Scenery Management System Inventory Report

Gila National Forest

Land and Resource Management Plan Revision

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for:

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May 23, 2019

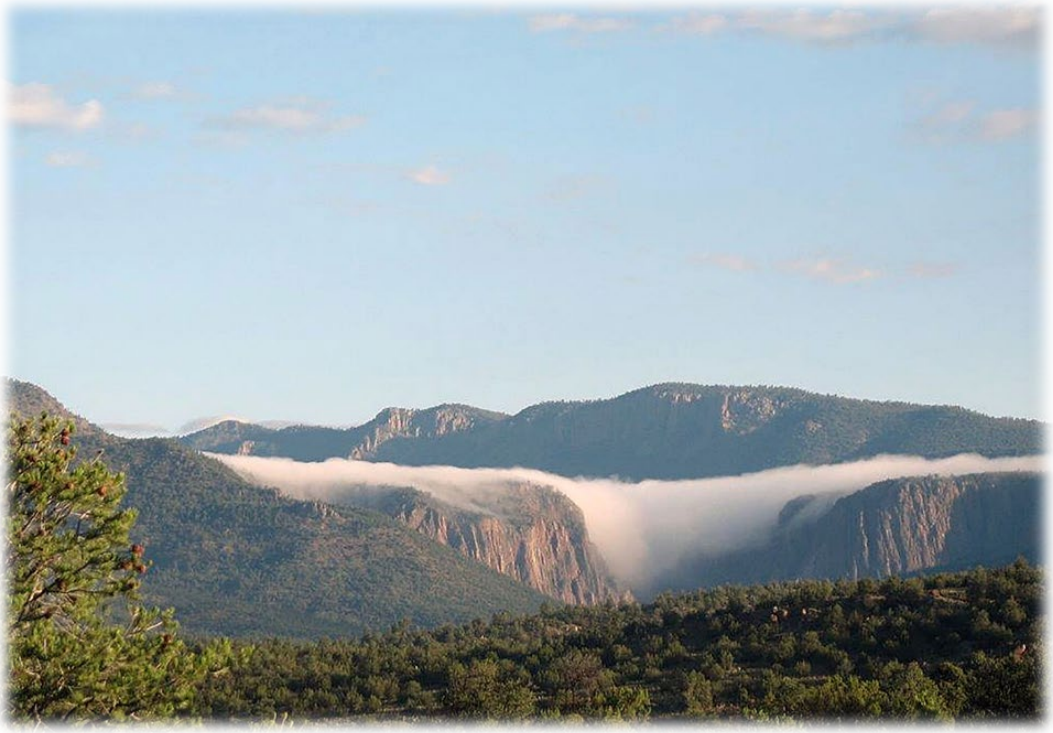

Figure 1 Photo of the San Francisco Box Landform

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NOTE: Photos in this document, unless otherwise stated, were taken by Jan Spencer, Enterprise Landscape Architect, in December 2015 and January 2016 during the site visit for completing the Scenery Management System inventories.

Background (Why We Manage Scenery)

Scenery as well as other natural resources must be cared for and managed in order to maintain quality scenery for generations to come. Scenery varies depending on existing natural features, including vegetation, water features, landform and geology, along with the cultural features and human alterations found in the landscape (such as buildings, structures, or manipulations of the land or vegetation). Cultural features and human alterations may contribute to scenic character when these elements have historical backgrounds, have nostalgic connotations, reflect the cultural legacy of an area, or create a visually pleasing complement to the natural character of the landscape.

The report of the President's Commission on America's Outdoors (1987) states that America's most important attribute for a recreation area is natural beauty. The findings of the President's Commission on America's Outdoors remain valid. Viewing natural scenery, sightseeing, driving for pleasure, and photographing natural features are among the nation's highest ranking recreational activities (Cordell 2008). Additionally, viewing, taking photos, or otherwise observing and appreciating nature has been the fastest-growing type of nature-based recreation (Cordell 2012). Scenic forest and grassland settings contribute to these and all outdoor recreational experiences.

Scenic characteristics are important in creating a sense of place for local residents and visitors alike. Scenery is an integral component of all outdoor recreation settings, contributes to the recreation opportunities selected, can influence visitor's recreation experiences, and plays a vital role in the attraction, enjoyment and economic value of recreation uses of the Gila National Forest.

"Our peace of mind, our emotions, our spirit - even our souls are conditioned by what our eyes see."
Lady Bird Johnson

Figure 2 Photo of View of the Black Range from Granny Mountain Trail on the Gila National Forest. Credit Jim Apodaca

The 2012 Planning Rule requires that Land Management Plans include plan components, including standards or guidelines, for integrated resource management of scenic character (§ 219.10(b)(1)(i)). The 2012 Planning Rule defines scenic character as "a combination of the physical, biological, and cultural images that gives an area its scenic identity and contributes to its sense of place. Scenic character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity." By sustaining the scenic character of landscapes we can contribute to the sense of place for communities, offer opportunities to connect people with nature, and maintain and enhance scenic settings essential to quality of life for local residents.

The Land Management Planning Handbook, Chapter 20, (FSH 1909.12) states that the Scenery Management System (SMS) is the framework for developing plan components related to scenic character. When developing plan components, the Responsible Official shall take into account scenic character (§ 219.8(b)(2)) and consider aesthetic values, geologic features, scenery, and viewsheds (§ 219.10 (a)(1)). (FSH 1909.12 Chapter 20, section 23.23f). Completing the SMS inventories provides the information needed to account for scenic character as identified in the directives.

This report summarizes the Scenery Management System inventory components and process for the Gila National Forests Land and Resource Management Plan Revision.

Introduction

The scenery management system (SMS) represents the agency's latest science in fulfilling its legal requirements for managing scenic resources and achieving high-quality scenery. It provides a systematic approach to determine the relative value and importance of scenery on national forest system lands based on how people relate to various landscapes. The system is used to inventory and analyze scenery, to monitor scenic resources and to ensure high quality scenery for future generations. The scenery management system integrates increased understanding of ecological settings and resiliency concepts, disturbance patterns, and cultural landscapes in identifying the effects of various management practices on scenic resources.

This report has been prepared to document the SMS inventory process for the Land and Resource Management Plan (LMP) revision for the Gila National Forest and to report the information this process generated. The information compiled within this document is intended to compliment the process outlined in Landscape Aesthetics: A Handbook for Scenery Management, Agricultural Handbook Number 701, (SMS Handbook) with refinement for the Gila National Forest management needs.

These inventories provide essential information to determine the existing condition of scenic resources, the inherent scenic beauty of the landscape, the value of scenic resources to the human environment, and inform desired conditions for potential scenery management scenarios. This information is used in an interdisciplinary planning format to develop scenic integrity objectives for all parts of the Gila National Forest. Scenic integrity objectives become part of the new forest plan and along with the desired scenic character provide a system to support future improvements to and management of scenic resources.

Site visits was completed in November 2015 and January 2016 by an Enterprise Landscape Architect. The site visit included field work to see current management activities and other landscape attributes for completing the scenic character description, scenic attractiveness and existing scenic integrity inventories. A workshop was held to introduce Forest staff to the scenery

management system, identify concern level roads, trails (travelways), and use points, and development of scenic character worksheets. Photos to support the SMS inventory process were also taken. A map of the photos is shown in Figure 2.

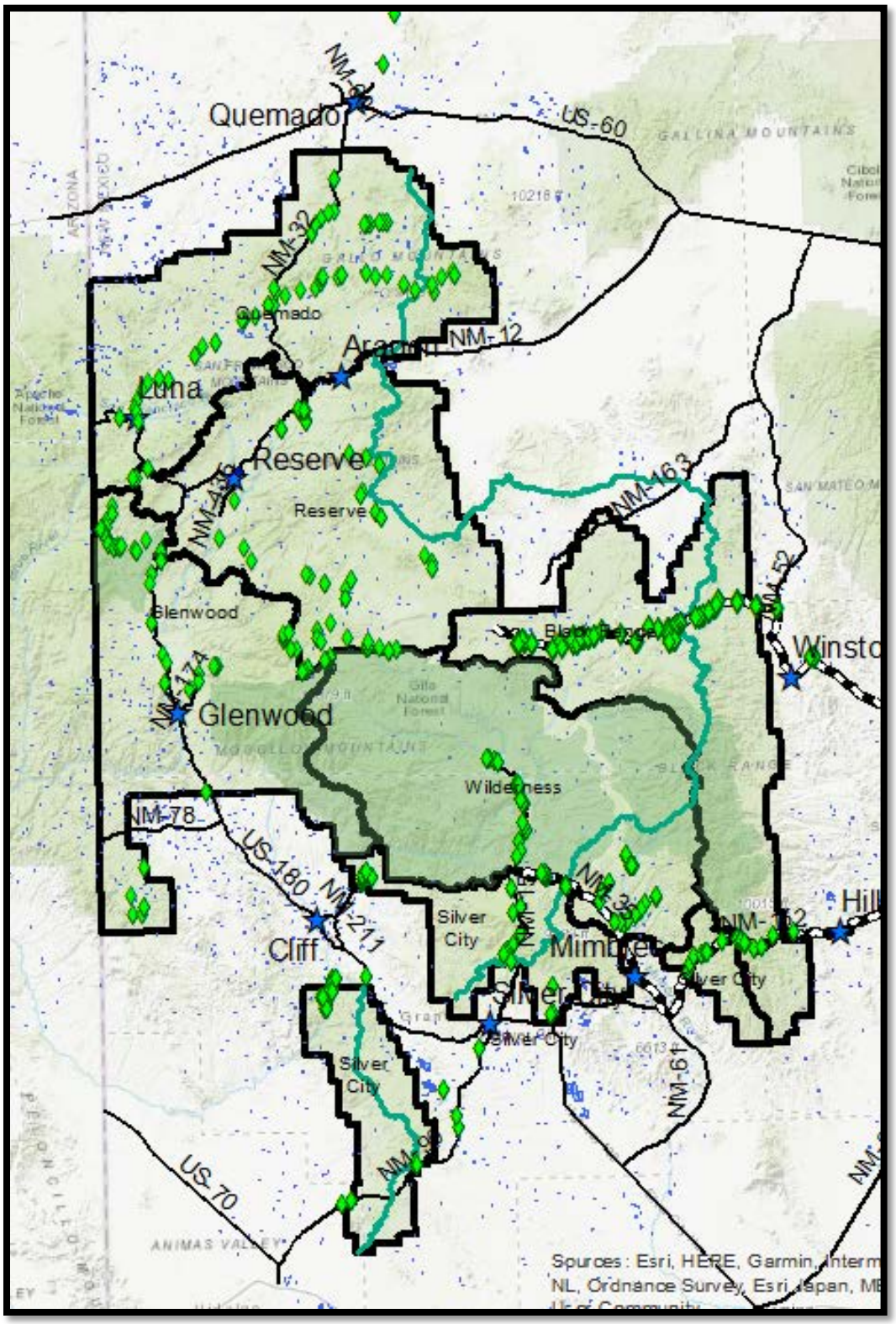

Figure 3 Map of Photo Points during the Site Visit on the Gila National Forest area

