest. New habitat components or seral states in response to fire will increase the diversity of both plants and animals. Therefore, burned areas within WQAs will still be important to wildlife.
- Wildlife focus use in areas with less than optimum habitat conditions when human disturbance is limited as has been demonstrated by AZGFD research in the Hulsey Bench WQA, even before the fire. This is expected to continue to be the case in those WQAs where habitat has been affected by the fire.
- Because of the loss of or change in forested habitat structure across about one-quarter of the forests due to the Wallow Fire, WQAs will be that much more important as habitat security areas with limited human disturbance.

- In addition, the identified need for secure habitat across the Mogollon Rim and across the ASNF landscape has not changed.
- Public desire for plan focus or emphasis on wildlife and their habitat remains.
- No change in WQAs has occurred outside of the 2011 Wallow Fire boundary.

Community-Forest Intermix – are still valid because of need to treat around communities-at-risk. If restoration treatments are needed, they would be allowed in this management area. *No need to change* management area.

Energy Corridors –powerlines are still in same location. If restoration treatments are needed, they would be allowed in this management area. *No need to change* management area.

Natural Landscape – varied impact from fire in these areas. Much of this management area is composed of Inventoried Roadless Areas (IRAs). Currently, timber harvest and road building are not allowed in IRAs. If future restoration treatments are needed, they would be allowed in this management area outside of IRAs. There is *no need to change* management area.

Primitive Area – boundary and management of primitive area cannot be changed except by Congress. *No need to change* management area.

General Forest – no needs to change identified. *No need to change* management area.

Eligible and Suitable Wild and Scenic Rivers – although these areas are not management areas, they are special areas that fall within the Wallow Fire burned area. The eligibility report for wild and scenic rivers was re-assessed based on the changed condition in the Wallow Fire burned area. Based on this assessment, there was *no change in the eligibility status* of the existing rivers. Appendix C contains an excerpt of the addendum to the eligibility report.

Other - the team briefly considered whether to create a new management area for the Wallow Fire burned area, but chose not to pursue further. Earlier in plan development, we had considered this as an option for managing the area burned by the Rodeo-Chediski and decided not to make it a separate management area.

Suitability

The team discussed whether suitability determinations would change because of the Wallow Fire. It was agreed that the suitability criteria would not change. The final suitable acres may be different from pre-Wallow because of changes in existing condition.

The team considered input from the regional office (Matt Turner and Jim Youtz) regarding timber suitability. Matt and Jim agreed that the basic timber suitability criteria shouldn't change. They recommended we review the cost efficiency criteria, as these may have changed because of the fire.

Although the criteria for range suitability would not change, the existing condition may change the final suitable acres because of changes in forage availability.

Results (acres of suitable vs. not suitable) of applying the suitability criteria will be documented in the DEIS.

Objectives

The team reviewed the objectives. Although some changes were recommended, none were as a result of the Wallow Fire[5].

Considerations when reviewing the vegetation treatment objectives included.

- Objectives include all treatments – mechanical and burning
- Still a need to retain old growth character where proportional representation is lacking – especially because of losses of that component in Wallow Fire.
- Focus watersheds is still a valid emphasis area – these will be specifically identified during plan implementation based on watershed condition class ratings, management emphasis, and forest capacity. Restoration needs in the Wallow Burn Area could be identified (as they are currently) through focus watersheds.
- Currently, local market demand for wood 14"DBH and greater is low.
- We currently mechanically treat (WMSP, 4-FRI, Salvage) approximately 13,300 acres (332,500 tons = 95,000 ccf)
- If the portable saw mill was up and running, we could treat an additional 4,600 acres for a total of 18,000 acres
- For the foreseeable future, the maximum anticipated would be 25,000 acres/year
- Snowflake Power has found through experimentation a third portion of PJ with two thirds conifer improves boiler efficiency. With Snowflake Power's recent interest in increasing PJ removal it may slightly lower conifer tonnages demand, bit will increase woodland/grassland treated acres (this could easily be supplied through our grassland restoration or woodland treatments)
- AZGFD supports grassland restoration treatments to support species such as pronghorn.

Monitoring Strategy

The team reviewed the items currently identified in the monitoring strategy. Although some changes were recommended, none were as a result of the Wallow Fire[6].

[5] See planning team notes from 12/8/2011 and 1/19/2012 in the Plan Set of Documents.

[6] See planning team notes from 12/8/2011 in the Plan Set of Documents.

Appendix A – Changed Condition Vegetation Assessment

The following provides information on the process used to create the updated existing vegetation condition for the Apache-Sitgreaves NFs following the Wallow Fire. This was developed by Tom Mellin, Regional Office Remote Sensing.

Wallow Fire Changed Condition Vegetation Assessment

This product represents a rapid assessment done to help identify changed vegetation condition within the perimeter of the Wallow Fire. The assessment utilized mid-scale existing vegetation data products for dominance type, size, and canopy cover map units as well as RAVG (Rapid Assessment of Vegetation Condition after Wildfire) data produced by RSAC (Remote Sensing Applications Center) representing canopy cover mortality classes (expressed as basal area loss). The datasets were combined using a standard rule-set to determine where mid-scale map units had changed according to fire severity. This product is intended as a rapid assessment of changed condition and does not represent an update of the official mid-scale map products.

The update of the mid-scale map products for each forest will be done by taking into account all fires, insect and disease events, management activities, and other changes that have occurred forestwide since the last mapping effort. Data sources will include MTBS (Monitoring Trends in Burn Severity) data, FACTS (Forest Service Activity Tracking System), Aerial Insect & Disease surveys, as well as change detection from satellite data. The timeline for updates will be based on a regional prioritization that considers time since last mapping as well as known change events that have occurred.

Rules for Correcting Mid-Scale Data Following Fire Events

Introduction

Below are the rules used to update R3 mid-scale existing vegetation data following wildfires in the Southwestern Region. These rules are used when wildfires have occurred after the date of the image used to derive the mid-scale mapping. These rules represent an interim solution for providing existing vegetation mapping, pending change detection or map refresh efforts by R3 Geometronics. The Region is tentatively planning programmatic updates on 5 to 10 year intervals, following agency guidelines (Brohman and Bryant 2005).

The application of these rule sets requires tree mortality/top kill mapping within the wildfire perimeter. MTBS, RAVG, or BARC (Burned Area Reflectance Classification) mapping can be used, respectively, in this order of preference. The following rule sets are commensurate with LANDFIRE mortality class thresholds (FRCC Guidebook, 2005):

Non-lethal fire – <25% mortality/top kill

Mixed-severity fire – 25-75% mortality/top kill

Stand replacement fire – >75% mortality/top kill

Rules can be applied to all disturbances where mortality/tree removal classes can be identified. Disturbance mapping with higher thematic detail would allow for more exacting rules.

Rule Sets

Canopy Cover Class – Resulting Cover Class* (cover class does not apply to herb dominance types)

Mortality Class	Original Cover Class	New Cover Class	Logic
Non-Lethal (avg 12% canopy removal)	Low (avg 20%)	Low (same)	20% – (12% X 20%) = 17%
	Open (avg 45%)	Open (same)	45% – (12% X 45%) = 40%
	Closed (avg 70%)	Closed (same)	70% – (12% X 70%) = 62%
Mixed-Severity (avg 50% canopy removal)	Low (avg 20%)	Low (same)	20% – (50% X 20%) = 10%
	Open (avg 45%)	Low	45% – (50% X 45%) = 23%
	Closed (avg 70%)	Open	70% – (50% X 70%) = 35%
Stand Replacement Fire (avg 87% canopy removal)	Low (avg 20%)	Sparse	20% – (87% X 20%) = 3%
	Open (avg 45%)	Sparse	45% – (87% X 45%) = 6%
	Closed (avg 70%)	Sparse	70% – (87% X 70%) = 9%

* – Where vegetation severity mapping is not available for shrub types, it is assumed that most shrub cover is lost, at least temporarily, due to fire so that shrub types within the fire perimeter are relabeled as 'sparsely vegetated / recently burned'. The shrub component in many cover types regenerates quickly.

Size Class – Resulting Size Class* (size class does not apply to herb dominance types)

Dominance Type	Non-lethal	Mixed Severity	Stand Replacement
Tree or Shrub	stays the same	stays the same	Sparsely Vegetated / Recently Burned
Herb	no size class – does not apply		

* – Where vegetation severity mapping is not available for shrub types, it is assumed that most shrub cover is lost, at least temporarily, due to fire so that shrub types within the fire perimeter are relabeled as 'sparsely vegetated / recently burned'. The shrub component in many cover types regenerates quickly.

Dominance Unit – Resulting Dominance Unit*

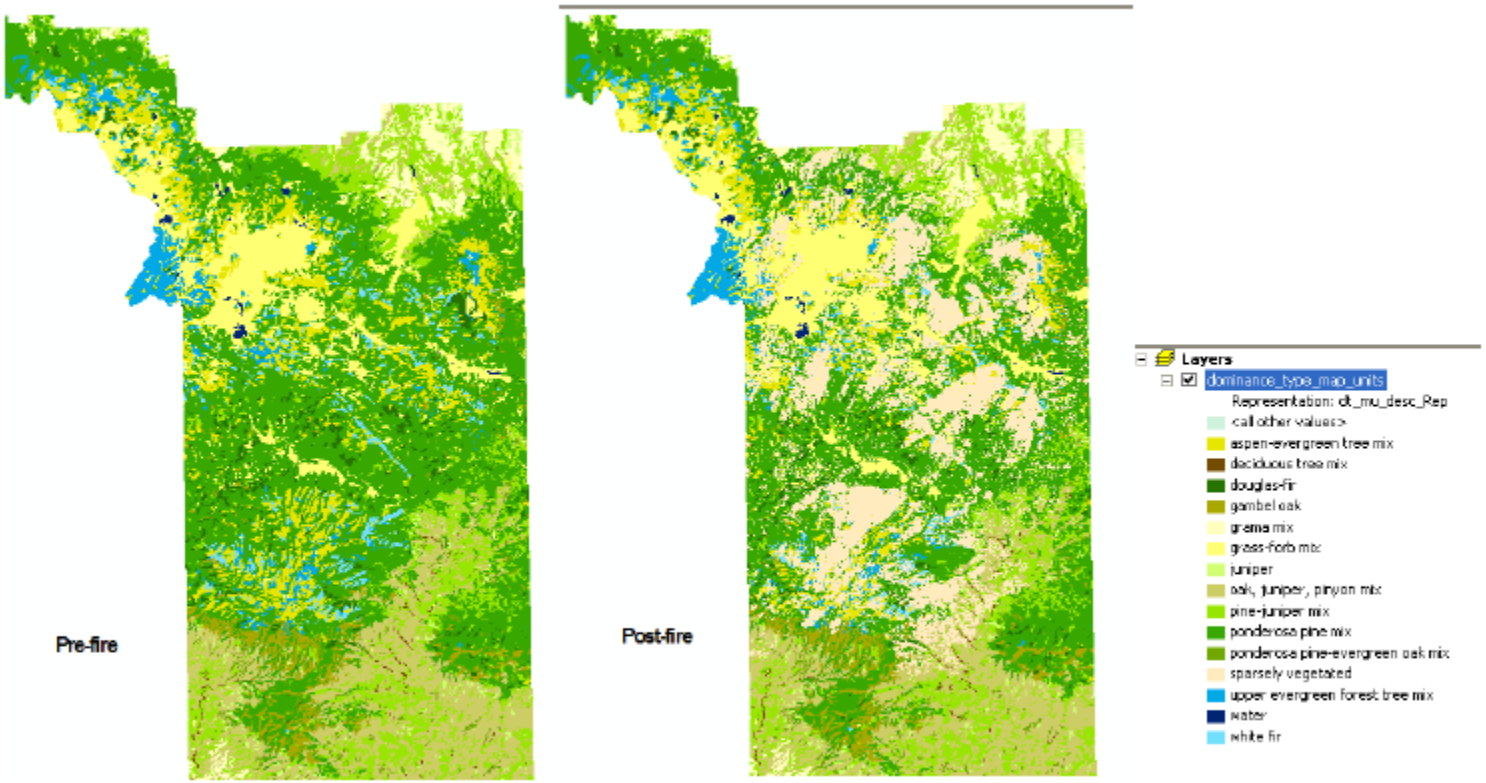
Dominance Type	Non-lethal	Mixed Severity	Stand Replacement
Tree or Shrub	stays the same	stays the same	Sparsely Vegetated / Recently Burned
Herbaceous	stays the same	stays the same	stays the same
Sparsely Vegetated	stays the same	stays the same	stays the same

* – Where vegetation severity mapping is not available for shrub types, it is assumed that most shrub cover is lost, at least temporarily, due to fire so that shrub types within the fire perimeter are relabeled as 'sparsely vegetated / recently burned'. The shrub component in many cover types regenerates quickly.

References

Brohman and Bryant, 2005

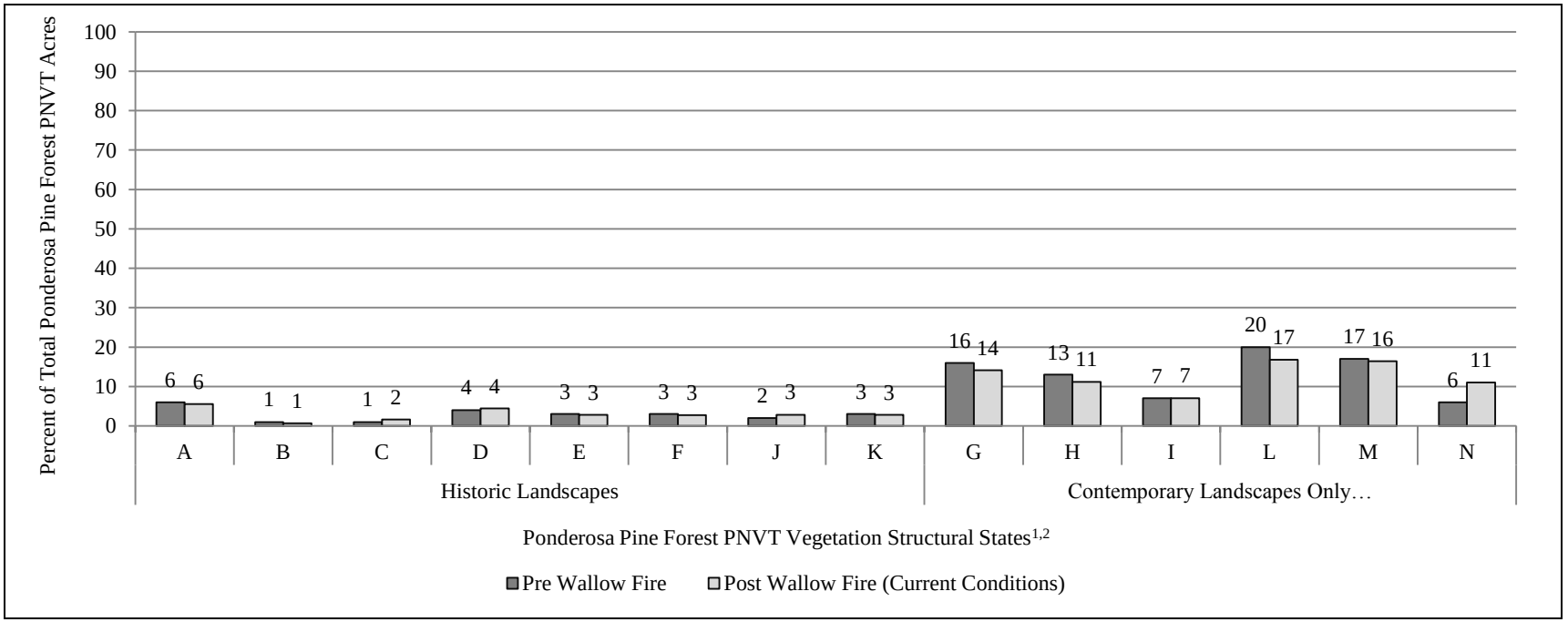
FRCC Guidebook, 2005



Results of Wallow Fire Changed Condition Vegetation Assessment

Appendix B Structural State Comparison: Pre- and Post-Wallow Fire

Ponderosa Pine Forest



[1] Ponderosa Pine Forest (PPF) PNVT Vegetation Structural States. At 602,206 acres or approximately 30% of the forests this PNVT is the largest on the ASNFs
State A (GFB/SHR) - Recently burned, grass, forb and shrub types with < 10% tree canopy cover; early development
State B (SSO) - Seedling and sapling size (< 5" dia.) trees with open (< 30%) canopy cover; all tree types; early development
State C (SMO) - Small size (5"-9.9" dia.) trees, with open canopy cover; all tree types; mid development
State D (MOS) - Medium size (10"-19.9" dia.) trees, single storied, with open canopy cover; all tree types; late development
State E (VOS) - Large to very large size (≥ 20" dia.) trees, single storied, with open canopy cover; all tree types; late development
State F (SSC) - Seedling and sapling size trees with closed (≥ 30%) canopy cover; all tree types; early development
State G (SMC) - Small size trees, with closed canopy cover; all tree types; mid development; not part of the historic conditions, found on contemporary landscapes only
State H (MCS) - Medium size trees, single storied, with closed canopy cover; all shade tree types; late development; not part of the historic conditions, found on contemporary landscapes only

State I (VCS) - Large to very large size trees, single storied, with closed canopy cover; all tree types; late development; not part of the historic conditions, found on contemporary landscapes only

State J (MOM) - Medium size trees, multi-storied, with open canopy cover; all tree types; late development

State K (VOM) - Large to very large size trees, multi-storied, with open canopy cover; all tree types; late development

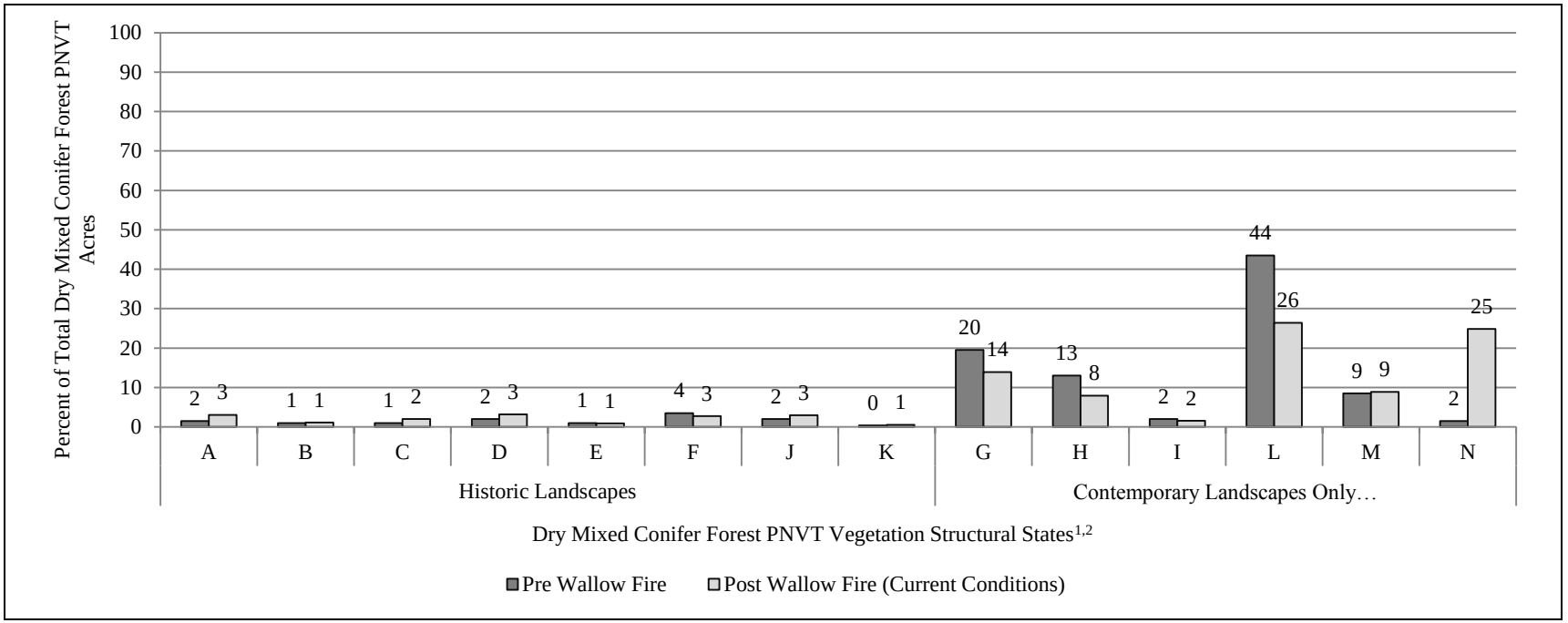
State L (MCM) - Medium size trees, multi-storied, with closed canopy cover; all tree types; late development; not part of the historic conditions, found on contemporary landscapes only

State M (VCM) - Large to very large size trees, multi-storied, with closed canopy cover; tree types; late development; not part of the historic conditions, found on contemporary landscapes only

State N (GFB/SHR) - Recently burned, grass, forb and shrub types with < 10% tree canopy cover; uncharacteristic early development due to fire; not part of the historic conditions, found on contemporary landscapes only

[2] PPF PNVT has a 76% or high departure rating from Desired Conditions making it the 2nd most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from the Nature Conservancy (Smith 2006a)

Dry Mixed Conifer Forest



[1] Dry Mixed Conifer Forest (DMCF) PNVT Vegetation Structural States. At 147,885 acres or approximately 7% of the forests this PNVT ranks 6th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Recently burned, grass, forb and shrub types with < 10% tree canopy cover; early development

State B (SSO) - Seedling and sapling size (< 5" dia.) trees with open (< 30%) canopy cover; all tree types; early development

State C (SMO Intolerant) - Small size (5"-9.9" dia.) trees, with open canopy cover; all shade intolerant tree types; mid development

State D (MOS Intolerant) - Medium size (10"-19.9" dia.) trees, single storied, with open canopy cover; all shade intolerant tree types; late development

State E (VOS Intolerant) - Large to very large size (≥ 20" dia.) trees, single storied, with open canopy cover; all shade intolerant tree types; late development

State F (SSC) - Seedling and sapling size trees with closed (≥ 30%) canopy cover; all tree types; early development

State G (SMC Mixed Tolerant) - Small size trees, with closed canopy cover; all shade tolerant and mixed shade tolerant tree types (e.g. PIPO_PSME); mid development

State H (MCS Mixed Tolerant) - Medium size trees, single storied, with closed canopy cover; all shade tolerant and mixed shade tolerant tree types (e.g. PIPO_PSME); late development

State I (VCS Mixed Tolerant) - Large to very large size trees, single storied, with closed canopy cover; all shade tolerant and mixed shade tolerant tree types (e.g. PIPO_PSME); late development

State J (MOM Intolerant) - Medium size trees, mufti-storied, with open canopy cover; all shade intolerant tree types; late development

State K (VOM Intolerant) - Large to very large size trees, multi-storied, with open canopy cover; all shade intolerant tree types; late development

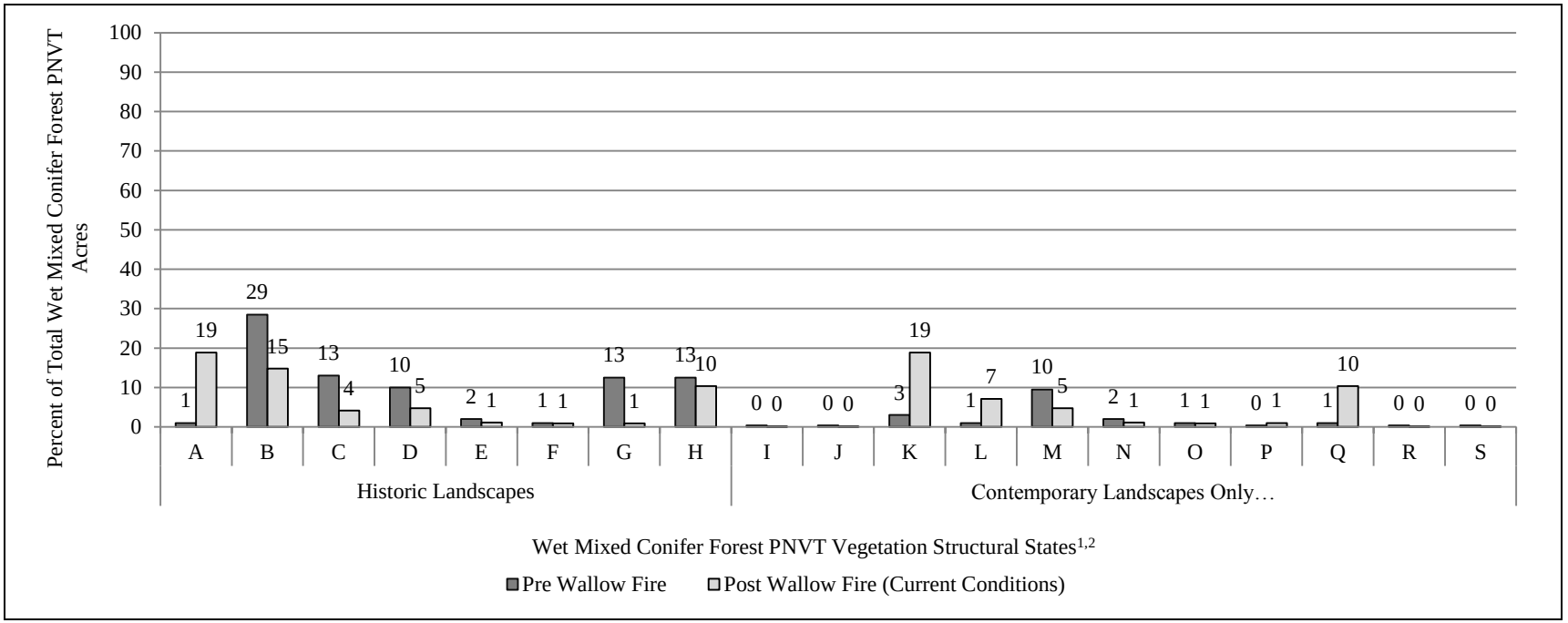
State L (MCM Mixed Tolerant) - Medium size trees, multi-storied, with closed canopy cover; all shade tolerant and mixed shade tolerant tree types (e.g. PIPO_PSME); late development

State M (VCM Mixed Tolerant) - Large to very large size trees, multi-storied, with closed canopy cover; all shade tolerant and mixed shade tolerant tree types (e.g. PIPO_PSME); late development

State N (GFB/SHR) - Recently burned, grass, forb and shrub types with < 10% tree canopy cover; uncharacteristic early development due to fire; not part of the historic conditions, found on contemporary landscapes only

[2] DMCF PNVT has a 67% or high departure rating from Desired Conditions making it tied with Great Basin grassland for the 3rd most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions derived from LANDFIRRE (2007a)

Wet Mixed Conifer Forest



[1] Wet Mixed Conifer Forest (WMCF) PNVT Vegetation Structural States. At 177,995 acres or approximately 9% of the forests this PNVT ranks 5th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR [with aspen regeneration]) - Recently burned, grass, forb and shrub types, with < 10% tree canopy cover; early development with aspen regeneration

State B (Aspen/mixed deciduous) - Seedling and sapling (< 5" dia.), small (5"-9.9" dia.), medium (10"-19.9" dia.), large to very large (≥ 20" dia.) size trees, with open (> 10% & ≤ 30%) or closed (> 30%) canopy cover, consisting of all aspen, deciduous tree mix, and evergreen-deciduous mix tree types (e.g. POTR5_PSME); with a plurality of shade intolerant tree types

State C (SSO, SSC, SMO, SMC Small Tolerant Conifers) - Seedling and sapling, and small size trees, with open or closed canopy cover; with a plurality of shade tolerant tree types

State D (MOS, MCS, MOM, MCM Mixed Tolerant Conifers) - Medium size trees, single or mufti-storied, with open or closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); with aspen regeneration

State E (VCS Tolerant Conifers and includes VCS Intolerant Conifers) - Large to very large size trees, single storied, with closed canopy cover; with a plurality of shade tolerant tree types; with aspen regeneration

State F (VCM Mixed Tolerant Conifers and includes VCM Intolerant Conifers) - Large to very large size trees, multi-storied, with closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); with aspen regeneration

State G (SSO, SMO Mixed Tolerant Conifers) - Seedling and sapling, and small size trees, with open canopy cover; shade intolerant tree types; with aspen regeneration

State H (MOS, MCS, MOM, MCM Mixed Tolerant Conifers) - Medium size trees, single or multi-storied, with open or closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME)

State I (VOS Tolerant Conifers and includes VOS Intolerant Conifers) - Large to very large size trees, single storied, with open canopy cover; with a plurality of shade tolerant tree types; not part of historic conditions, found on contemporary landscapes only

State J (VOM Tolerant Conifers and includes VOM Intolerant Conifers) - Large to very large size trees, multi-storied, with open canopy cover; with a plurality of shade tolerant tree types; not part of historic conditions, found on contemporary landscapes only

State K (GFB/SHR [with no aspen regeneration]) - Recently burned, grass, forb and shrub types, with < 10% tree canopy cover; early development; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State L (SSC, SMC Mixed Tolerant Conifers) - Seedling and sapling, and small size trees, with closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State M (MOS, MCS, MOM, MCM Mixed Tolerant Conifers) - Medium size trees, single or multi-storied, with open or closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State N (VCS Tolerant Conifers and includes VCS Intolerant Conifers) - Large to very large size trees, single storied, with open canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State O (VCM Mixed Tolerant Conifers and VCM Intolerant Conifers) - Large to very large size trees, multi-storied, with closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State P (SSO, SMO Tolerant Conifers) - Seedling and sapling, and small size trees, with open canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