General Description of Scenic Resources on the Gila National Forest

Covering 3.3 million acres, “the Gila National Forest is the sixth largest forest in the United States and offers spectacular scenery, ranging from high cool mountains of aspen and Douglas-fir to warm semi-arid lowlands with juniper, oak and cactus. It remains one of the more remote, uniquely continuous and least developed national forests in the Southwest. The geology and ecology of the forest provide habitat for distinctive flora and fauna, including several protected species. (USDA, 2008)

The Gila National Forest is a recreation destination for New Mexico residents as well at visitors from neighboring states. “People are seeking out special places while looking for a variety of outdoor settings and experiences. New Mexico enjoys a special place among mountain west states. Not only does the state offer great beauty in many different forms, it also offers and unmatched wealth of historic and cultural attractions. Out-of-state and in-state visitors seek the unique cultural events and festivals offered in New Mexico, and desire activities that ‘connect to nature’. Interestingly, the best attributes New Mexico has to offer are all those attributes unique to New Mexico.” (State of NM, 2016) Natural appearing scenery provides the basis for high quality recreation experiences on the Forest. In other words, scenery is an integral component of all forest settings, and contributes to the quality of the users’ recreation experience.

Landscapes of the Gila National Forest vary from low semi-desert lands around 4,200 feet elevation to rugged mountains in the Mogollon range at 10,900 feet elevation, rolling hills in-between link the mountains to the semi-desert lands. The range of elevation and topography provides a setting for four out of six of the life zones.

“The Gila National Forest has spectacular scenery ranging from high cool mountains with aspen and Douglas fir to warm semi-arid lowlands with juniper, oak and cactus. It is one of the more remote and least developed National Forests in the southwest.” (Wilderness Volunteers) Management of multiple resources has, to varying degrees, altered the natural scenic character. The most obvious effects on scenic resources are from vegetation and landform alterations. Management activities that have altered scenic resources include but are not limited to vegetation management, mineral extraction, roads and trails, campgrounds and picnic grounds, fire management (suppression and prescribed burning), and livestock grazing. It is important to evaluate the management of multiple resources, the need for ecosystem restoration, and the possible effects associated with scenic resources.

Many scenic drives wind through the Forest offering scenery viewing opportunities. “The Geronimo Trail Scenic Byway explores the countryside in which people and cultures have had a rich history. The trail starts in the Mimbres Valley on NM 152 at San Lorenzo. Very scenic roads wind through the Black Range Mountains and down across the low lands to the Rio Grande Valley. The small towns of Kingston and Hillsboro are welcome stops along the way.” (adventuredrop.com) The Spirit of the Mountains Scenic Byway is about a 100 mile long route in southwestern New Mexico. The southern leg of the byway stretches from San Lorenzo on the eastern end to Silver City at the western end. The byway runs north along SR 15 to its terminus at the Gila Cliff Dwellings National Monument. Scenic attractions include Lake Roberts, Wild Horse Mesa, Copperas Vista, and the Gila River. Other scenic drives include the Black Range Highway and State Highways 15, 35, 150, and 159. (wilderness.net) The Continental Divide National Scenic Trail (CDNST) runs along the western side of the forest for approximately 170 miles. Refer to figure 6 for a map of these scenic byways and the CDNST.

Figure 4 Photo of Cliff Formations along the West Fork of the Gila River at the Forks Campground along the Trail of the Mountain Spirits Scenic Byway

Figure 5 Photo of the Gila Wilderness seen from the Trail of the Mountain Spirits Scenic Byway

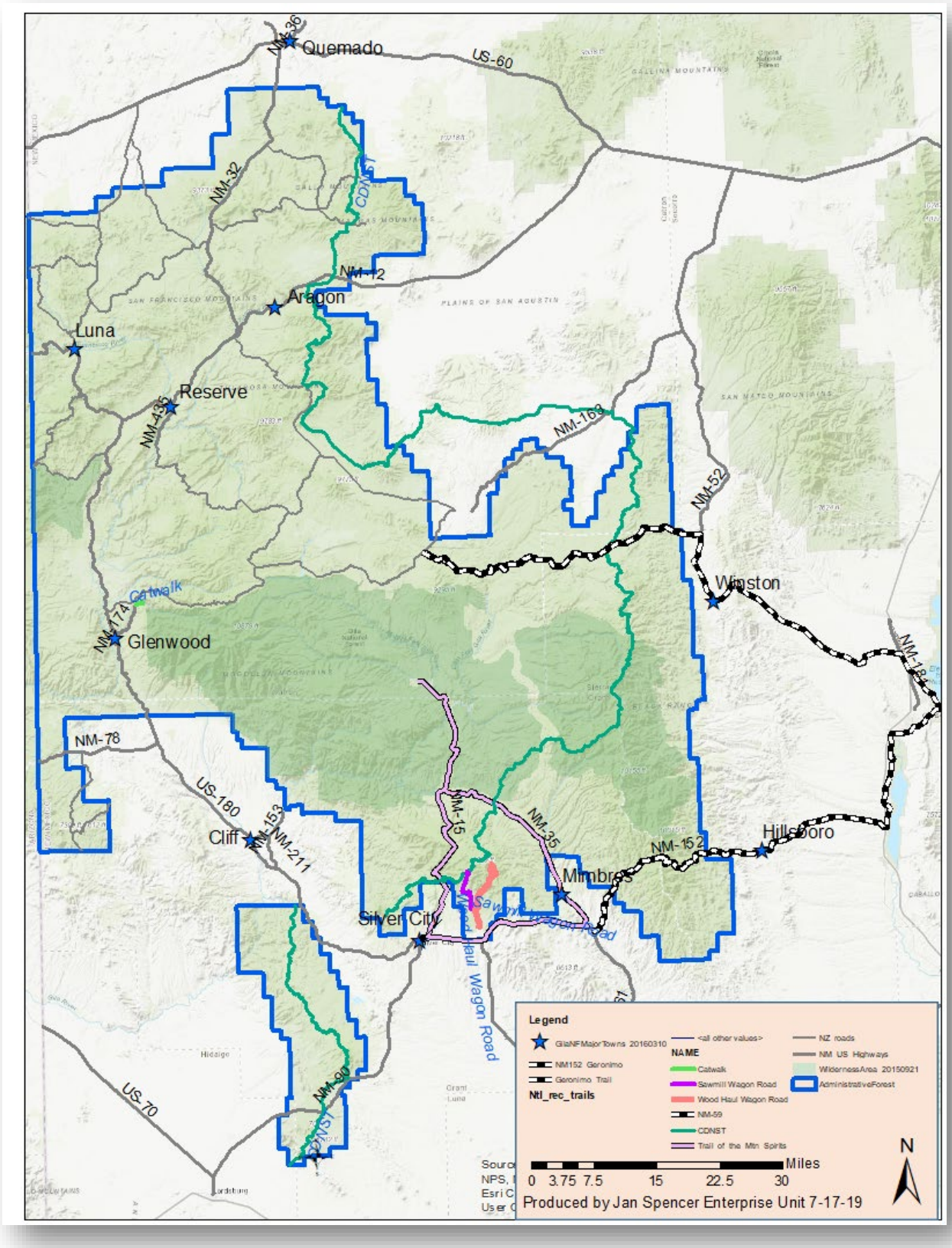

Figure 6 Map of Scenic Byways, and National Scenic and Recreation Trails

Overview of the Scenery Management System Process

The scenery management system process involves identifying scenic components as they relate to people, mapping these components and assigning a value for aesthetics. These maps provide information to planning teams to assist them in making a decision relative to scenery as a part of ecosystems and at project levels, and in determining the tradeoffs related to forest plan management scenarios. Refer to figure 7 for the Scenery Management System inventory flowchart.

The **Scenic Character Description** or Landscape Character Description is an objective description of the physical appearance and cultural context of a landscape that gives it an identity or "sense of place." The 2012 Planning Rule defines scenic character as "a combination of the physical, biological, and cultural images that gives an area its scenic identity and contributes to its sense of place. Scenic character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity."

The Scenic Character Description describes a geographic area's visual and cultural image, by discussing the combination of physical, biological and cultural attributes that make each landscape identifiable or unique. The description includes the valued attributes of the landscape, important elements of the social environment, environmental regimes, and disturbance regimes.

The Scenic Character Description is used as a reference for the **Existing Scenic Integrity**. Existing scenic integrity is the current state of the landscape, considering previous human alterations. It indicates the intactness and wholeness of the scenic character. Previous human alterations often disrupt the character of landscape, and existing scenic integrity measures the degree of that visible disruption. A landscape with very minimal disruption is considered to have high existing scenic integrity. Landscapes with more noticeable disruption in the scenic attributes have lower existing scenic integrity. Existing scenic integrity is expressed and mapped in terms of very high, high, moderate, low, very low, and unacceptably low.