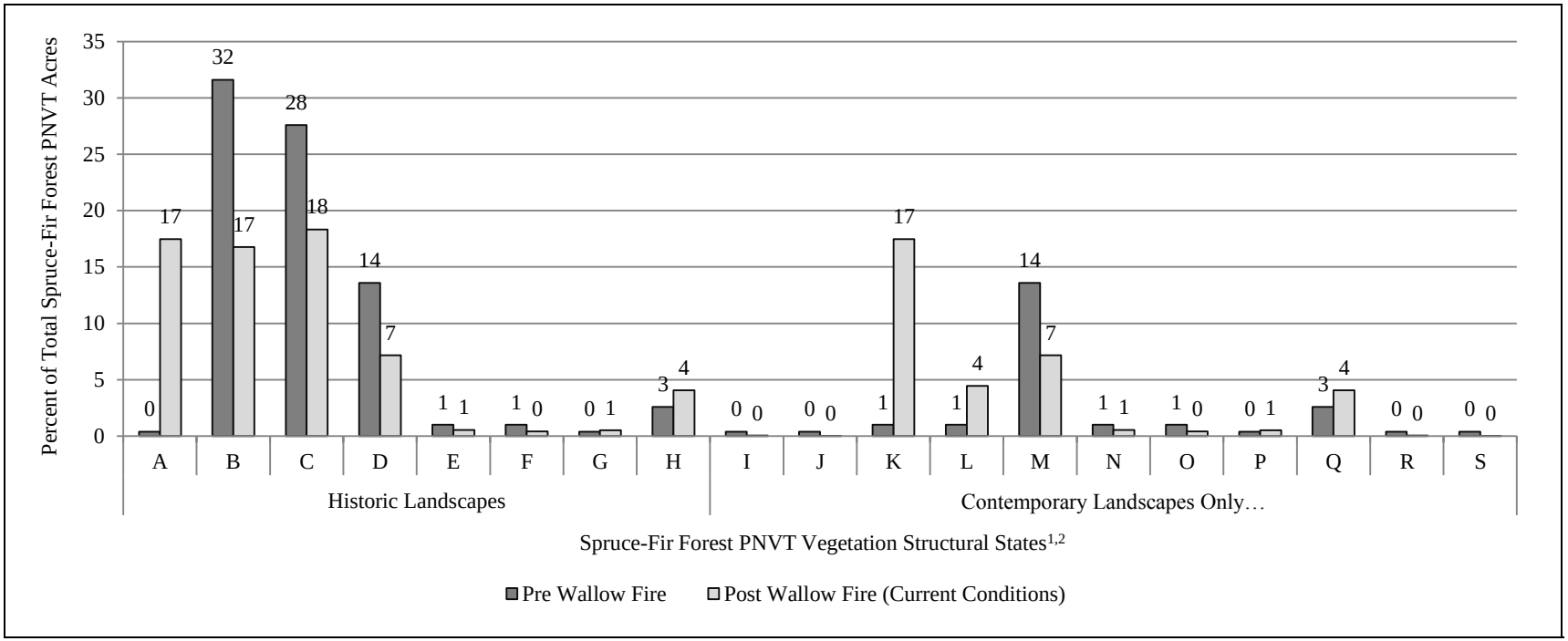
State Q (MOS, MCS, MOM, MCM Tolerant Conifers) - Medium size trees, single or multi-storied, with open or closed canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State R (VOS Mixed Tolerant Conifers and includes VOS Intolerant Conifers) - Large to very large size trees, single storied, with open canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State S (VOM Tolerant Conifers and includes VOM Intolerant Conifers) - Large to very large size trees, multi-storied, with open canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

[2] WMCF PNVT has a 59% or moderate departure rating from Desired Conditions making it the 5th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from the Nature Conservancy (Smith 2006b)

Spruce-Fir Forest



[1] Spruce-Fir Forest (SFF) PNVT Vegetation Structural States. At 17,667 acres or approximately 1% of the forests this PNVT ranks 11th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR [with aspen regeneration]) - Recently burned, grass, forb and shrub types, with < 10% tree canopy cover; early development with aspen regeneration

State B (Aspen/mixed deciduous) - Seedling and sapling (< 5" dia.), small (5"-9.9" dia.), medium (10"-19.9" dia.), large to very large (≥ 20" dia.) size trees, with open (> 10% & ≤ 30%) or closed (> 30%) canopy cover, consisting of all aspen, deciduous tree mix, and evergreen-deciduous mix tree types (e.g. POTR5_PSME); with a plurality of shade intolerant tree types

State C (SSO, SSC, SMO, SMC Small Tolerant Conifers) - Seedling and sapling, and small size trees, with open or closed canopy cover; with a plurality of shade tolerant tree types

State D (MOS, MCS, MOM, MCM Tolerant Conifers) - Medium size trees, single or mufti-storied, with open or closed canopy cover; with a plurality of shade tolerant tree types; with aspen regeneration

State E (VCS Tolerant Conifers and includes VCS Intolerant Conifers) - Large to very large size trees, single storied, with closed canopy cover; with a plurality of shade tolerant tree types; with aspen regeneration

State F (VCM Tolerant Conifers and includes VCM Intolerant Conifers) - Large to very large size trees, multi-storied, with closed canopy cover; with a plurality of shade

tolerant tree types; with aspen regeneration

State G (SSO, SMO Mixed Tolerant Conifers) - Seedling and sapling, and small size trees, with open canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); with aspen regeneration

State H (MOS, MCS, MOM, MCM Tolerant Conifers) - Medium size trees, single or multi-storied, with open or closed canopy cover; with a plurality of shade tolerant tree types

State I (VOS Tolerant Conifers and includes VOS Intolerant Conifers) - Large to very large size trees, single storied, with open canopy cover; with a plurality of shade tolerant tree types; not part of historic conditions, found on contemporary landscapes only

State J (VOM Tolerant Conifers and includes VOM Intolerant Conifers) - Large to very large size trees, multi-storied, with open canopy cover; with a plurality of shade tolerant tree types; not part of historic conditions, found on contemporary landscapes only

State K (GFB/SHR [with no aspen regeneration]) - Recently burned, grass, forb and shrub types, with < 10% tree canopy cover; early development; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State L (SSC, SMC Mixed Tolerant Conifers) - Seedling and sapling, and small size trees, with closed canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State M (MOS, MCS, MOM, MCM Tolerant Conifers) - Medium size trees, single or multi-storied, with open or closed canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration

State N (VCS Tolerant Conifers and includes VCS Intolerant Conifers) - Large to very large size trees, single storied, with open canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration

State O (VCM Tolerant Conifers and VCM Intolerant Conifers) - Large to very large size trees, multi-storied, with closed canopy cover; with a plurality of shade tolerant tree types; state exists with elk and no aspen regeneration

State P (SSO, SMO Mixed Tolerant Conifers) - Seedling and sapling, and small size trees, with open canopy cover; with a plurality of mixed shade tolerant tree types (e.g. PIPO_PSME); this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

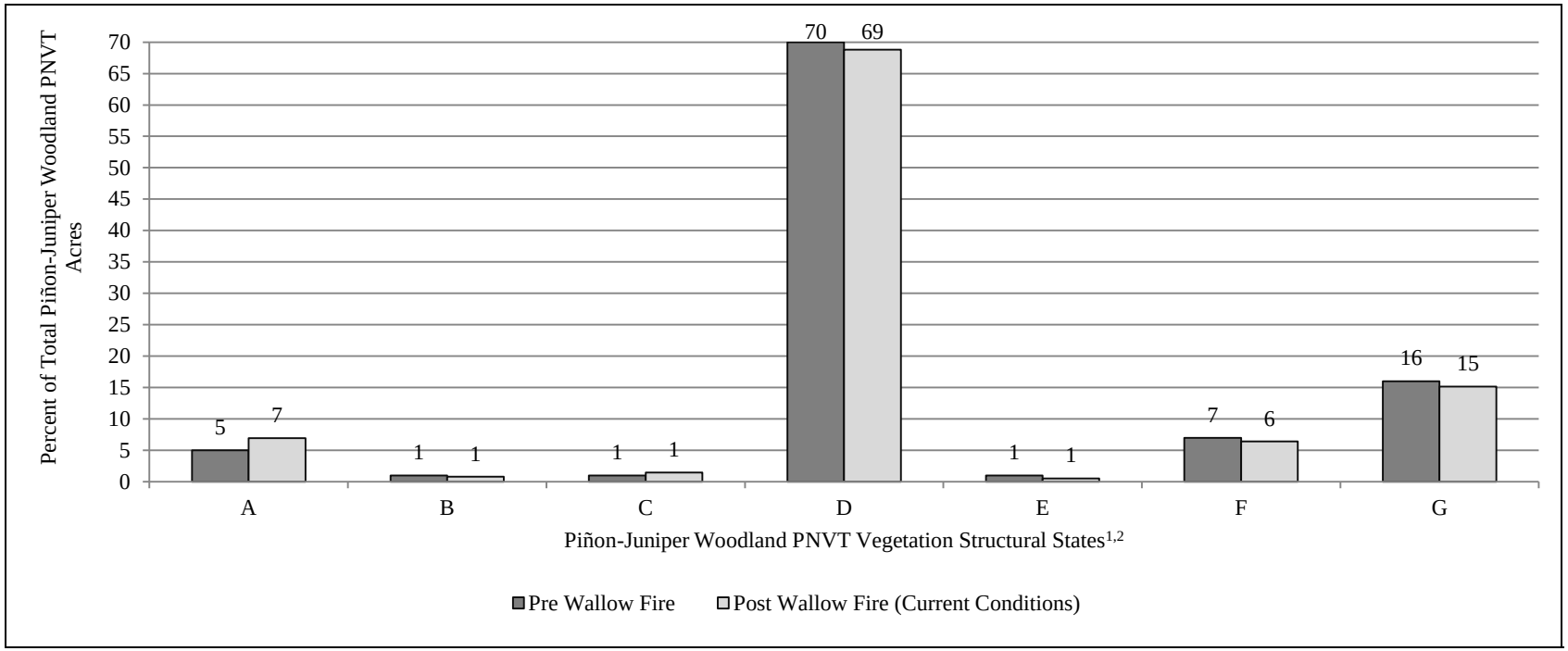
State Q (MOS, MCS, MOM, MCM Tolerant Conifers) - Medium size trees, single or multi-storied, with open or closed canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State R (VOS Tolerant Conifers and includes VOS Intolerant Conifers) - Large to very large size trees, single storied, with open canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

State S (VOM Tolerant Conifers and includes VOM Intolerant Conifers) - Large to very large size trees, multi-storied, with open canopy cover; with a plurality of shade tolerant tree types; this state exists with elk and no aspen regeneration; not part of historic conditions, found on contemporary landscapes only

[2] SFF PNVT has a 55% or moderate departure rating from Desired Conditions making it the 6th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from the Nature Conservancy (Smith 2006c)

Piñon-Juniper Woodland

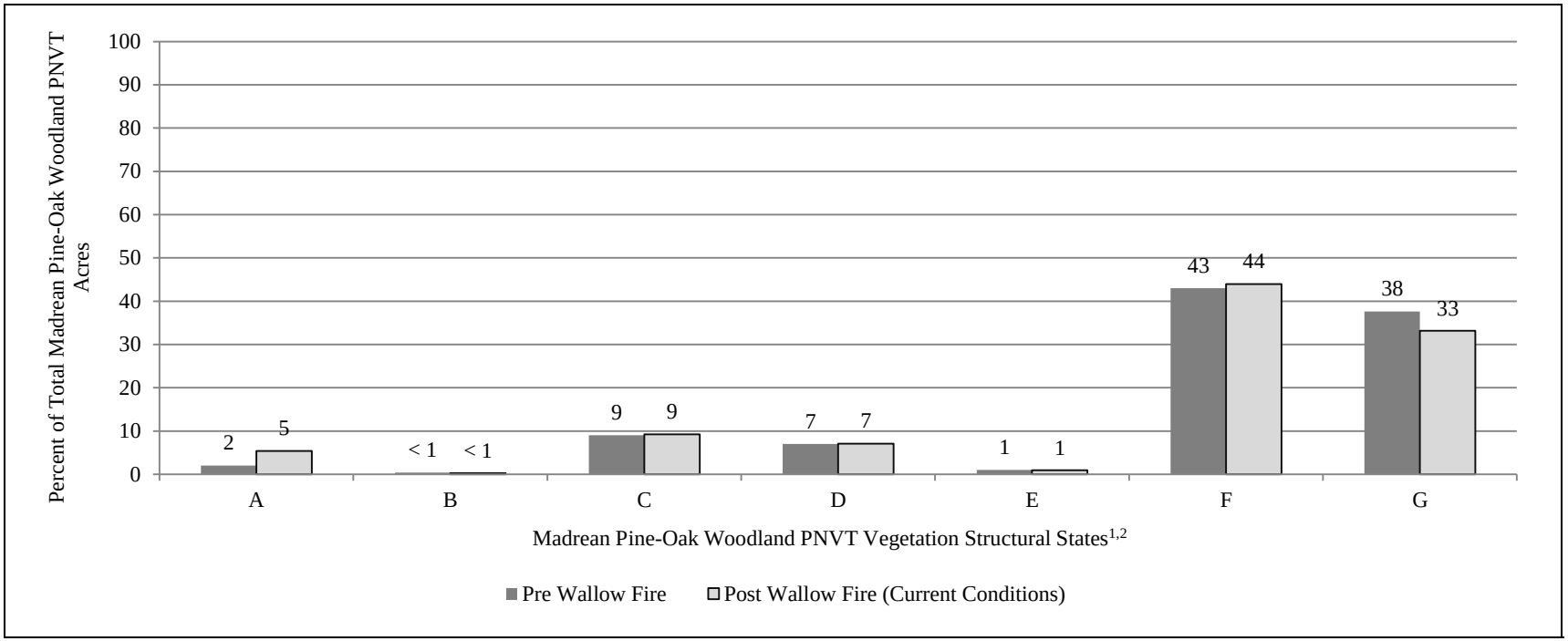


[1] Piñon-Juniper Woodland (PJW) PNVT Vegetation Structural States. At 222,155 acres or approximately 11% of the forests this PNVT ranks 3rd in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Recently burned, grass, forb and shrub types with < 10% tree canopy cover; early development
State B (SSO) - Seedling and sapling size (< 5" dia.) trees with open (< 30%) canopy cover; all tree types; early development
State C (SMO) - Small size (5"-9.9" dia.) trees, with open canopy cover; all tree types; mid development
State D (MVO) - Medium and large to very large size (≥ 10" dia.) trees, with open canopy cover; all tree types; late development
State E (SSC) - Seedling and sapling size trees with closed (≥ 30%) canopy cover; all tree types; early development
State F (SMC) - Small size trees, with closed canopy cover; all tree types; mid development
State G (MVC) - Medium and large to very large size trees, with closed canopy cover; all tree types; late development

[2] PJW PNVT has a 26% or low departure rating from Desired Conditions making it the 10th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from LANDFIRE (2003a)

Madrean Pine-Oak Woodland

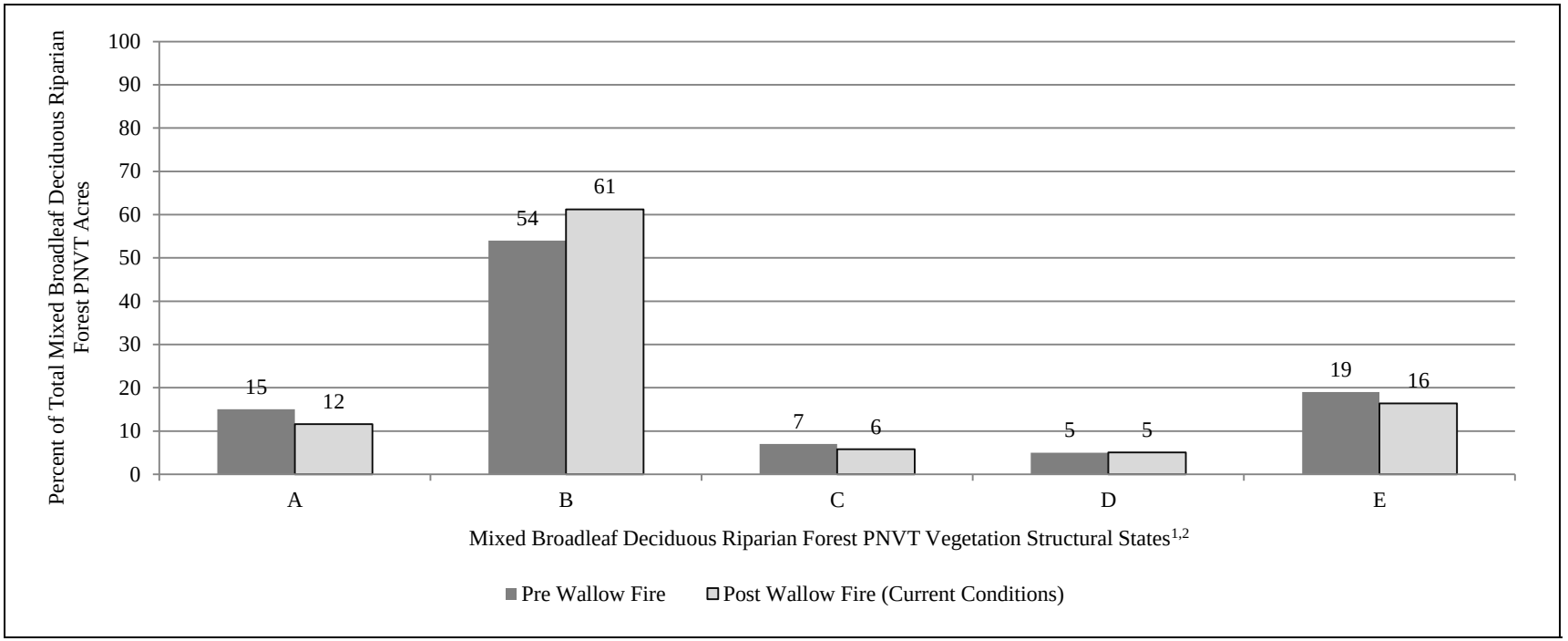


[1] Madrean Pine-Oak Woodland (MPOW) PNVT Vegetation Structural States. At 394,928 acres or approximately 20% of the forests this PNVT ranks 2nd in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Recently burned, grass, forb and shrub types with < 10% tree canopy cover; early development
State B (SSO) - Seedling and sapling size (< 5" dia.) trees with open (< 30%) canopy cover; all tree types; early development
State C (SMO) - Small size (5"-9.9" dia.) trees, with open canopy cover; all tree types; mid development
State D (MVO) - Medium and large to very large size (≥ 10" dia.) trees, with open canopy cover; all tree types; late development
State E (SSC) - Seedling and sapling size trees with closed (≥ 30%) canopy cover; all tree types; early development
State F (SMC) - Small size trees, with closed canopy cover; all tree types; mid development
State G (MVC) - Medium and large to very large size trees, with closed canopy cover; all tree types; late development

[2] MPOW PNVT has a 61% or high departure rating from Desired Conditions making it the 4th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from the Nature Conservancy (Schussman and Gori 2006)

Mixed Broadleaf Deciduous Riparian Forest



[1] Mixed Broadleaf Deciduous Riparian Forest (MBDRF) PNVT Vegetation Structural States. At 9,657 acres or approximately 0.5% of the forests this PNVT ranks 13th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Herbaceous vegetation regeneration, recently burned, sparsely vegetated; with < 10% tree or shrub canopy cover; early development

State B (SSC, SMC, MCS) - Shrubs, seedling and sapling size (< 5" dia.), small size (5"-9.9" dia.), and medium size (10"-19.9" dia.) trees with closed (> 30%) canopy cover; mid development

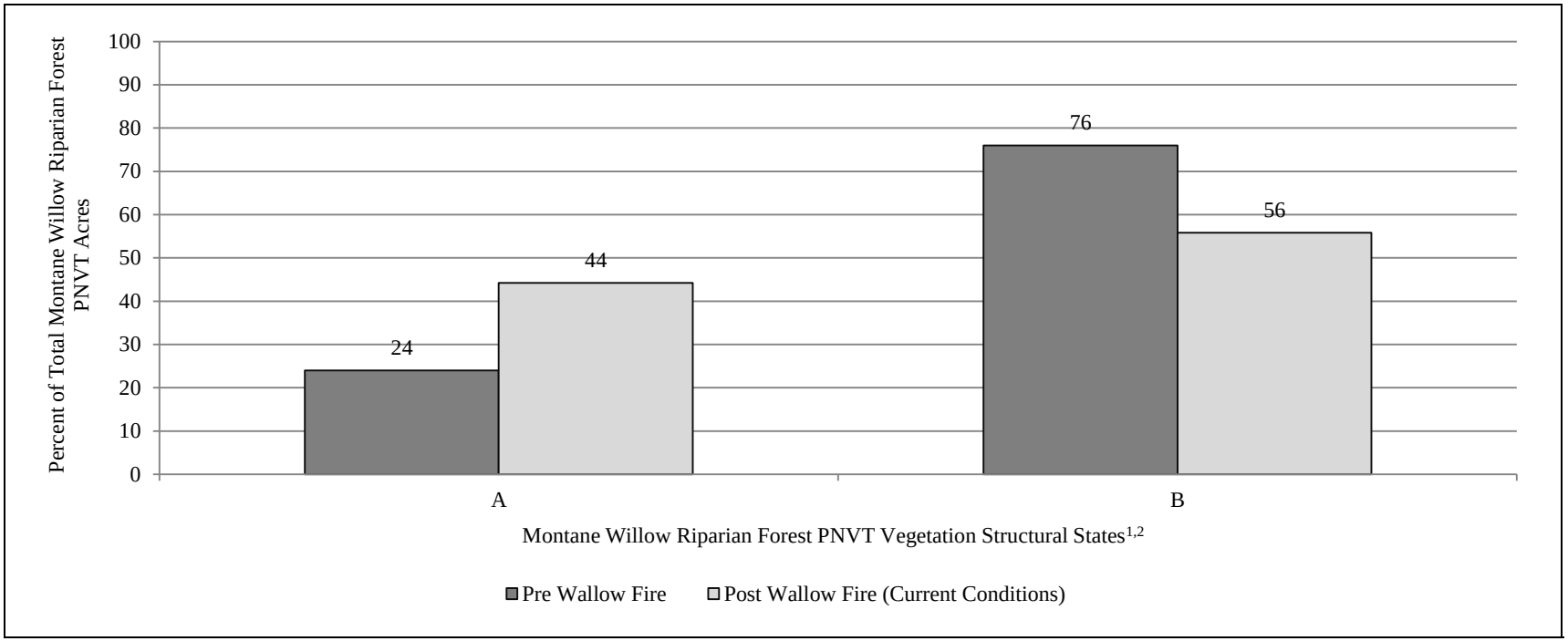
State C (SSO, SMO) - Shrubs, seedling and sapling, and small size trees with open (< 30%) canopy cover; mid development

State D (MOS, VOS) - Shrubs, medium size, and large to very large size (> 20" dia.) trees with open canopy cover; late development

State E (VCS) - Shrubs, and large to very large size trees with closed canopy cover; late development

[2] MBDRF PNVT has a 33% or low departure rating from Desired Conditions making it the 9th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions derived from LANDFIRE (2007d)

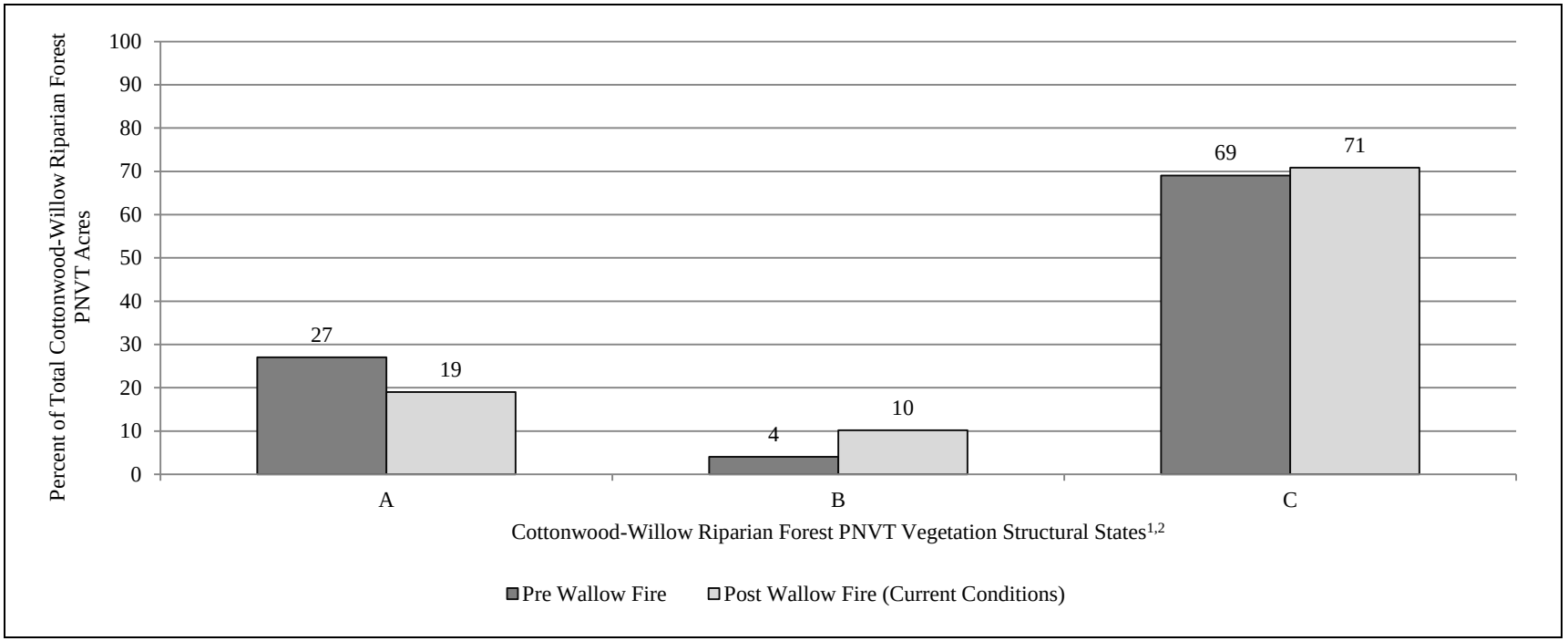
Montane Willow Riparian Forest



[1] Montane Willow Riparian Forest (MWRF) PNVT Vegetation Structural States. At 4,808 acres or approximately 0.2% of the forests this PNVT is the smallest on the ASNFs
State A (GFB/SHR, SSO) - Herbaceous vegetation regeneration, recently burned, and shrubs, and seedling and sapling size (< 5" dia.) trees with open (< 30%) canopy cover; early development
State B (MOS, VOS, SSC, SMC, MCS, VCS) - Shrubs, seedling and sapling, small size (5"-9.9" dia.) trees with closed (≥ 30%) canopy cover, and medium size (10"-19.9" dia.), and large to very large size trees with open or closed canopy cover; mid development

[2] MWRF PNVT has a 21% or low departure rating from Desired Conditions making it the 12th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from LANDFIRE (2007e)

Cottonwood Willow Riparian Forest



[1] Cottonwood-Willow Riparian Forest (CWRF) PNVT Vegetation Structural States. At 15,876 acres or approximately 0.8% of the forests this PNVT ranks 10th in order of size out of the 14 PNVTs on the ASNFs

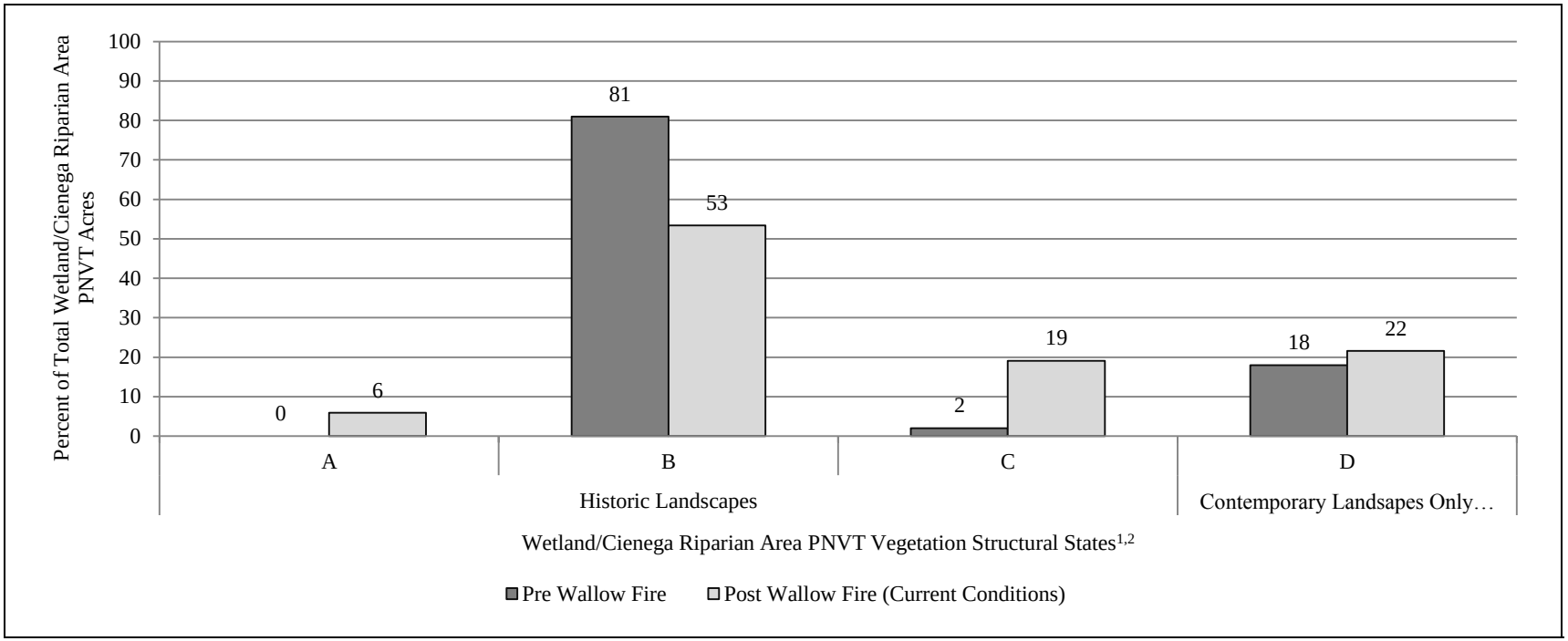
State A (GFB/SHR, SSO, SSC) - Herbaceous vegetation dominated with shrubs, seedling and sapling size (< 5" dia.) trees with open (< 30%) or closed (≥ 30%) canopy cover; early development

State B (SMO, SMC) - Tall shrubs and small size (5-9.9" dia.) trees with open or closed canopy cover; mid development

State C (MOS, MCS, VOS, VCS) - Medium size (10-19.9" dia.) and large to very large (> 20" dia.) size trees with open or closed canopy cover; late development

[2] CWRF PNVT has a 20% or no departure rating from Desired Conditions making it the 12th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from LANDFIRE (2007d)

Wetland/Cienega



[1] Wetland/Cienega Riparian Area (WCRA) PNVT Vegetation Structural States. At 17,900 acres or approximately 0.9% of the forests this PNVT ranks 10th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Herbaceous vegetation regeneration, recently burned, sparsely vegetated; with < 10% tree or shrub canopy cover; early development