Scenic Attractiveness Classes are developed to determine the relative scenic value of lands within a particular scenic character. The three scenic attractiveness classes are: Class A-distinctive; Class B-typical; Class C-indistinctive. The landscape elements of landform, vegetation, rocks, cultural features and water features are considered when determining each of these classes.

Landscape Visibility is composed of two parts: human values as they relate to the relative importance to the public of various scenes and the relative sensitivity of scenes based on distance from an observer. Human values that affect perceptions of landscapes are derived from constituent analysis. Constituent analysis serves as a guide to perceptions of attractiveness, helps identify special places, and helps to define the meaning people give to the landscape. Constituent analysis leads to a determination of the relative importance of aesthetics to the public. This importance is expressed as a **concern level**. Sites, travel ways, special places and other areas are assigned a concern level value of 1, 2, or 3 to reflect the relative high, medium, or low importance. **Seen Areas and Distance Zones** are mapped from these 1, 2, or 3 areas to determine the relative sensitivity of scenes based on their distance from an observer. These distance zones are identified as:

Foreground – up to 1/2 mile from observer
Middleground – 1/2 to 4 miles from the observer
Background – 4 miles from the observer to the horizon

Seldom Seen Areas are areas not seen from travel routes or identified use points. These areas are assigned a concern level 1, 2, or 3, based on concern for a specific area and may occur in any distance zone or scenic attractiveness class.

Using the data gathered and mapped for scenic attractiveness and landscape visibility (seen areas/distance zones), a numerical **Scenic Class** value is assigned to Forest lands. The ratings 1-7, indicate the scenic value of landscape areas, irrespective of existing scenic integrity. Mapped scenic class values are used during forest planning and project planning to compare the value of scenery with the value of other resources.

Scenic Integrity Levels are discussed and proposed for all National Forest System acres during the forest planning process using the information in the above scenery inventories as guidance. The assignment of integrity levels is dependent on the theme or desired future condition of each alternative. Once a final plan alternative is adopted, the Scenic Integrity Levels become Scenic Integrity Objectives which are then used to manage the scenery resource (USDA FS 1995, 4-16).

Products of the Scenery Management System Process for the Gila NF

- Map of scenic attractiveness utilizing General Terrestrial Ecosystem Survey (GTES) based on distinctive landscape features to map: landform, rock form, water features, and vegetation.
- Map of concern level travelways and use areas.
- Map of landscape visibility utilizing road, trail, and stream travel routes and use area concern levels.
- Map of Forest lands with a scenic class value (representing the level of public value for scenery) to be used as a management tool.
- Map of existing scenic integrity levels of the Forest.
- Map showing a preliminary scenic integrity objectives based on scenic classes and visibility.
- Written scenic character descriptions (a separate report).
- Summary report to document entire process (this report).
- Geographic Information System data layers for the above maps and inventories, provided by Enterprise to the Gila NF.

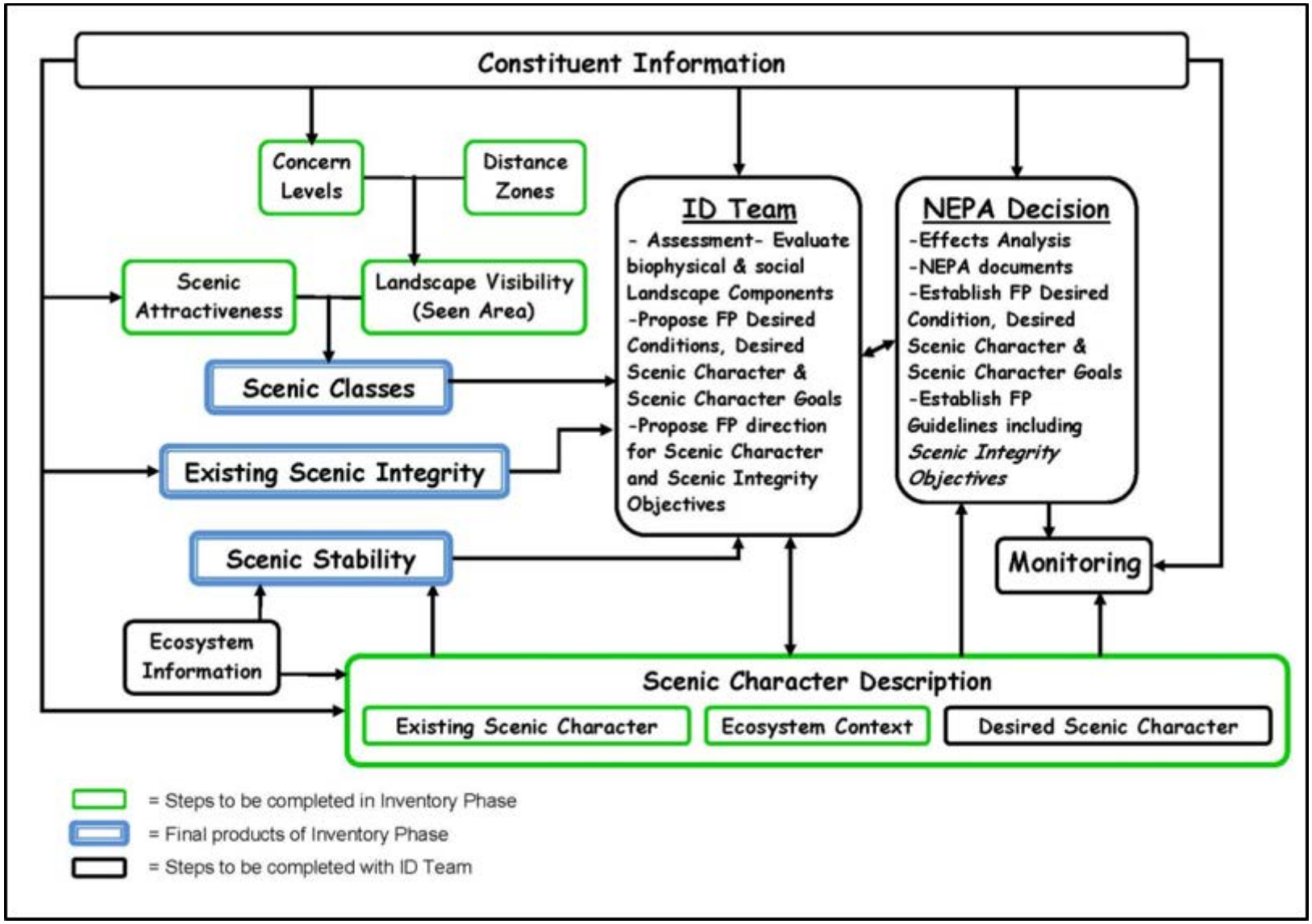

Figure 7 Scenery Management System inventory flowchart

Components and Inventory Process for the Gila National Forest

Enterprise produced the scenic character descriptions, concern levels, visibility analysis, scenic attractiveness, scenic classes, existing scenic integrity, and potential scenic integrity levels. Gila NF forest and district personnel provided critical review and input for each of the above inventories and products. Creation of preliminary Scenic Integrity Levels and final Scenic Integrity Objectives will be completed within the context of the Land and Resource Management Plan Revision Interdisciplinary Team.

Scenic Character Descriptions

Gila Forest staff developed scenic character units. They considered the following mapping units: ecological subsections, Ranger Districts, New Mexico Game and Fish Department Game Management Units, and watersheds. After reviewing the various types of units above, Forest staff chose groupings of 5th code watersheds with the Blue Range Wilderness, and the combined Gila and Aldo Leopold Wilderness areas treated as separate Scenic Character Units. Some splitting along roads was done a couple instances for coherency. The Scenic Character Descriptions were written for each of those scenic character units. Information was compiled from a variety of sources including but not limited to General Terrestrial Ecosystem Surveys (USDA FS 1993), Gila National Forest Land and Resource Management Plan as amended (USDA FS 2010a), Gila National Forest Geographic Area Existing Condition Descriptions, Geographic Information System (GIS) corporate data, research of social component attributes, and information gathered during the Landscape Architecture site visit.

The scenic character description gives a geographic area its visual and cultural image. The visual and cultural image of an area is the combination of physical, biological, and cultural attributes that make each landscape identifiable or unique. Scenic character embodies distinct attributes that exist throughout an area and descriptions concentrate on positive attributes. The descriptions represent the combination of the human habitat, heritage, and social ties to the landscape in combination with the physical and biological characteristics of the landscape.

The scenic character descriptions provide information needed to determine scenic character goals and desired conditions for scenery in the forest plan revision process. Additionally, the descriptions support analysis of the existing condition of the scenic character in future project planning. The scenic character description is a separate document from this report (USDA FS 2019a). Refer to figure 8 for a map of the Scenic Character Units.

Components of the Scenic Character Description

Social Component categories:

- Scenic Characteristics from Concern Level 1 Roads, Trails and Use Points
- Special or Distinctive Landscape Attributes
- Recreation Opportunities

Ecological Component categories:

- Dominant Environmental Regimes
- Disturbance Regimes

- Human Caused Disturbance

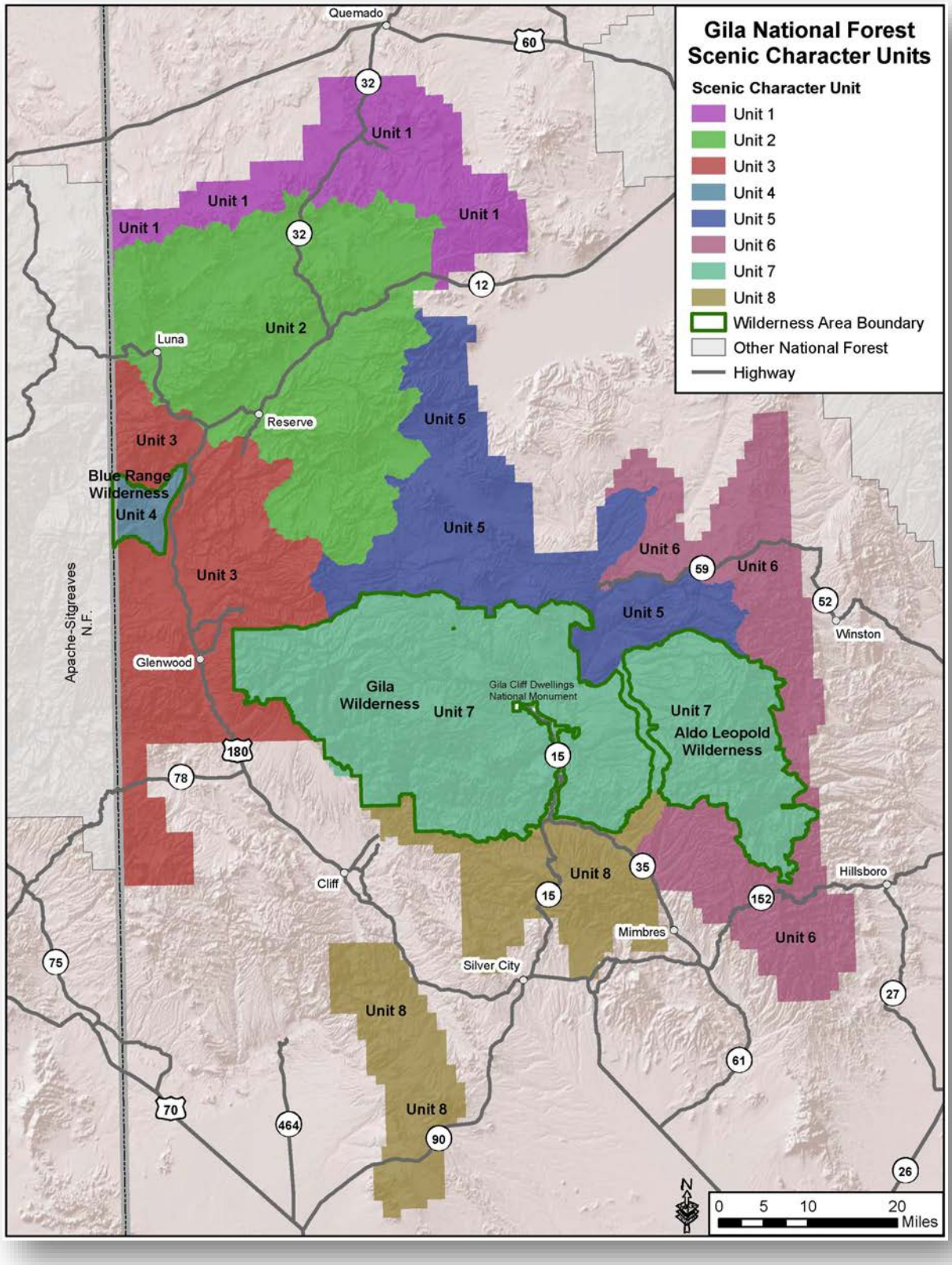

Figure 8 Map of Gila NF Scenic Character Units

Concern Levels

Forest recreation and planning staff, District Rangers, and Enterprise Landscape Architect determined initial concern levels through a workshop which was part of the Scenery Management System training held in the December 2015. District and Forest staff identified concern levels one and two on hard copy maps. Refer to Appendix A for documentation of the concern level rating process.

Enterprise added initial concern level ratings on GIS data layers. Maps for each district were sent to the Forest for review. Streams were not included on the hard copy maps, but were considered in the concern level mapping by. Forest and District personnel provided critical review and finalized all concern level ratings for travel routes and use areas.

To summarize, the road, trail, and stream systems of the Forest were rated as a concern level 1, 2, or 3, primary, secondary, and secondary with low use and moderate to low interest in scenery respectively, as defined in the SMS handbook. Use areas were assigned concern level 1, 2, or 3 as defined in the SMS handbook. Recreation use areas on the Gila NF were assigned concern level 1 or 2 and are shown on the concern level map as use points. Areas with a high likelihood of being seldom seen, due to few roads or trails in the area (i.e., designated wilderness areas), were also assigned concern level 1 (refer to the Visibility Analysis for more detail). This system was also applied to travel routes outside of the Forest which have potential views into the Forest. Refer to *Landscape Aesthetics, A Handbook for Scenery Management*, Agriculture Handbook 701, for detailed information on determining concern levels (USDA FS 1995, 4-8 – 4-10).

Concern level 1 generally includes all seen areas from primary travel routes, use areas, and water bodies where the forest visitors have a high interest in scenic qualities. Concern level 1 areas also include all seen areas from secondary travel routes use areas, and water bodies where the forest visitors have a high interest in scenic qualities. Both the SMS and the VMS give a Concern Level 1 to secondary travel ways and use areas where any level of use has a high interest in scenery, although the VMS is more instructive in stating, “Level 1 also includes all seen areas from Secondary travel routes, use areas, and water bodies where at least three fourths of the Forest visitors have a Major concern for the scenic qualities” (USDA FS 1974, 19).

Concern Level 2 generally includes all seen areas from primary travel routes, use areas, and water bodies where the forest visitors have a moderate interest in scenic qualities or low interest in scenic qualities if the area receives moderate to high use. Concern level 2 also includes all seen areas from secondary travel routes, use areas, and water bodies where the forest visitors have a moderate interest in scenic qualities or low interest in scenic qualities if the area receives high use or “where at least one-fourth and not more than three-fourths of the Forest visitors have a Major concern for scenic qualities” (USDA FS 1974, 20).

Concern Level 3 areas apply to all other travel routes and use areas not listed above.

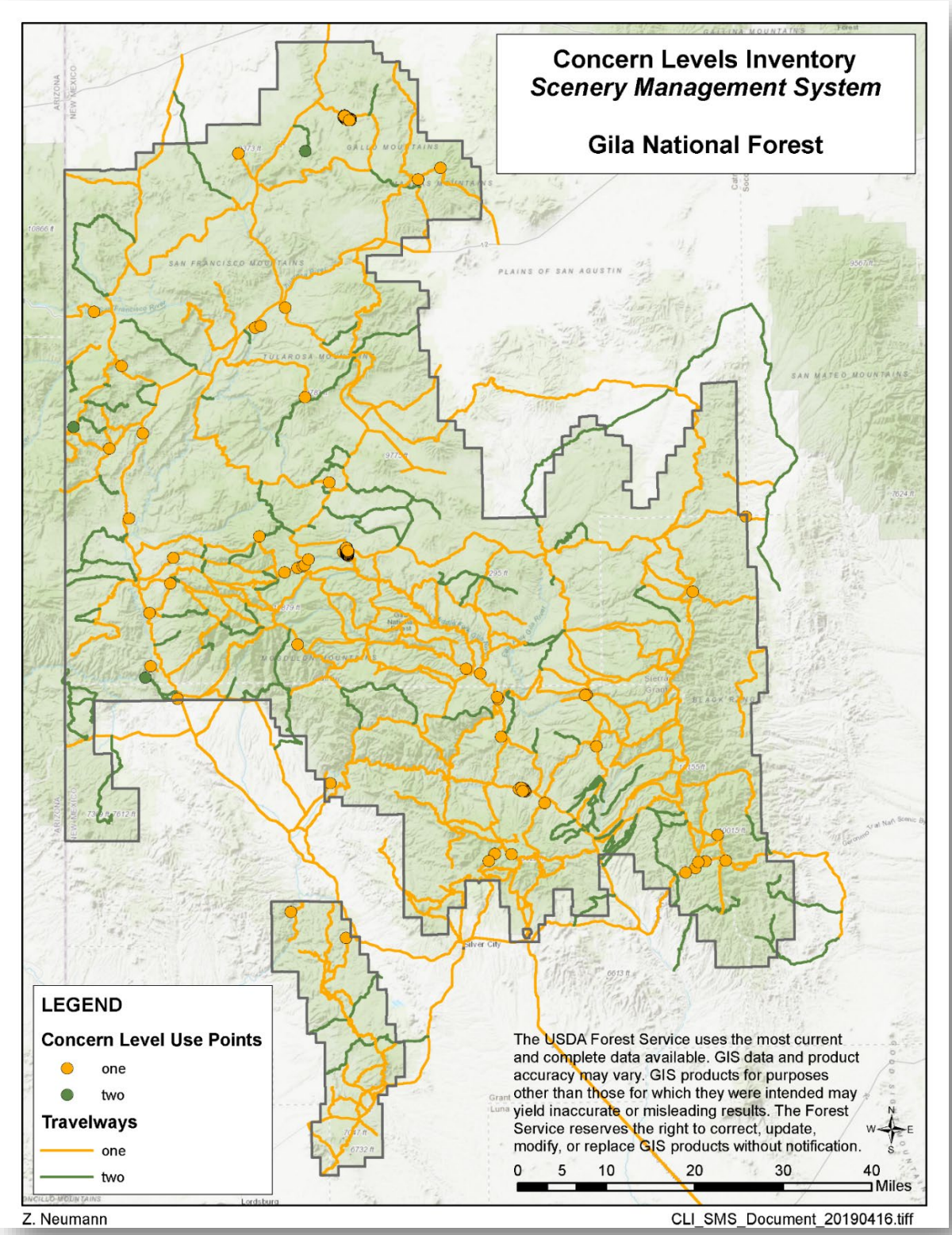

Figure 9 Map of Concern Level 1 and 2 Roads and Trails Travelways and Use Points Map of the Gila National Forest.

Visibility Analysis

The visibility analysis was generated in ArcInfo GIS, using the concern level data layers. Viewpoints were generated at roughly 1/4-mile intervals for concern level 1 roads, trails, and streams and roughly 1/4-mile intervals for concern level 2 roads and trails. A viewpoint layer of concern level use points, which included points not generated from the travel route intervals, was also used to determine seen areas. These use points included vistas, overlooks, developed recreations areas, and points identified by Forest personnel for key views. The visibility analysis was completed for concern levels 1 and 2 only since areas seen by concern levels 1 and 2 would override most areas seen by concern level 3.

The following table shows the number of viewpoints generated on travel routes and the number of key viewpoints identified on and near the Forest.