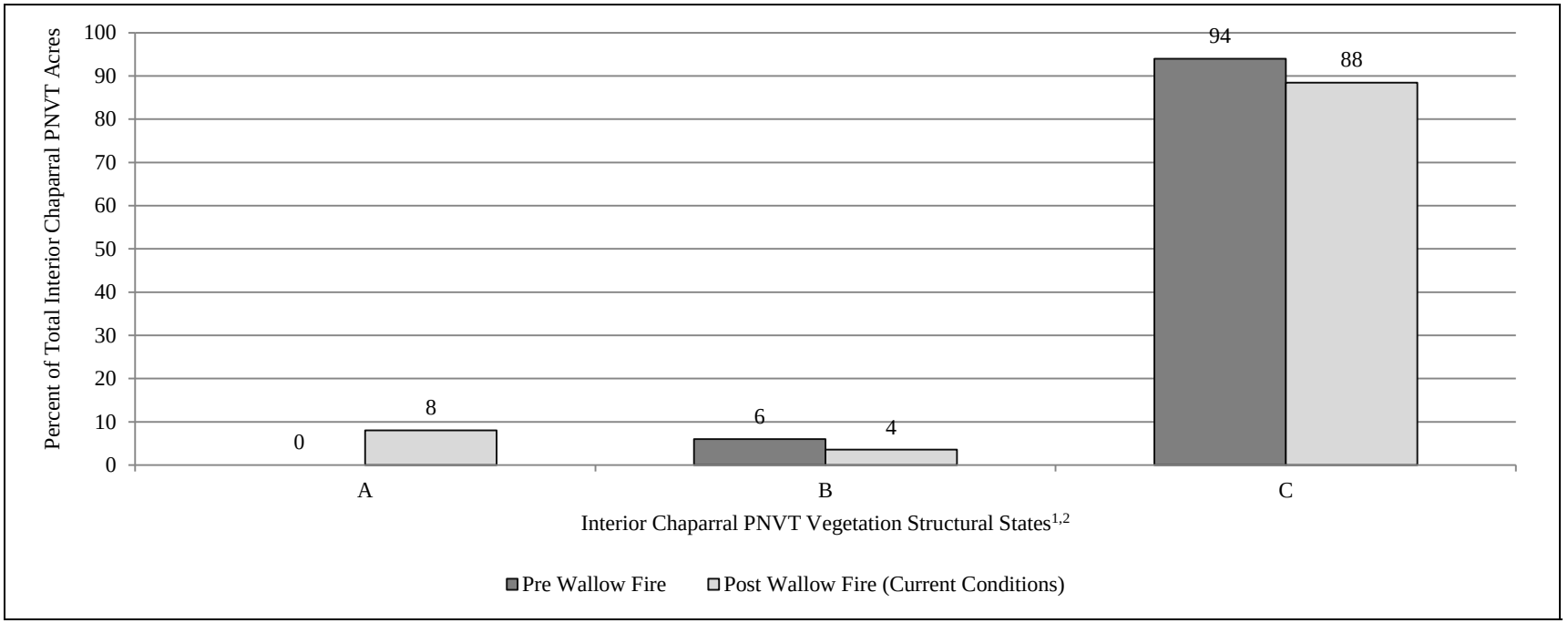
State B (GFB/SHR) - Perennial herbaceous vegetation, with < 10% tree or shrub canopy cover; mid development

State C (GFB/SHR, SSO, SSC) - Shrubs, and seedling and sapling size (< 5" dia.) trees with open (< 30%) or closed (≥ 30) canopy cover, with perennial herbaceous vegetation; mid development

State D (SMO, SMC, MOS, MCS, VOS, VCS) - Shrubs, small size (5"-9.9" dia.), medium size (10"-19.9" dia.), and large to very large size (> 20" dia.) trees with open (< 30%) or closed (≥ 30) canopy cover, with herbaceous vegetation; late development; not part of the historic conditions, found on contemporary landscapes only

[2] WCRA PNVT has a 36% or low departure rating from Desired Conditions making it the 8th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from LANDFIRE (2003b)

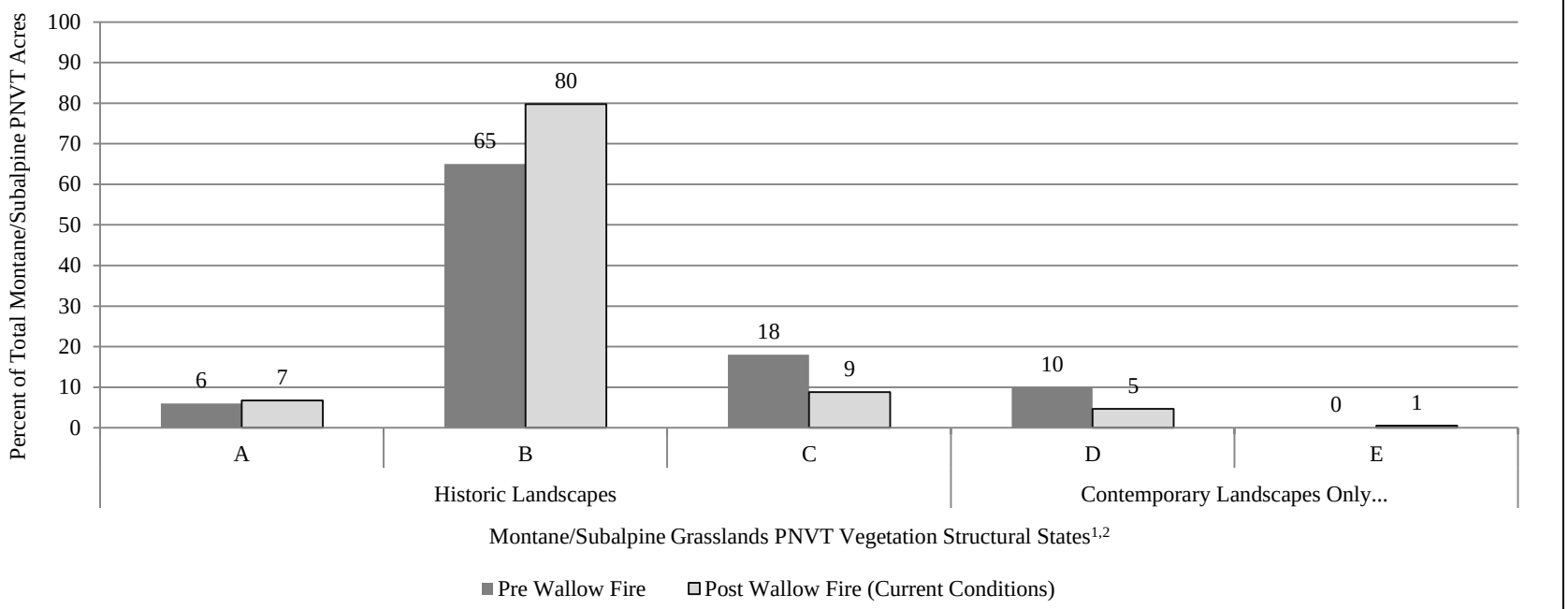
Interior Chaparral



[1] Interior Chaparral (IC) PNVT Vegetation Structural States. At 55,981 acres or 3% of the forests this PNVT ranks 8th in order of size out of the 14 PNVTs on the ASNFs
State A (GFB/SHR) - Herbaceous vegetation regeneration, recently burned, sparsely vegetated; with < 10% shrub or tree canopy cover; early development
State B (SSO, SMO) - Open perennial herbaceous vegetation, with shrubs, seedling and sapling size (< 5" dia.) and small size (5"-9.9" dia.) trees with open (< 30% canopy cover; mid development
State C (SSC, SMC, MOS, MCS, VOS, VCS) - Shrubs, seedling and sapling, small, medium size (10"-19.9" dia.), and large to very large size (> 20" dia.) trees with closed (≥ 30) canopy cover, and medium and large to very large size (> 20" dia.) trees with open canopy cover with no herbaceous vegetation understory; late development

[2] IC PNVT has an 8% or no departure rating from Desired Conditions making it the least departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions derived from the Nature Conservancy (Schussman 2006b)

Montane/Subalpine Grasslands



[1] Montane/Subalpine Grasslands (MSG) PNVT Vegetation Structural States. At 51,559 acres or approximately 3% of the forests this PNVT ranks 9th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Herbaceous vegetation regeneration, recently burned, sparsely vegetated; with < 10% tree or shrub canopy cover; early seral development

State B (GFB/SHR) - Perennial herbaceous vegetation, with < 10% tree or shrub canopy cover; mid seral development

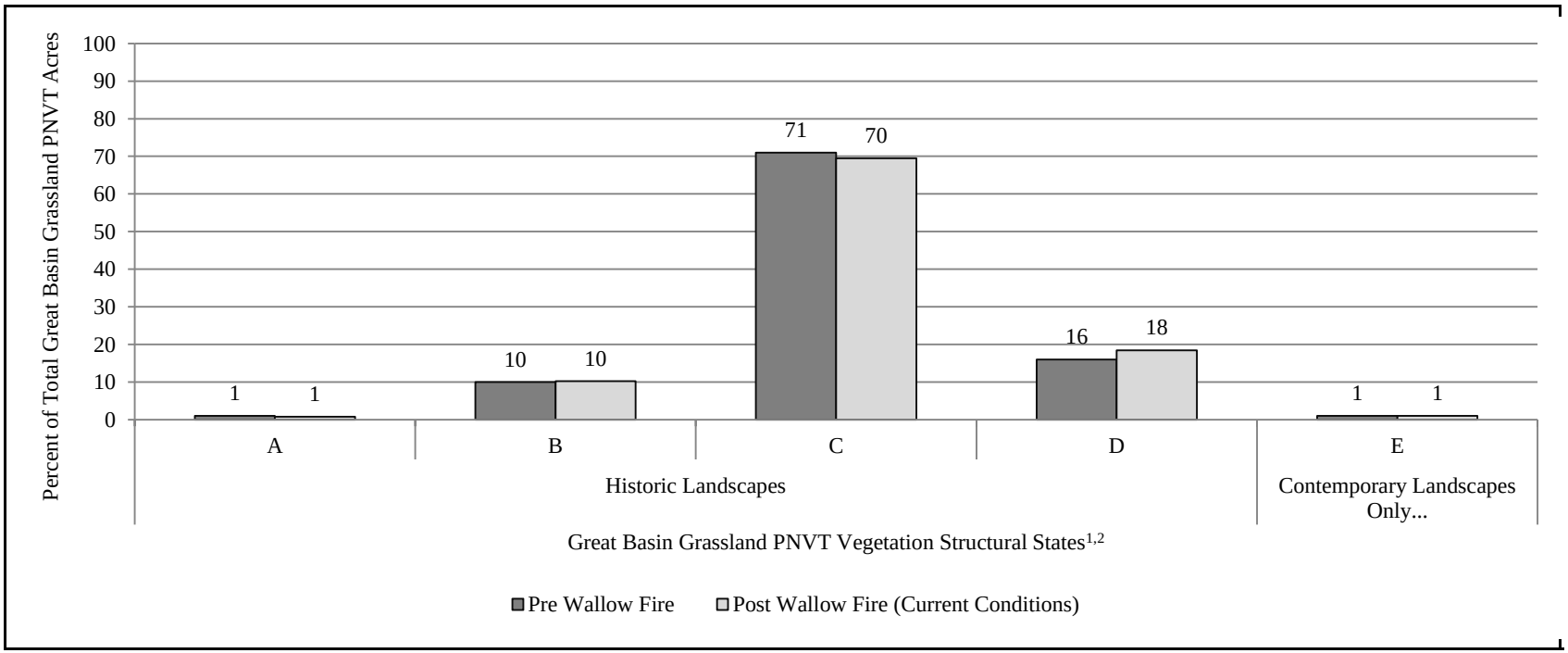
State C (GFB/SHR) - Perennial herbaceous vegetation, with < 10% tree or shrub canopy cover; late seral development

State D (SSO, SMO, MOS, VOS, SSC, SMC, MCS, VCS) - Shrubs, seedling and sapling size (< 5" dia.), small size (5"-9.9" dia.), medium size (10"-19.9" dia.), and large to very large size (> 20" dia.) trees with open (< 30%) or closed (≥ 30) canopy cover, with perennial herbaceous vegetation; not part of the historic conditions; not part of historic conditions, found on contemporary landscapes only

State E (NWINP) - Various noxious weeds and invasive non-native plants makeup a significant portion of the herbaceous vegetation composition; not part of historic conditions, found on contemporary landscapes only

[2] MSG PNVT has a 54% or moderate departure rating from Desired Conditions making it the 7th most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from LANDFIRE (2007c)

Great Basin Grassland



[1] Great Basin Grassland (GBG) PNVT Vegetation Structural States. At 185,523 acres or approximately 9% of the forests this PNVT ranks 4th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Herbaceous vegetation regeneration, recently burned, sparsely vegetated; with < 10% tree or shrub canopy cover; early development

State B (GFB/SHR) - Open perennial herbaceous vegetation, with < 10% tree or shrub canopy cover; mid development

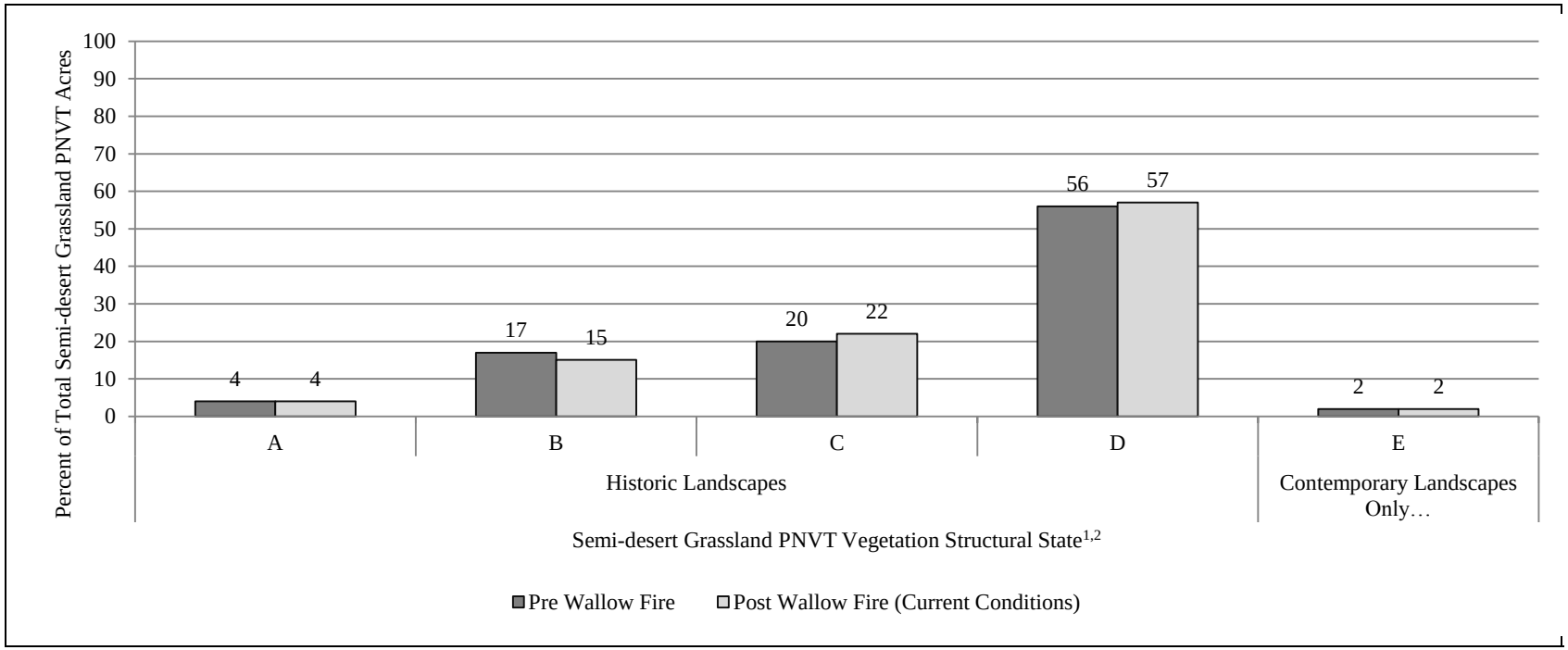
State C (SSO, SMO, MOS) - Perennial herbaceous vegetation with shrubs, seedling and sapling size (< 5" dia.), small size (5"-9.9" dia.), and medium size (10"-19.9" dia.) trees with open (< 30%) canopy cover; late development

State D (SSC, SMC, MCS, VOS, VCS) - Shrubs, seedling and sapling, small, medium, and large to very large size (> 20" dia.) trees with closed (≥ 30%) canopy cover, and large to very large size trees with open canopy cover with perennial herbaceous vegetation, mid development

State E (NWINP) - Various noxious weeds and invasive non-native plants makeup a significant portion of the herbaceous vegetation composition; not part of historic conditions, found on contemporary landscapes only

[2] GBG PNVT has a 67% or high departure rating from Desired making it tied with dry mixed conifer forest for the 3rd most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions derived from LANDFIRE (2007b)

Semi-desert Grassland



1 Semi-desert Grassland (SDG) PNVT Vegetation Structural States. At 106,952 acres or approximately 5% of the forests this PNVT ranks 7th in order of size out of the 14 PNVTs on the ASNFs

State A (GFB/SHR) - Herbaceous vegetation regeneration, recently burned, sparsely vegetated; with < 10% tree or shrub canopy cover; early development

State B (GFB/SHR) - Perennial herbaceous vegetation, with < 10% tree or shrub canopy cover; mid development

State C (SSO, SMO, MOS) - Perennial herbaceous vegetation with shrubs, seedling and sapling size (< 5" dia.), small size (5"-9.9" dia.), and medium size (10"-19.9" dia.) trees with open (< 30%) canopy cover; late development; not part of the historic conditions, found on contemporary landscapes only

State D (SSC, SMC, MCS, VOS, VCS) - Shrubs, seedling and sapling, small, medium, and large to very large size (> 20" dia.) trees with closed (≥ 30%) canopy cover, and large to very large size trees with open canopy cover with perennial herbaceous vegetation, mid development; not part of the historic conditions, found on contemporary landscapes only

State E (NWINP) - Various noxious weeds and invasive non-native plants makeup a significant portion of the herbaceous vegetation composition; not part of historic conditions, found on contemporary landscapes only

2 SDG PNVT has an 81% or severe departure rating from Desired Conditions making it the most departed PNVT on the ASNFs. Desired Conditions were provided by the Regional Office, and reference conditions were derived from the Nature Conservancy (Schussman 2006a)

Appendix C – Excerpt from Addendum to Eligibility Report for the National Wild and Scenic River System

This appendix contains an excerpt from the April 2012 *Addendum to Eligibility Report for the National Wild and Scenic River System*.

The addendum updates river conditions in light of the 2011 Wallow Fire and presents additional information for East Eagle Creek. The Outstandingly Remarkable Values (ORVs) for the eligible and suitable Wild and Scenic Rivers within the perimeter of the Wallow Fire were reviewed in late 2011. The Wallow Fire burned over 538,000 acres on the Apache-Sitgreaves National Forests and adjacent ownerships in May and June of 2011. The review focuses on the long-term assessment of eligibility because of the changed conditions.

The review found the ORVs for each river are still valid and will remain valid into the future. Each eligible river and its ORVs are discussed below. Specific information for each river is shown in table 1. The percentages of fire severity are for the portion of the river segment that lies within the fire perimeter.

Maps of rivers that were partially affected by the Wallow Fire can be found in the addendum. Maps for the remaining rivers can be found in the 2009 Eligibility Report for the National Wild and Scenic River System, Apache-Sitgreaves National Forests.

Eligible rivers affected by the Wallow Fire

Bear Wallow Creek

The Wallow Fire affected the entire eligible river: Segments 1 and 2. Fire severity along Segment 1 was mostly unburned (72 percent) and low (22 percent), with patches of moderate (4 percent) and high (2 percent). Segment 2 showed mostly unburned (69 percent) and low (26 percent) severity, with patches of moderate (5 percent). Vegetation along Segment 1 is conifer forests and pine oak woodland, while Segment 2 is pine oak woodland and conifer forest. Riparian vegetation, including montane willow riparian forest, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscapes along the river were not affected. It is expected that aspen regeneration will be very high along the entire eligible river, with the extent of fall colors greater than in the past. In this regard, the river corridor will continue to be showcase of forest succession. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. Recreation opportunities are unchanged for the long-term, although the fishery may be depleted for some time. Hunting opportunities may increase because of more diverse vegetation and more open forests.

Fish habitat will continue to be an ORV for this river. Bear Wallow Creek is identified as necessary for Apache trout recovery; short- and long-term management for this purpose will

continue. Approximately ½ mile of Apache trout recovery habitat was directly affected. The effects of fire in the uplands will indirectly affect an additional 3½ miles of recovery habitat. Habitat quality and conditions have been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation. Work on or reconstruction of the fish barrier to prevent upstream movement of non-native fishes must not affect the free-flowing character of Bear Wallow Creek and must be in conformance with the Wilderness Act and FSH 1909.12, section 82.51.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along Bear Wallow Creek were primarily unburned, with short sections of low severity fire. The riparian areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support predators and raptors, including the northern goshawk. Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). The regrowing shrubs and down trees will maintain habitat for black bear and blue grouse. Mexican spotted owls may persist in the river corridor.

Vegetation will continue to be an ORV for this river. The riparian areas were generally unburned and will recover over time. Plant species such as Goodding's onion and Blumer's dock will regrow from underground rhizomes. Aspen will resprout throughout the river corridor. Moderate and high severity fire created scattered openings on north-facing slopes, which will increase vegetation diversity as succession occurs.

Black River (Mainstem)

The Wallow Fire affected the entire eligible river: Segments 1, 2, and 3. Fire severity along Segment 1 was unburned (14 percent), low (69 percent), and moderate (14 percent) with a small amount of high (3 percent). Segment 2 showed a mix of unburned (62 percent) and low severity (38 percent). Fire severity along Segment 3 was predominantly unburned (32 percent) and low (65 percent), with 3 percent moderate severity. Vegetation along Segment 1 is conifer forests and grassland, while Segment 2 is conifer forests. Segment 3 vegetation is conifer forests and pine oak woodland. Riparian vegetation, including montane willow riparian forest, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscape along the river (lava ridges, canyon size, scree slopes, and colorful canyon walls) was not affected. The canyon should be more open where the mostly low severity fire removed brush and undergrowth. Higher fire severities on some north-facing slopes should result in openings with different plant species than nearby forested slopes. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. The available opportunities have not changed and will continue to attract users, although the fishery may be depleted for some time.

Fish species and habitat will continue to be ORVs for this river. Short- and long-term management for native fish species recovery will continue and is critical for roundtail chub.

Approximately 16 miles of the Black River were directly affected. The effects of fire in the uplands will indirectly affect an additional 2 miles of native fish habitat. Habitat quality and native fish populations have been, and possibly for many years, will be affected by impacts to the watershed and increased sedimentation.

The Black River currently supports one of two roundtail chub populations on the Apache-Sitgreaves NFs and contains populations of desert sucker, speckled dace, and Sonora sucker. Wallow fire impacts to the roundtail chub population include reduced habitat (especially pool quality) from increased sedimentation. Concurrent increases in non-native species abundance will also affect all native species. However, native fish populations will persist at possibly reduced levels, but should improve when aquatic habitat, riparian, and watershed recovery occur.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along the Black River were primarily unburned or experienced low severity fire. These areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. The regrowing shrubs and down trees will maintain habitat for black bear. Riparian areas with moderate or high fire severity are expected to recover slowly, with a slower return of riparian-associated wildlife species. Mexican spotted owls may persist in the river corridor.

Campbell Blue Creek

The Wallow Fire affected almost all of the eligible river: Segments 1, 2, and most of 3. Fire severity along Segment 1 was predominantly low (98 percent) with some moderate (2 percent). Segment 2 showed a mix of low (64 percent), moderate (12 percent), and high (18 percent) severities, with 6 percent unburned. The moderate and high fire severities were primarily in the mixed conifer forest. Fire severity along the affected portion of Segment 3 was primarily unburned (53 percent) and low (44 percent) with some moderate (3 percent). Vegetation along Segment 1 is conifer forests, while Segments 2 and 3 are conifer forests and pine oak woodland. Riparian vegetation, including montane willow and cottonwood-willow riparian forests, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscapes along the river (canyons, cliffs, and meadows) were not affected. The canyon should be more open where low severity fire removed brush and undergrowth. It is expected that the riparian vegetation will rebound and that aspen regeneration will be high where it was present, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. The recreation opportunities available along the river corridor have not changed and will continue to attract visitors, although the fishery may be depleted for some time.

Fish species and habitat will continue to be ORVs for Campbell Blue Creek. Short- and long-term management of this eligible river for native fish species recovery and viability will continue and is essential for the loach minnow and its designated critical habitat. Approximately 10 miles of Campbell Blue Creek were directly affected. The effects of fire in the uplands will indirectly affect an additional 2 miles of native fish habitat.

Campbell Blue Creek supports one of three loach minnow populations on the ASNFs and 7½ miles of its designated critical habitat. Critical habitat for spikedace has recently been proposed for Campbell Blue Creek. Campbell Blue Creek also contains populations of desert sucker, longfin dace, speckled dace, and Sonora sucker. Wallow fire impacts to these species' habitats (especially pool quality) will probably be greatest to the loach minnow, because of its sensitivity to increased sediment. Concurrent increases in non-native species abundance will also affect the native fish species. Native fish populations may persist at reduced levels, but should improve when aquatic habitat, riparian, and watershed recovery occurs.

Wildlife species will continue to be an ORV for this river. Riparian areas along Campbell Blue Creek were primarily unburned or experienced low severity fire, with a section of moderate and high severity in Segment 2. The unburned and low severity areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. Wildlife habitat in the moderate and high severity area in Segment 2 is expected to recover slowly, with a slower return of riparian-associated wildlife species. Mexican spotted owls may persist in the river corridor.

Vegetation will continue to be an ORV for this river. The riparian areas were generally unburned and will recover. Plant species such as Blumer's dock and yellow lady's-slipper regrow from underground rhizomes. Aspen will resprout where it was previously present. Moderate and high severity fire created several openings, which will increase vegetation diversity as succession occurs. The woody riparian species and ponderosa pines in Segment 3 were generally not affected by fire.

East Eagle Creek

The Wallow Fire affected approximately 1.4 miles of the river corridor in Segment 1; Segments 2 and 3 were not directly affected. Fire severity along the affected portion of Segment 1 was mostly unburned (75 percent) and low (24 percent), with 1 percent moderate. Vegetation along Segment 1 is conifer forest and pine oak woodland. Riparian vegetation occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Recreation will continue to be an ORV for this river. The recreation opportunities available along the river corridor have not changed and will continue to attract visitors. Greater diversity of vegetation may improve habitat for big game species.

Fish species and habitat will continue to be ORVs for East Eagle Creek. Short- and long-term management of this eligible river for Gila chub recovery and its designated critical habitat will continue. Approximately ½ mile of East Eagle Creek was directly affected. The effects of fire in

the uplands will indirectly affect an additional 14½ miles of native fish habitat. The impacts to East Eagle Creek, its riparian areas, and the watershed will affect habitat quality for native fish.

East Eagle Creek supports one of three Gila chub populations on the ASNFs and 15 miles of designated critical habitat. Wallow fire impacts to Gila chub habitat include reduced habitat quality (especially pool quality) from increased sedimentation. Concurrent increases in non-native species abundance will also affect the Gila chub. However, the Gila chub may persist at reduced levels, but should improve when aquatic habitat, riparian, and watershed recovery occurs.

East Fork Black River

The Wallow Fire affected the entire eligible river: Segments 1, 2, and 3. Fire severity along Segment 1 was mostly low (44 percent) and moderate (38 percent), with some unburned (15 percent) and high (7 percent). Segment 2 showed mostly low (44 percent) and moderate (38 percent) severities, with 15 percent unburned and 3 percent high. Fire severity along Segment 3 was mostly unburned (27 percent) and low (60 percent), with 10 percent moderate and 3 percent high. Vegetation along Segment 1 is conifer forests, grassland, and wetland, while Segment 2 is conifer forests and grassland. Segment 3 vegetation is conifer forests. Riparian vegetation, including montane willow riparian forest, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscapes along the river (canyons, cliffs, and rolling meadows) were not affected. The canyon should be more open where the mostly low severity fire removed brush and undergrowth. Higher fire severities on some north-facing slopes should result in openings with different plant species than nearby forested slopes. It is expected that aspen regeneration will be very high along the entire eligible river, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. The recreation opportunities available along the river corridor have not changed and will continue to attract visitors, although the fishery may be depleted for some time. Motor vehicle access through Segment 3 may be different in the future, depending on long-term effects of any flooding and rock falls. Apache trout will continue to be stocked in Segment 3.

Fish habitat will continue to be an ORV for this river. Short- and long-term management of East Fork Black River for recovery of native fish species will continue and is critical for the loach minnow and its designated critical habitat. Approximately 6 miles of this eligible river were directly affected. The effects of fire in the uplands will indirectly affect an additional 6 miles of native fish habitat. Habitat quality for native fish species has been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation.

The East Fork Black River supports one of three loach minnow populations on the Apache-Sitgreaves NFs and includes designated critical habitat. There are also populations of desert sucker, speckled dace, and Sonora sucker. Wallow fire impacts to these species' habitats (especially pool quality) will be greatest to the loach minnow, which is affected by increased sedimentation. Concurrent increases in non-native species abundance will affect all native

species. Native fish populations will persist at possibly reduced levels, but should improve when aquatic habitat, riparian, and watershed recovery occur.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along the East Fork Black River were primarily unburned or experienced low severity fire. These areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. Mexican spotted owls may persist in the river corridor.

The Three Forks area was slightly affected by the fire; sediment flows from burned hillsides are a continuing concern. Straw wattles were placed uphill of important habitats to reduce sediment effects to wildlife and aquatic species.

Historic resources will continue to be an ORV for this river. None of the identified historic features was affected by the Wallow Fire.