Table 1. Gila National Forest Scenery Viewpoints

Concern Level	Viewpoints generated on concern level travel ways	Viewpoints identified as concern level use points
One	11,490	306
Two	2,879	6
Total	**14,369**	**312**

Each viewpoint was assigned an observation height. Viewpoints generated on travel routes and viewpoints identified as concern level use points were assigned an observation height of five feet (1.5 meters).

The viewpoints were analyzed in combination with the digital elevation models (DEM) of the forest. The DEM cell size was about 30 meters. The DEM was processed in GIS to run the visibility commands. Only the topographical/elevation information was used to determine seen areas. Vegetation was not considered in this analysis, because vegetation, being dynamic, may change over time due to natural disturbance or human activity. Vegetative screening is important for short-term detailed planning at the project level. However, vegetative screening is inappropriate to consider in long-term, broad-scale planning, such as forest planning (USDA FS 1995, 4-5). A background viewing distance of four to 15 miles was used for this analysis since little detail is discernible beyond 15 miles.

Unseen Acres: Inevitably the visibility computer analysis results in some acres that are “unseen.” These acres are referred to in the SMS handbook as Seldom Seen since they may be seen, at a minimum, from aircraft and an occasional viewer wandering through the forest (USDA FS 1995, 4-11). A concern level use areas layer, which included designated wilderness areas, special interest management areas, areas identified during the concern level inventory, and inventoried roadless areas, was used to determine and assign a concern level to these “unseen acres”. Designated wilderness areas, special interest areas and inventoried roadless areas were assigned concern level one. All other unseen areas were assigned concern level two, as directed by Forest personnel.

Visibility analyses for the concern level use points and concern level travelways were completed separately and later combined for the final visibility analysis. In the final visibility layer, when an area was assigned to more than one distance zone, the distance zone reflecting the highest concern level use point or travelway was assigned according to the matrix outlined in the SMS handbook (USDA FS 1995, 4-12). All map layers, including viewer frequency, are available to provide more data for project level analysis.

Visibility analysis for the Continental Divide National Scenic Trail (CDNST) was processed at a higher point frequency of 153 meters. Lakes were sampled using grit at 300' or 91 meters.

Anomalies in the visibility output data layers exist due to corrupt or null cells in the source data grid. This results in banding of data which seems out of place when compared to surrounding values. Surrounding values are the most likely value for the anomaly cells. Specialists should be aware of these anomalies when doing project level analysis.

Sampling interval, quickly changing topography, and DEM cell size may result in cells directly located on a concern level route being coded as unseen. These lands would actually be seen when traveling the route. These areas should be considered seen and fixed during project level analysis.

Table 2. Visibility, Distance Zones, and Concern Level Acres

Distance Zones/Concern Level	Acres	Percent of Forest
Foreground Level 1 (Fg1)	477,708	15
Middleground Level 1 (Mg1)	1,141,463	35
Background Level 1 (Bg1)	716,290	22
Seldom Seen Areas Level 1 (ss1)	371,812	11
Foreground Level 2 (Fg2)	85,948	3
Middleground Level 2 (Mg2)	71,965	2
Background Level 2 (Bg2)	52,332	2
Seldom Seen Areas Level 2 (ss2)	356,087	11

Note: The acres calculations only include National Forest System lands.

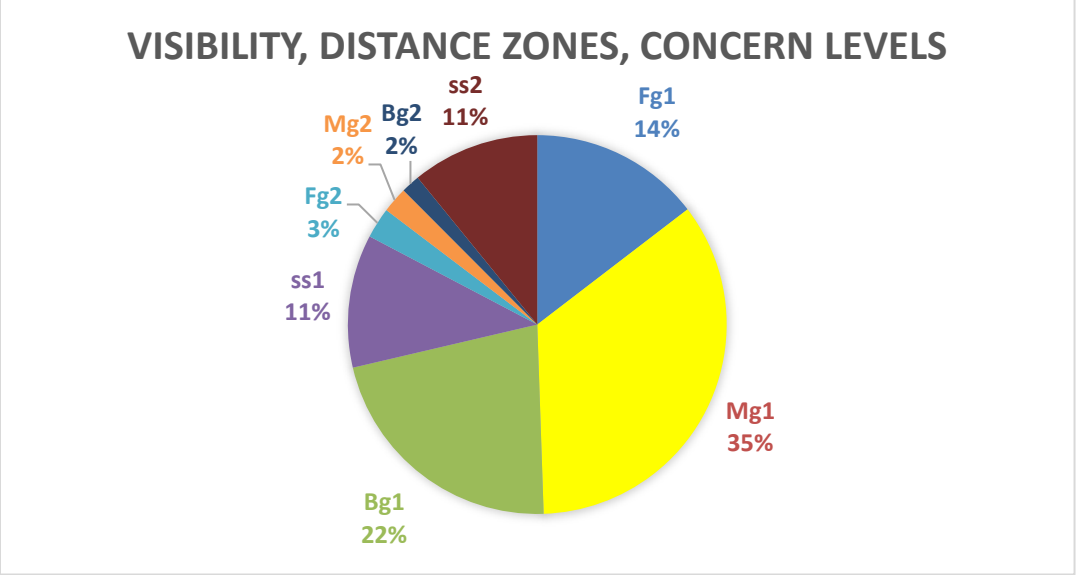

Figure 10 Visibility, Distance Zones, and Concern Levels Chart

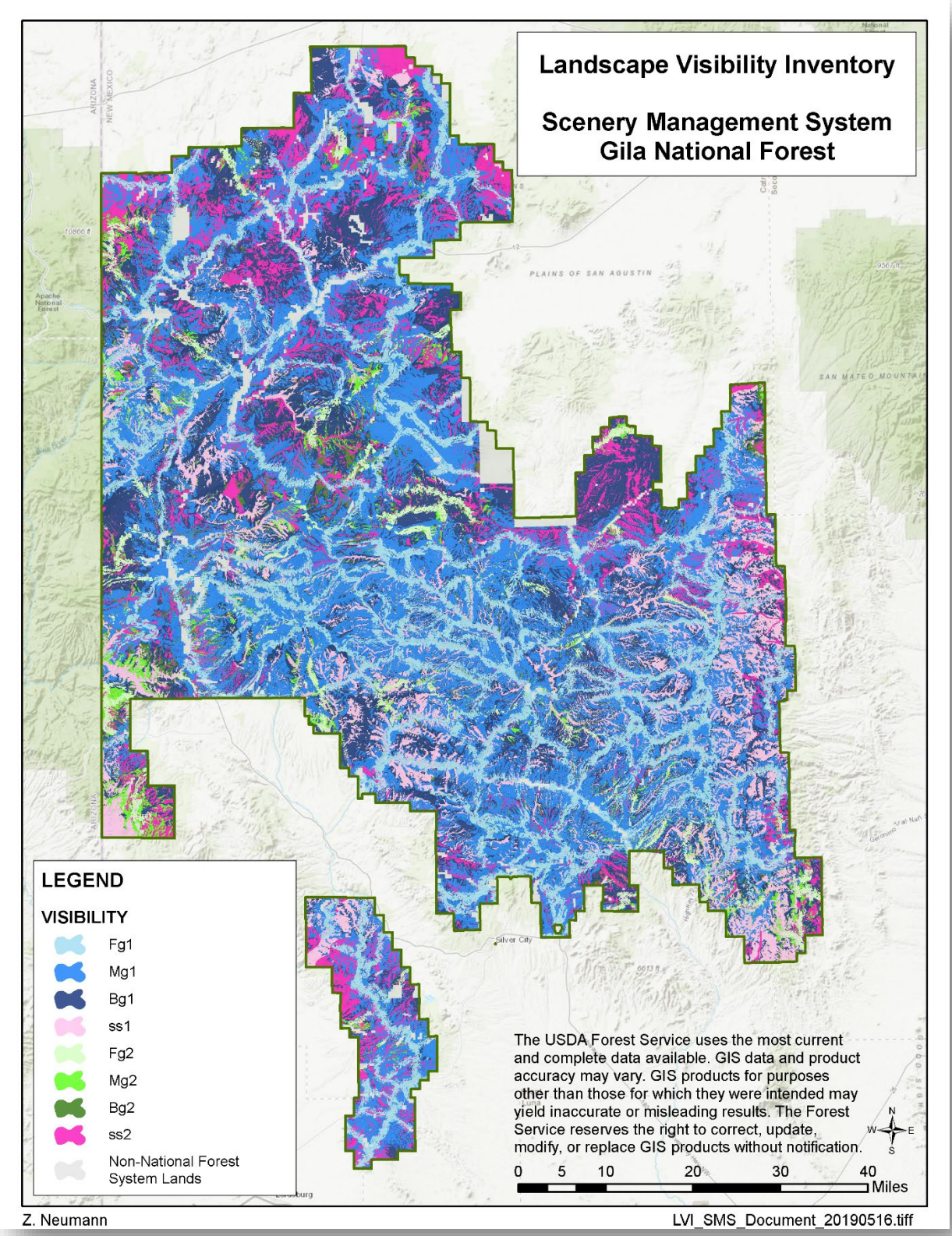

Figure 11 Visibility, Distance Zones, and Concern Levels Map for western portion of the Gila National Forest

Scenic Attractiveness

Scenic Attractiveness is the primary indicator of the intrinsic scenic beauty of a landscape and of the positive responses it evokes in people. It helps determine landscapes valued for scenic beauty, based on commonly held perceptions of the beauty of landform, vegetation pattern and composition, water characteristics, and land use patterns and cultural features. Scenic attractiveness indicates varying levels of long-term beauty of the landscape character, regardless of existing conditions. Scenic attractiveness classifications are Class A – distinctive, Class B – typical, and Class C – indistinctive.

The National Forest System adopted The National Hierarchical Framework of Ecological Units as part of its ecosystem management policy (McNab and Avers 1994). The hierarchy identifies eight hierarchical levels of land classification based on known ecological relationships.