East Fork Little Colorado River

The Wallow Fire affected approximately 66 percent of the eligible river corridor, from State Highway 273 northeast towards Greer. Fire severity was generally unburned (18 percent) to low (45 percent) in the affected portion of river corridor. The upper 4½ miles of affected river corridor show mostly low severity and unburned areas with patches of moderate and high severity. The high (12 percent) and moderate (12 percent) severity is concentrated along the lower portion of the river corridor. Vegetation along the upper affected river is conifer forests, grassland, and wetland; the lower, more severely burned portion was conifer forests. Riparian vegetation, including wetland/cienega areas, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The landscapes associated with the western portion of the eligible river in Mount Baldy Wilderness remain untouched. The physical landscapes along the river were not affected. It is expected that aspen regeneration will be very high in all affected areas, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more canyon walls visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. The recreation opportunities associated with the western portion of the river in Mount Baldy Wilderness remain unchanged. The user-created route along the very eastern portion of the eligible river was probably affected by falling trees and any flooding. Future users will probably re-establish this route. The physical isolation and solitude found in the canyon are not affected and may increase if the lower canyon receives less visitor use. The variety of wildlife seen along the river corridor may increase with the anticipated greater vegetation diversity.

Fish habitat will continue to be an ORV for this river. The East Fork Little Colorado River is identified as necessary for Apache trout recovery; short- and long-term management for this

purpose will continue. Approximately 5 miles of Apache trout recovery habitat were directly affected. The effects of fire in the uplands will indirectly affect an additional 2½ miles of recovery habitat. Habitat quality and conditions have been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation. A small population of Apache trout is expected to remain in the upper 3 miles of this eligible river, outside the fire perimeter.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along the East Fork Little Colorado River were unburned or experienced low severity fire expect for the lower 1½ miles. The riparian areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds).The lower 1½ miles of the river corridor experienced mostly moderate and high fire severity. Wildlife habitat here is expected to recover slowly, with a slower return of riparian-associated wildlife species. Mexican spotted owls may persist in the river corridor. The Upper Little Colorado River Watershed Important Bird Area will continue to provide breeding habitat for a variety of bird species.

Vegetation will continue to be an ORV for this river. The riparian communities along the affected portion of the eligible river were generally not adversely affected by the fire except along the lower 0.3 miles. Riparian vegetation is expected to rebound and overall vegetation diversity in the river corridor will probably increase. The Phelps Cabin RNA and Phelps Botanical Area were not affected by the fire.

Fish Creek

The Wallow Fire affected the entire eligible river: Segments 1 and 2. Fire severity along Segment 1 was a mix of low (31 percent), moderate (27 percent), and high (37 percent), with some unburned (5 percent). Segment 2 was predominantly low (73 percent) and moderate (26 percent) severities, with 1 percent high. Vegetation along the eligible river is conifer forests and wetlands. Riparian vegetation, including montane willow riparian forest in Segment 2, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscapes along the river (canyons and cliffs) were not affected. Moderate and high fire severities along the river corridor should result in large areas with different plant species than nearby forested slopes. It is expected that the riparian vegetation will rebound and that aspen regeneration will be very high where it was present, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river, although the fishery may be depleted for some time. Hiking and backpacking will continue to be recreation activities that attract visitors to the river corridor, but the experiences will be different because of the moderate and high fire severities through the river canyon and the potentially very different vegetation in the future.

Fish habitat will continue to be an ORV for this river. Fish Creek is identified as necessary for Apache trout recovery even though stream and watershed impacts are severe. Short- and long-term management for Apache trout will continue. Approximately 8½ miles of Apache trout recovery habitat was directly affected. The effects of fire in the uplands will indirectly affect an additional 1½ miles of recovery habitat. Habitat quality and conditions have been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation. Reconstruction of the fish barrier to prevent upstream movement of non-native fishes must not affect the free-flowing character of Fish Creek and must be in conformance with FSH 1909.12, section 82.51.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along Fish Creek experienced a variety of fire severity. The unburned and low severity areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. The regrowing shrubs and down trees will maintain habitat for black bear and blue grouse. Approximately 4½ miles of the river corridor experienced moderate and high fire severity. Wildlife habitat here is expected to recover slowly, with a slower return of riparian-associated wildlife species. Mexican spotted owls may persist in the river corridor.

North Fork East Fork Black River

The Wallow Fire affected the entire eligible river: Segments 1, 2, and 3. Fire severity along Segment 1 was unburned (32 percent) and low (68 percent). Segment 2 showed predominantly low severity (83 percent) with 7 percent unburned and 9 percent moderate severity. Fire severity along Segment 3 was predominantly unburned (46 percent) and low (53 percent) with 1 percent moderate severity. Vegetation along all segments is grassland, wetland, and conifer forests. Riparian vegetation, including montane willow riparian forest in Segment 3, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscapes along the river (rolling meadows, canyons, and cliffs) were not affected. It is expected that aspen regeneration will be very high, particularly in Segment 3, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Fish habitat will continue to be an ORV for this river. Short- and long-term management of North Fork East Fork Black River for recovery of native fish species will continue and is critical for the loach minnow and its designated critical habitat. Approximately 7 miles of this eligible river were directly affected. The effects of fire in the uplands will indirectly affect an additional 7 miles of native fish habitat. Habitat quality for native fish species has been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation.

The North Fork East Fork Black River supports one of three loach minnow populations on the Apache-Sitgreaves NFs, with 3½ river miles designated as critical habitat. There are also populations of desert sucker, speckled dace, and Sonora sucker. Wallow fire impacts to these species' habitats (especially pool quality) will be greatest to the loach minnow, which is affected by increased sedimentation. Concurrent increases in non-native species abundance will affect all native species. However, native fish populations will persist at possibly reduced levels, but should improve when aquatic habitat, riparian, and watershed recovery occur.

Wildlife habitat will continue to be an ORV for this river. Riparian areas along the North Fork East Fork Black River were unburned or experienced low severity fire. These areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. Mexican spotted owls may persist in the river corridor.

South Fork Little Colorado River

The Wallow Fire affected the entire eligible river: Segments 1 and 2. Fire severity along Segment 1 was mostly moderate (43 percent), high (25 percent), and low (30 percent) with 2 percent unburned. Segment 2 showed a mix of moderate (39 percent), low (37 percent), and high (17 percent) severities, with 8 percent unburned. Vegetation along Segment 1 is conifer forests, grassland, and wetland; Segment 2 is ponderosa pine forest and piñon-juniper woodland. Riparian vegetation, including montane willow riparian forest, occurs adjacent to the river. Riparian vegetation over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. It is expected that aspen regeneration will be very high along the entire eligible river, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

West Fork Black River

The Wallow Fire affected the approximately 0.8 miles of Segment 1 and all of Segment 2. Fire severity along the affected portion of Segment 1 was mostly unburned (46 percent) and low (49 percent), with a small amount of moderate (5 percent). Segment 2 showed a mix of low (20 percent), moderate (29 percent), and high (39 percent) severities, with 12 percent unburned. Vegetation along Segment 1 is conifer forest, grassland, and wetland, while Segment 2 is conifer forests, wetland, and grassland. Riparian vegetation, including montane willow riparian forest, occurs adjacent to the river. Riparian vegetation over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscapes along the river (deep canyons, cliffs, and rolling meadows) were not affected. It is expected that aspen regeneration will be very high along the entire eligible river, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more

rock features visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. The variety of recreation opportunities has not changed, although the fishery may be depleted for some time. The greater vegetation and habitat diversity may enhance wildlife viewing.

Fish habitat will continue to be an ORV for this river. West Fork Black River is identified as necessary for Apache trout recovery; short- and long-term management for this purpose will continue. Approximately ½ mile of Apache trout recovery habitat was directly affected. The effects of fire in the uplands will indirectly affect an additional ½ mile of recovery habitat. Habitat quality and conditions have been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation. This eligible river is still capable of supporting Apache trout, especially in the uppermost 2 river miles.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along the West Fork Black River were primarily unburned or experienced low severity fire in the upper 2/3 of the river corridor. These areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. The lower 1/3 of the river corridor experienced mostly moderate and high fire severity. Wildlife habitat here is expected to recover slowly, with a slower return of riparian-associated wildlife species. Mexican spotted owls may persist in the river corridor.

West Fork Little Colorado River

The Wallow Fire affected approximately 25 percent of Segment 2 and all of Segment 3; Segment 1 was not affected. Fire severity was generally unburned (49 percent)to low (39 percent) in the affected portion of Segment 2, while fire severity in Segment 3 varied from unburned to high (21 percent) depending on vegetation type and aspect. More than half of Segment 3 is unburned (21 percent) and low (43 percent) severity. Vegetation along the affected river segments is conifer forests and montane grassland. Riparian vegetation, including wetland/cienega areas in Segment 2, occurs found adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The physical landscape was not affected. Patches of conifer forests on the north-facing slopes in Segment 3 experienced moderate to high fire severity. It is expected that aspen regeneration will be very high in all affected areas, with the extent of fall colors greater than in the past. Increased landscape diversity is expected because of the greater variety of landscapes (more canyon walls visible, greater presence of aspen, different tree sizes and species as regrowth occurs, and more open forests where small trees were killed).

Recreation will continue to be an ORV for this river. Most of the lands along Segment 2 where recreation use is highest are not within the fire perimeter. The user-created route along Segment 3 was probably affected by falling trees and any flooding. Future users will probably re-establish this route. The variety of wildlife seen along the river corridor may increase with the anticipated greater vegetation diversity. Apache trout will continue to be stocked in Segment 2.

Wildlife habitat will continue to be an ORV for this river. Riparian areas along the West Fork Little Colorado River were unburned or experienced low severity fire. The riparian areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Mexican spotted owls may persist in the river corridor. The Upper Little Colorado River Watershed Important Bird Area will continue to provide breeding habitat for a variety of bird species.

Suitable River affected by the Wallow Fire

KP Creek

The Wallow Fire affected the entire eligible river. Fire severity was a mix of unburned (13 percent), low (51 percent), and moderate (32 percent), with some high (4 percent). Vegetation along the eligible river varies from conifer forest and wetland to pine oak woodland and chaparral to grassland as the elevation decreases. Riparian vegetation, including mixed broadleaf deciduous riparian forest at the lower elevations, occurs adjacent to the river. Riparian vegetation recovers over time and usually more rapidly than upland vegetation after disturbance (fire and flood) events.

Scenery will continue to be an ORV for this river. The steep canyon walls and waterfalls are not affected. In the long-term the riparian vegetation will recover, however the large ponderosa pine component may be missing.

Recreation will continue to be an ORV for this river. The recreation opportunities are unchanged, although the fishery may be depleted for some time. The river corridor will continue to attract visitors.

Fish habitat will continue to be an ORV for this river. Although the Wallow fire affected the watershed, KP Creek is identified as a potential recovery stream for Gila trout; short- and long-term management for this purpose will continue. Approximately 9 miles of Gila trout recovery habitat were directly affected. The effects of fire in the uplands will indirectly affect an additional 2 miles of recovery habitat. Habitat quality and conditions have been, and possibly for many years, will be affected by the loss of riparian vegetation and increased sedimentation.

Wildlife species and habitat will continue to be ORVs for this river. Riparian areas along KP Creek were unburned or experienced low severity fire, except for approximately 2½ miles of moderate severity in the center of the river segment. The unburned and low severity areas and their associated wildlife species (e.g., rodents, shrews) are expected to recover over time; recovering vegetation still provides many habitat components that support a variety of wildlife species, including birds. Prey species will support a variety of predators and raptors, including the northern goshawk. Early succession habitats are likely to attract a variety of wildlife species (e.g., snags and dead trees attract woodpeckers and cavity nesting birds). Wildlife habitat in the river corridor may be more diverse with more shrubs and small trees. The regrowing shrubs and down trees will maintain habitat for black bear and blue grouse. Wildlife habitat in the moderate severity portion of the river corridor is expected to recover slowly, with a slower return of riparian-associated wildlife species. Mexican spotted owls may persist in the river corridor.

Table 1. River corridor acres, percentage affected, and fire severity for rivers, affected by the Wallow Fire

River	Segment Number and Acres	Fire Severity	Corridor Acres (percent not affected)	Percentage of affected segment corridor	Potential Natural Vegetation Type
Bear Wallow Creek	1 976.6	U	704.7	72	mixed conifer forest, Madrean pine-oak woodland, ponderosa pine forest, montane willow riparian forest
		L	211	22	
		M	42.1	4	
		H	18.9	2	
	2 287.1	U	198.9	69	Madrean pine-oak woodland, mixed conifer forest, montane willow riparian forest
		L	74.6	26	
		M	13.7	5	
		H	0		
Black River (Mainstem)	1 3,048.4	U	436.9	14	ponderosa pine forest, mixed conifer forest, montane/subalpine grasslands, montane willow riparian forest
		L	2095.3	69	
		M	439.8	14	
		H	76.4	3	
	2 151.1	U	93.9	62	ponderosa pine forest, mixed conifer forest, montane willow riparian forest
		L	57.2	38	
		M	0		
		H	0		
	3 1,957.5	U	620.4	32	mixed conifer forest, ponderosa pine forest, Madrean pine-oak woodland, montane willow riparian forest
		L	1273.1	65	
		M	61.2	3	
		H	2.8	0	
Campbell Blue Creek	1 329.4	U	0.6	0	ponderosa pine forest, mixed conifer forest, montane willow riparian forest
		L	323.4	98	
		M	5.4	2	
		H	0		
	2 1,167.6	U	72.5	6	ponderosa pine forest, mixed conifer forest, montane willow riparian forest, cottonwood-
		L	743.1	64	

River	Segment Number and Acres	Fire Severity	Corridor Acres (percent not affected)	Percentage of affected segment corridor	Potential Natural Vegetation Type
		M	136	12	willow riparian forest, Madrean pine-oak woodland
		H	216.0	18	
	3 1,829.0	not affected	62.1 (3%)		Madrean pine-oak woodland, cottonwood-willow riparian forest, mixed conifer forest
		U	937.6	53	
		L	780.0	44	
		M	48.9	3	
		H	0.4	0	
East Eagle Creek	1 1,116.9	not affected	764.7 (68%)		mixed conifer forest, Madrean pine-oak woodland
		U	264.0	75	
		L	86.2	24	
		M	2.0	1	
		H	0		
	2	not affected			
	3	not affected			
East Fork Black River	1 325.6	U	36.3	11	mixed conifer forest, montane/subalpine grasslands, wetland/cienega riparian areas, ponderosa pine forest, montane willow riparian forest
		L	141.4	43	
		M	124.4	38	
		H	23.5	7	
	2 937.9	U	137.4	15	mixed conifer forest, ponderosa pine forest, montane/subalpine grasslands, montane willow riparian forest
		L	418.3	44	
		M	356.1	38	
		H	26.0	3	
	3	U	656.4	27	mixed conifer forest,

River	Segment Number and Acres	Fire Severity	Corridor Acres (percent not affected)	Percentage of affected segment corridor	Potential Natural Vegetation Type
	2,414.9	L	1438.9	60	ponderosa pine forest, spruce-fir forest, montane willow riparian forest
		M	240.1	10	
		H	79.5	3	
East Fork Little Colorado River	1 2,628.3	not affected	898.5 (34%)		montane/subalpine grasslands, wetland/ cienega riparian areas, spruce-fir forest, mixed conifer forest
		U	358.3	18	
		L	888.4	45	
		M	237.6	12	
		H	245.5	12	
Fish Creek	1 2,914.9	U	156.7	5	mixed conifer forest, spruce-fir forest, ponderosa pine forest, wetland/cienega riparian areas
		L	890.1	31	
		M	788.3	27	
		H	1079.8	37	
	2 125.3	U	0		mixed conifer forest, spruce-fir forest, montane willow riparian forest
		L	90.9	73	
		M	33.1	26	
		H	1.3	1	
North Fork East Fork Black River	1 1,413.9	U	449	32	montane/subalpine grasslands, wetland/cienega riparian areas, spruce-fir forest, mixed conifer forest
		L	959.3	68	
		M	3.4	0	

River	Segment Number and Acres	Fire Severity	Corridor Acres (percent not affected)	Percentage of affected segment corridor	Potential Natural Vegetation Type
		H	2.3	0	
	2 316.4	U	23.5	7	montane/subalpine grasslands, wetland/cienega riparian areas, mixed conifer forest
		L	263.9	83	
		M	29.0	9	
		H	0		
	3 2,240.9	U	1042.2	46	mixed conifer forest, montane/subalpine grasslands, wetland/cienega riparian areas, ponderosa pine forest, montane willow riparian forest
		L	1180.5	53	
		M	17.5	1	
		H	0.7	0	
South Fork Little Colorado River	1 1,789.1	U	30	2	mixed conifer forest, montane/subalpine grasslands, ponderosa pine forest, wetland/cienega riparian areas, piñon-juniper woodland, montane willow riparian forest
		L	541.6	30	
		M	772.8	43	
		H	444.7	25	
	2 421.1	U	32.1	8	ponderosa pine forest, piñon-juniper woodland, montane willow riparian forest
		L	153.8	37	
		M	162.2	39	
		H	73.0	17	
West Fork Black River	1 787.8	not affected	654.3 (83%)		

River	Segment Number and Acres	Fire Severity	Corridor Acres (percent not affected)	Percentage of affected segment corridor	Potential Natural Vegetation Type
		U	61.7	46	spruce-fir forest, wetland/cienega riparian areas, montane/subalpine grasslands
		L	64.9	49	
		M	6.9	5	
		H	0		
	2 2,552.2	U	305.0	12	mixed conifer forest, spruce-fir forest, wetland/cienega riparian areas, montane/subalpine grasslands, ponderosa pine forest, montane willow riparian forest
		L	521.3	20	
		M	735	29	
		H	991	39	
West Fork Little Colorado River	1	not affected			
	2 500.9	not affected	381.9 (76%)		montane/subalpine grasslands, mixed conifer forest, spruce-fir forest, wetland/cienega riparian areas
		U	57.9	49	
		L	46.6	39	
		M	14.5	12	
		H	0		
	3 661.9	U	135.8	21	mixed conifer forest, spruce-fir forest, montane/subalpine grasslands, ponderosa
		L	287.5	43	

River	Segment Number and Acres	Fire Severity	Corridor Acres (percent not affected)	Percentage of affected segment corridor	Potential Natural Vegetation Type
		M	99.1	15	pine forest
		H	139.4	21	
KP Creek	1 3,449.7	U	434.6	13	spruce-fir forest, wetland/cienega riparian areas, mixed conifer forest, Madrean pine-oak woodland, interior chaparral, mixed broadleaf deciduous riparian forest, semi-desert grassland
		L	1758.2	51	
		M	1111.6	32	
		H	145.2	4	

Appendix D – Burn Severity and RAVG

The following tables indicate the amounts by forest type affected in the Wallow Fire burned area. They are based on PNVT and the burn severity and RAVG (Rapid Assessment of Vegetation Condition) mapping that were completed following the fire. The displayed data was generated in October 2011.

BURN SEVERITY				DRAFT RAVG[1]			
Ponderosa Pine Forest 602,206 acres	Acres of PPF in Burned Area	Percent of Total PPF in Burned Area	Percent of Total PPF on ASNFs Land within Fire Perimeter	**Ponderosa Pine Forest Overall BA Loss SUMMATION 602,206 acres**	Acres of PPF in Burned Area	Percent of Total PPF in Burned Area	Percent of Total PPF on ASNFs Land within Fire Perimeter
High	11,809	9	2	75 - 100% BA Loss	32,861	25	5
Moderate	22,734	18	4	50 - < 75% BA Loss	35,446	27	6
Low	79,821	62	13	25 - < 50% BA Loss	47,809	37	8
Unburned	14,488	11	2	0 - < 25% BA Loss	8,626	7	1
TOTAL within fire	**128,852**	**100**	**21**	Un-mapable	4,911	4	1
				TOTAL within fire	**129,653**	**100**	**22**

[1] Data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Dry Mixed Conifer Forest 147,885 acres	Acres of DMCF in Burned Area	Percent of Total DMCF in Burned Area	Percent of Total DMCF on ASNFs Land within Fire Perimeter	**Dry Mixed Conifer Forest Overall BA Loss SUMMATION 147,885 acres**	Acres of DMCF in Burned Area	Percent of Total DMCF in Burned Area	Percent of Total DMCF on ASNFs Land within Fire Perimeter
High	19,412	25	13	75 - 100% BA Loss	44,529	51	30
Moderate	12,253	16	8	50 - < 75% BA Loss	13,139	15	9
Low	31,462	40	21	25 - < 50% BA Loss	16,715	19	11
Unburned	14,813	19	10	0 - < 25% BA Loss	11,229	13	8
TOTAL within fire	**77,940**	**100**	**53**	Un-mapable	2,538	3	2
				TOTAL within fire	**88,151**	**100**	**60**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Wet Mixed Conifer Forest 177,995 acres	Acres of WMCF in Burned Area	Percent of Total WMCF in Burned Area	Percent of Total WMCF on ASNFs Land within Fire Perimeter	**Wet Mixed Conifer Forest Overall BA Loss SUMMATION 177,995 acres**	Acres of WMCF in Burned Area	Percent of Total WMCF in Burned Area	Percent of Total WMCF on ASNFs Land within Fire Perimeter
High	47,409	35	27	75 - 100% BA Loss	3,487	3	2
Moderate	19,835	15	11	50 - < 75% BA Loss	56,702	51	32
Low	43,494	32	24	25 - < 50% BA Loss	10,911	10	6
Unburned	23,702	18	13	0 - < 25% BA Loss	18,659	17	10
TOTAL within fire	**134,440**	**100**	**76**	Un-mapable	21,028	19	12
				TOTAL within fire	**110,788**	**100**	**62**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Spruce-Fir Forest 17,667 acres	Acres of SFF in Burned Area	Percent of Total SFF in Burned Area	Percent of Total SFF on ASNFs Land within Fire Perimeter	**Spruce-Fir Forest Overall BA Loss SUMMATION 17,667 acres**	Acres of SFF in Burned Area	Percent of Total SFF in Burned Area	Percent of Total SFF on ASNFs Land within Fire Perimeter
High	3,874	31	22	75 - 100% BA Loss	4,180	42	24
Moderate	2,462	19	14	50 - < 75% BA Loss	1,615	16	9
Low	3,897	31	22	25 - < 50% BA Loss	2,211	22	13
Unburned	2,423	19	14	0 - < 25% BA Loss	1,811	18	10
TOTAL within fire	**12,656**	**100**	**72**	Un-mapable	167	2	1
				TOTAL within fire	**9,984**	**100**	**57**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Madrean Pine-Oak Woodland 394,927 acres	Acres of MPOW in Burned Area	Percent of Total MPOW in Burned Area	Percent of Total MPOW on ASNFs Land within Fire Perimeter	**Madrean Pine-Oak Woodland Overall BA Loss SUMMATION 394,927 acres**	Acres of MPOW in Burned Area	Percent of Total MPOW in Burned Area	Percent of Total MPOW on ASNFs Land within Fire Perimeter
High	1,246	2	< 1	75 - 100% BA Loss	17,161	33	4
Moderate	4,767	9	1	50 - < 75% BA Loss	8,920	17	2
Low	20,396	38	5	25 - < 50% BA Loss	14,027	27	4
Unburned	26,679	50	7	0 - < 25% BA Loss	11,443	22	3
TOTAL within fire	**53,088**	**100**	**13**	Un-mapable	7	< 1	< 1
				TOTAL within fire	**51,558**	**100**	**13**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Piñon-Juniper Woodland 222,166 acres	Acres of PJW in Burned Area	Percent of Total PJW in Burned Area	Percent of Total PJW on ASNFs Land within Fire Perimeter	**Piñon-Juniper Woodland Overall BA Loss SUMMATION 222,166 acres**	Acres of PJW in Burned Area	Percent of Total PJW in Burned Area	Percent of Total PJW on ASNFs Land within Fire Perimeter
High	583	3	< 1	75 - 100% BA Loss	5,430	31	2
Moderate	2,225	13	1	50 - < 75% BA Loss	2,359	13	1
Low	5,587	31	3	25 - < 50% BA Loss	2,967	17	1
Unburned	9,389	53	4	0 - < 25% BA Loss	6,497	37	3
TOTAL within fire	**17,784**	**100**	**8**	Un-mapable	545	3	< 1
				TOTAL within fire	**17,798**	**100**	**8**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Wetland/ Cienega Riparian Areas 17,900 acres	Acres of WCRA in Burned Area	Percent of Total WCRA in Burned Area	Percent of Total WCRA on ASNFs Land within Fire Perimeter	**Wetland/ Cienega Riparian Areas Overall BA Loss SUMMATION 17,900 acres**	Acres of WCRA in Burned Area	Percent of Total WCRA in Burned Area	Percent of Total WCRA on ASNFs Land within Fire Perimeter
High	441	4	2	75 - 100% BA Loss	440	36	2
Moderate	759	6	4	50 - < 75% BA Loss	274	22	2
Low	7,406	63	41	25 - < 50% BA Loss	340	28	2
Unburned	3,212	27	18	0 - < 25% BA Loss	119	10	1
TOTAL within fire	**11,818**	**100**	**66**	Un-mapable	62	5	< 1
				TOTAL within fire	**1,235**	**100**	**7**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Cottonwood-Willow Riparian Forest 15,876 acres	Acres of CWRF in Burned Area	Percent of Total CWRF in Burned Area	Percent of Total CWRF on ASNFs Land within Fire Perimeter	**Cottonwood-Willow Riparian Forest Overall BA Loss SUMMATION 15,876 acres**	Acres of CWRF in Burned Area	Percent of Total CWRF in Burned Area	Percent of Total CWRF on ASNFs Land within Fire Perimeter
High	72	4	< 1	75 - 100% BA Loss			
Moderate	176	10	1	50 - < 75% BA Loss			
Low	731	42	5	25 - < 50% BA Loss	**NO**	**RAVG**	**DATA**
Unburned	759	44	5	0 - < 25% BA Loss			
TOTAL within fire	**1,738**	**100**	**11**	Un-mapable			
				TOTAL within fire			

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Mixed Broadleaf Deciduous Riparian Forest 9,657 acres	Acres of MBDRF in Burned Area	Percent of Total MBDRF in Burned Area	Percent of Total MBDRF on ASNFs Land within Fire Perimeter	**Mixed Broadleaf Deciduous Riparian Forest Overall BA Loss SUMMATION 9,657 acres**	Acres of MBDRF in Burned Area	Percent of Total MBDRF in Burned Area	Percent of Total MBDRF on ASNFs Land within Fire Perimeter
High	0	0	0	75 - 100% BA Loss	51	10	1
Moderate	27	5	< 1	50 - < 75% BA Loss	83	16	1
Low	212	43	2	25 - < 50% BA Loss	226	44	2
Unburned	251	51	3	0 - < 25% BA Loss	156	30	2
TOTAL within fire	**491**	**100**	**5**	Un-mapable	0	0	0
				TOTAL within fire	**516**	**100**	**5**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Montane Willow Riparian Forest 4,808 acres	Acres of MWRF in Burned Area	Percent of Total MWRF in Burned Area	Percent of Total MWRF on ASNFs Land within Fire Perimeter	**Montane Willow Riparian Forest Overall BA Loss SUMMATION 4,808 acres**	Acres of MWRF in Burned Area	Percent of Total MWRF in Burned Area	Percent of Total MWRF on ASNFs Land within Fire Perimeter
High	196	6	4	75 - 100% BA Loss	697	27	14
Moderate	424	13	9	50 - < 75% BA Loss	462	18	10
Low	1,674	50	35	25 - < 50% BA Loss	836	33	17
Unburned	1,041	31	22	0 - < 25% BA Loss	452	18	9
TOTAL within fire	**3,335**	**100**	**69**	Un-mapable	88	3	2
				TOTAL within fire	**2,534**	**100**	**53**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Interior Chaparral 55,981 acres	Acres of IC in Burned Area	Percent of Total IC in Burned Area	Percent of Total IC on ASNFs Land within Fire Perimeter	**Interior Chaparral Overall BA Loss SUMMATION 55,981 acres**	Acres of IC in Burned Area	Percent of Total IC in Burned Area	Percent of Total IC on ASNFs Land within Fire Perimeter
High	357	4	1	75 - 100% BA Loss	4,580	46	8
Moderate	2,426	24	4	50 - < 75% BA Loss	1,130	11	2
Low	3,266	33	6	25 - < 50% BA Loss	1,835	18	3
Unburned	3,900	39	7	0 - < 25% BA Loss	2,418	24	4
TOTAL within fire	**9,949**	**100**	**18**	Un-mapable	0	0	0
				TOTAL within fire	**9,964**	**100**	**18**

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Great Basin Grassland 185,523 acres	Acres of GBG in Burned Area	Percent of Total GBG in Burned Area	Percent of Total GBG on ASNFs Land within Fire Perimeter	**Great Basin Grassland Overall BA Loss SUMMATION 185,523 acres**	Acres of GBG in Burned Area	Percent of Total GBG in Burned Area	Percent of Total GBG on ASNFs Land within Fire Perimeter
High	88	1	< 1	75 - 100% BA Loss			
Moderate	325	5	< 1	50 - < 75% BA Loss			
Low	3,311	50	2	25 - < 50% BA Loss	**NO**	**RAVG**	**DATA**
Unburned	2,854	43	2	0 - < 25% BA Loss			
TOTAL within fire	**6,578**	**100**	**4**	Un-mapable			
				TOTAL within fire			

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Semi-desert Grassland 106,952 acres	Acres of SDG in Burned Area	Percent of Total SDG in Burned Area	Percent of Total SDG on ASNFs Land within Fire Perimeter	**Semi-desert Grassland Overall BA Loss SUMMATION 106,952 acres**	Acres of SDG in Burned Area	Percent of Total SDG in Burned Area	Percent of Total SDG on ASNFs Land within Fire Perimeter
High	35	2	< 1	75 - 100% BA Loss			
Moderate	251	17	< 1	50 - < 75% BA Loss			
Low	606	40	1	25 - < 50% BA Loss	**NO**	**RAVG**	**DATA**
Unburned	624	41	1	0 - < 25% BA Loss			
TOTAL within fire	**1,516**	**100**	**1**	Un-mapable			
				TOTAL within fire			

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery

BURN SEVERITY				DRAFT RAVG[1]			
Montane/ Subalpine Grasslands 51,559 acres	Acres of MSG in Burned Area	Percent of Total MSG in Burned Area	Percent of Total MSG on ASNFs Land within Fire Perimeter	**Montane/ Subalpine Grasslands Overall BA Loss SUMMATION 51,559 acres**	Acres of MSG in Burned Area	Percent of Total MSG in Burned Area	Percent of Total MSG on ASNFs Land within Fire Perimeter
High	176	< 1	< 1	75 - 100% BA Loss			
Moderate	1,679	5	3	50 - < 75% BA Loss			
Low	27,422	75	53	25 - < 50% BA Loss	**NO**	**RAVG**	**DATA**
Unburned	7,159	20	14	0 - < 25% BA Loss			
TOTAL within fire	**36,436**	**100**	**71**	Un-mapable			
				TOTAL within fire			

[1] RAVG data as of 07/18/2011 will be updated with future LANDSAT imagery