Table 3. The Forest Service National Hierarchical Framework of Ecological Units (McNab and Avers 1994)

Planning and Analysis Scale	Ecological Units	Purpose, Objectives and General Use	General Size Range
Ecoregion Global Continental Regional	Domain Division Province	Broad applicability for modeling and sampling, strategic planning and assessment, and international planning	Millions to tens thousands of square miles
Subregion	Section Subsection	Strategic, multi-forest, statewide and multi-agency analysis and assessment	Thousands to hundreds of acres
Landscape	Landtype Association [General Terrestrial Ecosystem Survey*]	Forest or area-wide planning and watershed analysis	Thousands to hundreds of acres
Land Unit	Landtype [Terrestrial Ecosystem Survey*] Landtype Phase	Project and management area planning and analysis	Hundreds to less than ten acres

Note: Items added to show Region 3 ecosystem survey information in the Hierarchy

“In Bailey's (1995) approach, landtypes are divided into landtype phases or aggregated into landtype associations for landscape scale planning and analysis. At these detailed levels, forest and woodland stands as well as linear riparian ecosystems are recognized. Because these units can be observed on the ground, they are especially meaningful to managers and the public. The phase, landtype, and association are the smallest recognized divisions in the hierarchy of the National Framework of Ecological Units...Landtype and phase (land units) are useful for project planning and analysis and link to landscape units. Landtype associations (landscape units) are useful in forest planning and tier to the subregional units described by Bailey et al. (1994).” (Dahms and Geils 1997, Ecosystem scale, hierarchy and classification section).

The scenic attractiveness inventory was derived from two different scale levels of data. The project level scale data is comprised of water features of lakes and streams, three slope classes depicting topography, general terrestrial ecosystem survey map units and geomorphology data depicting landform, and midscale vegetation dominance types. This data was used to determine the forest planning scale inventory, which used mapping units from the General Terrestrial Ecosystem Survey (GTES).

Project Level Scale Scenic Attractiveness - Process

Individual landscape attributes, such as landform, vegetation, and water features, were reviewed at a finer scale to inform the forest planning scale scenic attractiveness inventory. The project level scale

data reviewed included water features of lakes and streams, three slope classes depicting topography, terrestrial ecological map units depicting landform and potential natural vegetation, and midscale vegetation dominance types. Appendix A includes a summary table of rating these landscape attributes.

Water features

Water characteristics include the relative occurrence and distinguishing characteristics of rivers, streams, lakes, and reservoirs. Because of its scarcity, water is a special and distinctive feature across New Mexico landscapes, especially perennial water sources. Rivers and streams were classified and identified for their distinctiveness based on eligible wild and scenic rivers and their outstandingly remarkable value of scenery and presence of riparian areas as mapped by the Forest. To determine potential riparian areas or influence zone of streams, the corporate riparian data, RMAP, was used.

Lakes and reservoirs were rated for scenic attractiveness based on acreage and distinctive characteristics. Class A lakes and reservoirs are water bodies 6 acres and larger. Some lakes smaller than six acres with one or more of the following characteristics were rated as class A: unusual or outstanding shoreline characteristics, strong reflective quality, or distinctive shoreline, vegetation, or rock forms. Lakes occurring within riparian areas were included as distinctive regardless of size. Class B lakes and reservoirs are water bodies from two to six acres. Class C lakes and reservoirs are less than two acres in size. Lakes and reservoirs rated Class A or B were buffered with a ¼ mile buffer to show potential influence areas.

Topography and Landform

The topography of the Forest is represented in GIS with the 30 meter digital elevation model (DEM). Using the DEM, the percent of slope was broken down into three categories: Class A – 60 percent slope and higher, Class B – 30-59 percent slopes, Class C – 0-29 percent slopes.

Geology and landform patterns were determined using the General Terrestrial Ecosystem Survey (GTES) of the Gila National Forest. The data in the GTES was reviewed to assign scenic attractiveness based primarily on presence of rock outcrops and badland formations. The GTES map units with those landforms were rated as distinctive are 168, 192, 452, 475 and 479. The GTES map units rated common are 427 and 452.

Vegetative Patterns

Vegetative patterns include the distinguishing characteristics of existing and potential vegetative communities and the patterns formed by them. The existing vegetation layer, mid-level vegetation dominance type item, was used to determine vegetation's project level scenic attractiveness. In addition to the mid-level dominance types, riparian vegetation was rated Class A using RMAP data. The table below summarizes the classification used for vegetative patterns on the Forest.

Table 4. Mid-level vegetation dominance type scenic attractiveness ratings

Scenic Attractiveness Class	DT_MU_CODE	DT_MU_DESC
A	ASPE_06	Aspen
A	DETM_06	Deciduous-evergreen tree mix
A	DSM_06	Deciduous shrub mix
A	GAMB_06	Gambel oak
A	GOETM_06	Gambel oak – evergreen tree mix
A	WHITEFRM_06	White fir mix
B	DOUGFM_06	Douglas-fir mix

B	PONDO_06	Ponderosa pine- evergreen oak mix
B	POND_06	Ponderosa pine mix
B	ONESJM_06	One-seed juniper mix
B	CFES_06	Corkbark fir-Englemann Spruce
B	ALLU_06	Alligator juniper
B	EOM_06	Evergreen oak mix
B	ESM_06	Evergreen shrub mix
B	PAJEO_06	Pinyon, alligator juniper, evergreen oak mix
B	UEFTM_06	Upper evergreen forest tree mix
C	GM_06	Grass mix
C	SVG_06	Sparsely vegetated

Note: Riparian vegetation was rated Class A using RMAP data

Forest Planning Level Scale Scenic Attractiveness – Process

General Terrestrial Ecosystem Survey (GTES) map units denote soil condition, erosion hazard, re-vegetation potential and vegetation cover. The map units are similar in scale to landtype associations which fit within the National Hierarchical framework of Ecological units as a landscape level planning and analysis scale unit useful in forest planning (Dahms and Geils 1997). Local landform patterns become apparent at this level in the hierarchy and differences between delineations are usually noticeable to on the ground observers (Cleland et al. 1997). Since landtype associations or GTES map units can be observed on the ground, these units provide for human experience and interaction in the ecosystem.

Although no detailed descriptions for the General Terrestrial Ecosystem Survey map units could be found, some map unit properties can be found in the Region 3 GTES Manual (USDA FS 1991). Project level scale scenic attractiveness data was used to analyze and rank the character of each GTES map unit including: topography, characteristic landforms and rock features, and dominant vegetation types. The scenic attractiveness ratings for the GTES map units were reviewed by Enterprise landscape architect and GIS specialists and Forest staff.

This portion of the scenic attractiveness inventory was used in the forest planning process to determine scenic classes. At project level analysis, all scales of the scenic attractiveness attributes can be used. The table below is a summary of scenic attractiveness rating for each GTES map unit across the Forest.

Table 5. Gila National Forest GTES Map Units and Scenic Attractiveness Ratings

GTES	Scenic Attract-iveness	Vegetation System Symbol	Common Name	Landform	Scenic Character Unit
127	B	QUTU2	scrub oak	Hills, Elevated Plains	8
134	C	JUMO, GUSA2	oneseed juniper, broom snakeweed	Hills, Elevated Plains	1
143	B	PRGL2, QUGR3	honey mesquite , gray oak	Hills	3,4,7
144	B	JUDE2, QUGR3	alligator bark juniper, gray oak	Hills, Elevated Plains	2,3,4,5,6,7
145	B	PRGL2, QUGR3,	honey mesquite, gray oak	Hills, Elevated Plains	3
149	B	QUGR3	gray oak	Mountains, Hills, Elevated Plains	2,3,4,6,8
157	B	PIPOS, QUGR3, JUDE2	ponderosa pine, gray oak, alligator bark juniper	Elevated Plains, Escarpments	5,6,7,8
158	B	PIPOS, QUGR3	ponderosa pine, gray oak	Hills, Mountains, Escarpments	2,3,5,6,7
160	B	PIPOS	ponderosa pine	Elevated Plains	1
168	A	QUGR3, PSMEG	gray oak, Douglas fir	Mountains, Escarpments	1,2,3,4,5,6,7,8
181	A	PIEN	Englemann spruce	Mountains, Elevated Plains	3,7
191	B	PIPOS	ponderosa pine	Mountains, Hills, Elevated Plains	1,2,3,5,7
198	B	PSMEG	Douglas fir	Hills, Elevated Plains	2,3,4,5,6
370	A	QUEM, CHL12	Emory oak, desert willow	Valley Plains	8
371	A	QUEM, POFR2	Emory oak, Fremont cottonwood	Valley Plains	3,6,7,8
390	B	QUGR3, PSMEG	gray oak , Douglas fir	Escarpments	1,2
427	B	PRGL2, QUGR3,	honey mesquite, gray oak	Hills, Escarpments	3,7,8
429	B	JUMO, ERNA10	oneseed juniper, rubber rabbitbrush	Valley and Elevated Plains	1,2
435	B	PIPOS, QUGR3,	ponderosa pine, gray oak	Elevated plains, Hills	2,3,5,6
452	A	PSMEG, PIEN	Douglas fir, Englemann spruce	Mountains, Escarpments	2
474	B	FOSP, QUGR3	mixed scrub, gray oak	Mountains, Hills, Escarpments	6,8
478	B	FOSP, QUGR3	mixed scrub, gray oak	Mountains, Hills, Escarpments	3
479	A	QUGR3, PSMEG	gray oak, Douglas fir	Mountains, Hills	2,3,5,6,7,8
491	B	PRGL2, QUGR3	honey mesquite, gray oak	Hills	3
501	B	POPR, Poan3	Kentucky blue grass, narrow leaf cottonwood	Valley Plains	1,2,3,5,6,7
560	B	FEAR2	Arizona fescue	Elevated Plains	1,2
561	C	FEAR2	Arizona fescue	Elevated Plains	1, 2,5,6,7

Scenic Attractiveness Definitions and Gila National Forest Examples

Scenic attractiveness classifications are Class A – distinctive, Class B – typical, and Class C – indistinctive.

Scenic Attractiveness Class A – Distinctive landscapes are areas where landform, vegetation patterns, water characteristics, and cultural features combine to provide unusual, unique, or outstanding scenic quality. These landscapes have strong positive attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance. The following photos are examples of Class A landscapes on the Gila National Forest. About a third of the Forest or 34 percent of the landscape has a scenic attractiveness of Class A.

Figure 12 Photo of Gila River Corridor

Figure 13 Photo of View of Whitewater Canyon

Figure 14 Photo of a View of the Petroglyphs in the Pueblo Park Area

Figure 15 Photo of Snow Lake Seen From the Dipping Vat Campground

Scenic Attractiveness Class B – Typical landscapes are areas where landform, vegetation patterns, water characteristics and cultural features combine to provide scenic quality to the study area. These landscapes have generally positive, yet common attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance. The majority of the Forest or 62 percent of the landscape has a scenic attractiveness of Class B.

Figure 16 Photo of Ponderosa Pine near Poverty Creek on the Black Range Ranger District

Figure 17 Photo of the Gila River Basin on the Silver City Ranger District

Figure 18 Photo of the Slaughter Mesa Area on the Quemado Ranger District

Figure 19 Photo of Ponderosa Pine and Meadow seen from the Bursum Road on the Reserve Ranger District

Figure 20 Photo of View to the West from McKnight Road on the Wilderness District

Figure 21 Photo of a View in the Windy Flat Area seen from US Highway 180 on the Glenwood District

Scenic Attractiveness Class C – Indistinctive landscapes are areas where landform, vegetation patterns, water characteristics and cultural features have low scenic quality. Often water and rock form of any consequence are missing in class C landscapes. These landscapes have weak or missing attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

A small portion of lands, approximately 4%, have been classified in this category. The majority occur on the Quemado Ranger District. One area is on the north side of Jenkins Creek road and Bill Knight Gap Road. A small unit surrounds Steele Flat on the west side of the District. Another Class C area is in the Sand Flat area. There are a few more occurrences on the Reserve Ranger District along the O Bar O road and around the SS Basin area north of Snow Lake. The single occurrence on the Black Range District is in the Wolf Hollow Campground area.

Figure 22 Photo of Pinyon Juniper mixed Vegetation and Rolling Hills seen from Wolf Hollow Campground on the Black Range District

Figure 23 Photo of High Elevation Plains looking towards O Bar O Mountain near the intersection of O Bar O Road and Bursum Road Reserve Ranger District

The following table summarizes acres in each scenic attractiveness class using the forest planning scale inventory data. Refer to Appendix B for the scenic attractiveness protocol and fine scale project level maps.

Table 6. Scenic Attractiveness Classes Acres

Class	Acres	Percent of Forest
A – Distinctive	1,105316	34
B – Typical	2,043,391	62
C – Indistinctive	123,424	4

Note: The acres calculations only include National Forest System lands. Scenic Attractiveness mapped to the extent of the General Terrestrial Ecological Survey for the Forest.

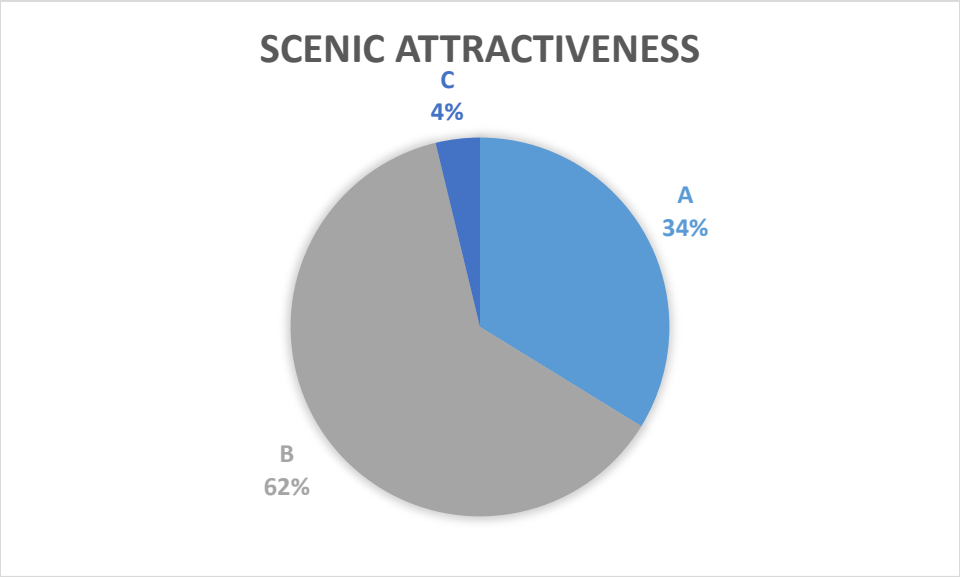

Figure 24 Scenic Attractiveness Chart

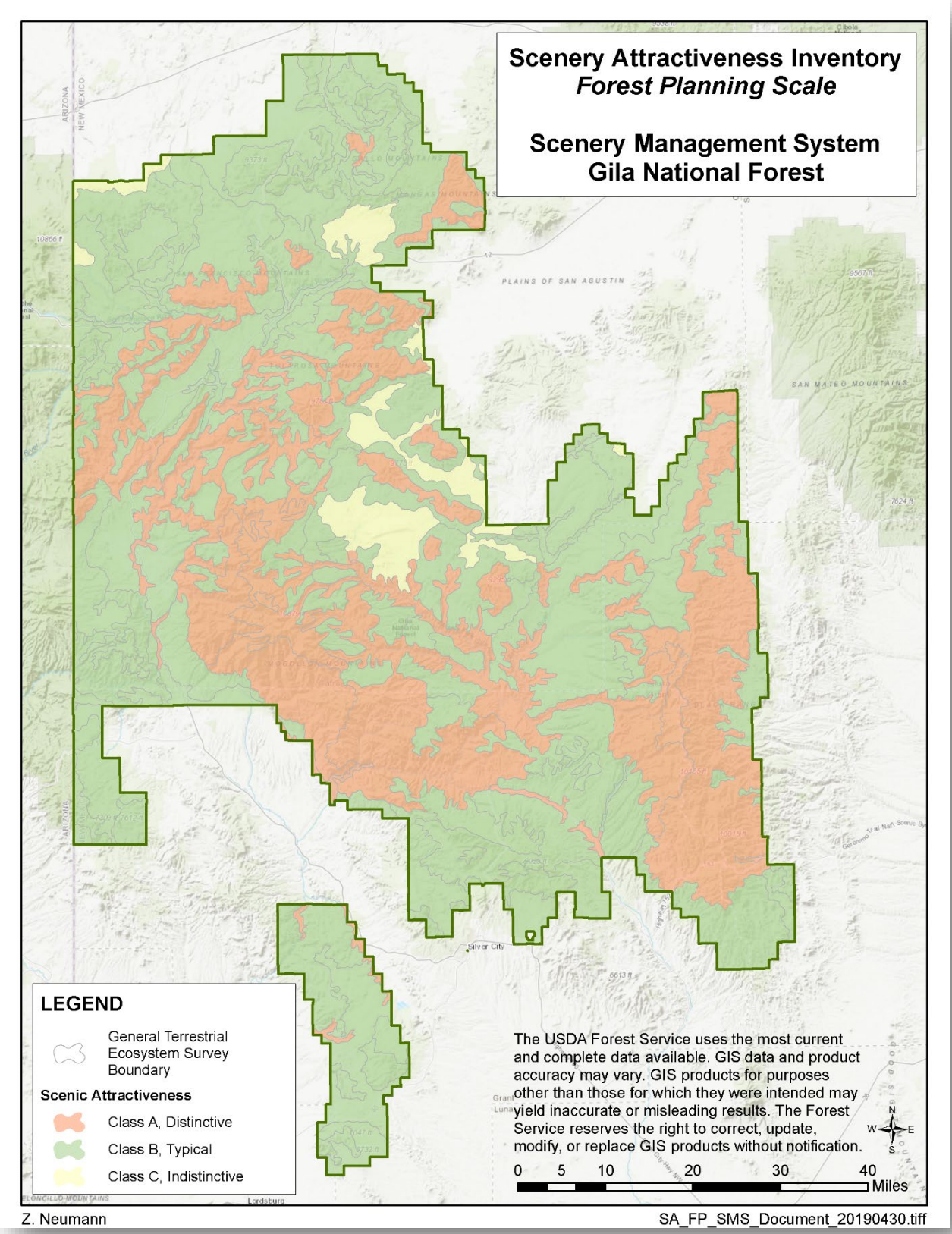

Figure 25 Forest planning scale Scenic Attractiveness Map

Scenic Classes

All National Forest landscapes have value as scenery. Scenic classes are a measure of the value of scenery in a National Forest and used during forest planning to compare the value of scenery with the value of other resources, such as timber, wildlife, old growth, or minerals (USDA FS 1995, 4-15). They are a product of the inventory process used for analysis and forest planning purposes.

Scenic classes are determined and mapped by combining the three classes of scenic attractiveness with the distance zone and concern levels of landscape visibility as outlined in the Scenic Class Matrix found in the SMS handbook and shown in the table below.

Table 7. Scenic Class Matrix

		Distance Zones/Seldom Seen & Concern Levels							
		Fg1	Mg1	Bg1	Fg2	Mg2	Bg2	ss1	ss2
Scenic Attractiveness	A	1	1	1	2	2	2	1	2
	B	1	2	2	2	3	4	2	3
	C	1	2	3	2	4	5	3	5

Note: Only the portions of the Scenic Class Matrix applicable to the Gila SMS inventory process are shown in this table. For the full Scenic Class matrix see the SMS handbook (USDA FS 1995, page 4-16).

Generally, scenic classes 1 and 2 have high public value, classes 3 through 5 have moderate value and classes 6 and 7 have low value (USDA FS 1995, 4-15). Approximately 86 percent of the Gila NF has high public value, 13 percent has moderate public value, and less than 1 percent has low public value for scenery. There are no occurrences of classes 6 and 7 on the Gila National Forest.

Table 8. Scenic Classes Acres

Scenic Class	Acres	Percent of Forest
1 - High Public Value	1,286,126	39
2 - High Public Value	1,579,111	47
3 - Moderate Public Value	357,858	11
4 - Moderate Public Value	37,081	2
5 - Moderate Public Value	11,730	>1

Note: Scenic Classes mapped to the extent of the Gila NF Administrative Boundary, percentage reported does not include non-NFS lands.

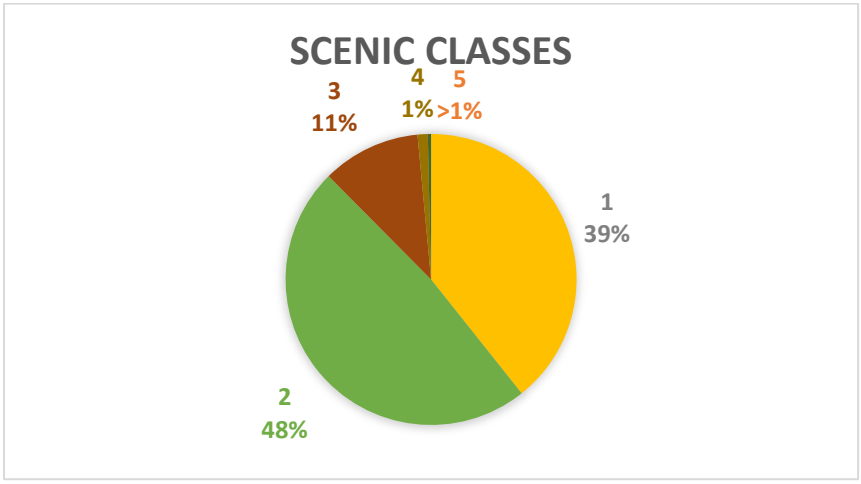

Figure 26 Scenic Classes Chart

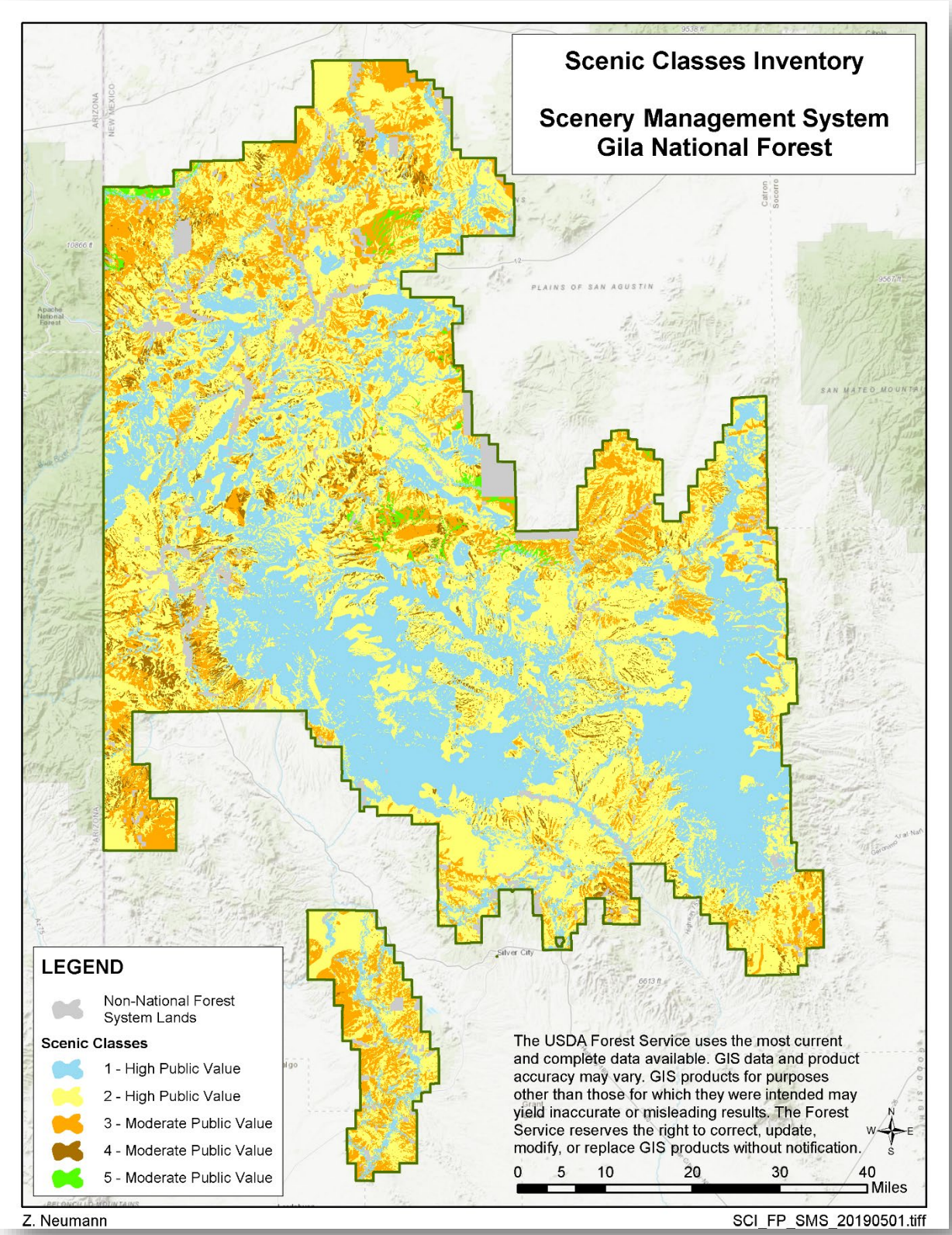

Figure 27 Scenic Classes Map for western portion of the Gila National Forest

Existing Scenic Integrity

Existing scenic integrity (ESI) is the current state of the landscape, considering previous human alterations. It indicates the intactness and wholeness of the scenic character. Previous human alterations often disrupt the character of landscape, and existing scenic integrity measures the degree of that visible disruption. A landscape with very minimal disruption is considered to have high existing scenic integrity. Landscapes with more noticeable disruption in the scenic attributes have lower existing scenic integrity. Existing scenic integrity is expressed and mapped in terms of Very High, High, Moderate, Low, Very Low, and Unacceptably Low.

Existing Scenic Integrity Mapping Process

Existing scenic integrity (ESI) levels were determined for the Gila NF using elements in GIS. Forest activities (FACTS) data from about 1950 to present was used to determine areas that appear altered across the forest from vegetative management and fuels reduction activities. Other activities altering the landscape that were used include: utility corridors, travel management, oil and gas activities, mining activities, recreation developments, and communication sites. This data was used in GIS to display the current condition of the landscape. Other GIS data used includes: designated wilderness areas, wilderness study areas, roadless inventory, research natural areas, and Recreation Opportunity Spectrum (ROS). NAIP (National Agricultural Imagery Program) aerial imagery from 2016 was used as a reference to identify changes in the landscape that may not be found in the above GIS layers and may be noticeable from aerial views. Most existing scenic integrity levels were rated from an aerial view, which is consistent with SMS Handbook direction (USDA FS 1995, 2-6). Site specific mitigation for past projects was not considered when rating vegetation management activities. Activities and lands in other ownerships were not reviewed or rated in detail but were generally rated the same as adjacent Forest lands.

Very High Existing Scenic Integrity

Very high (Unaltered) scenic integrity refers to landscapes where the valued scenic character “is” intact with only minute if any deviations. The existing scenic character and sense of place is expressed at the highest possible level (USDA FS 1995).

The following land management designations include lands which are unaltered, expressing the highest possible level of intactness with a primitive and natural sense of place and have an ESI of very high: designated wilderness areas and wilderness study areas, inventoried roadless areas (IRAs) where road construction and reconstruction is prohibited and Primitive ROS Class when adjacent to IRAs or other Very High ESI areas. Only minute, if any, deviations in the scenic character exist, such as non-motorized trails. Lands with very high ESI make up about 44 percent of the Forest.

Figure 28 Photo of the Blue Range Wilderness Area- Very High ESI

Figure 29 Photo of Brushy Mountain in the Gila Wilderness- Very High ESI

Figure 30 Photo looking east from the Black Range Trail at Hillsboro Peak in the Aldo Leopold Wilderness- Very High ESI

Figure 31 Photo of the Gila River Basin on the Silver City Ranger District- Very High ESI

High Existing Scenic Integrity

High (Appears Unaltered) scenic integrity refers to landscapes where the valued scenic character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the scenic character so completely and at such scale that they are not evident (USDA FS 1995).

About 36 percent of the Forest has high existing scenic integrity; the landscape appears intact and deviations from the scenic character are not evident, giving these areas an existing scenic integrity level of high. Roads and trails may occur in high existing scenic integrity since they are the platform for viewing scenery. Prescribed burning and grazing activities may also occur in high ESI areas since these activities typically result in a landscape that appears unaltered.

The following land management designations were determined to have a scenic character that appears unaltered; the landscape appears intact and deviations from the scenic character are not evident, giving these areas an ESI level of high: inventoried roadless areas where road construction and reconstruction is not prohibited. Across the Forest, Semi-Primitive Non-Motorized ROS class when adjacent to IRAs or other High ESI areas and areas of Semi-primitive Motorized ROS class where the road or trail is the only noticeable activity were rated high. Current ROS layer was used, since it is the result of implementing the current Forest Plan.

Figure 32. Photo of Ponderosa Pine Stand in the Tularosa Mountains- High ESI

Figure 33 Photo of the Slaughter Mesa Area- High ESI

Figure 34 Photo of Ponderosa Pine mixed Conifer stand in the San Francisco Mountain Range- High ESI

Figure 35. Photo of the Rocky Canyon Area- High ESI

Figure 36 Photo of the Mimbres River- High ESI

Moderate Existing Scenic Integrity

Moderate (Slightly Altered) scenic integrity refers to landscapes where the valued scenic character "appears slightly altered." Noticeable deviations must remain visually subordinate to the scenic character being viewed (USDA FS 1995).

About 18 percent of the Forest appears slightly altered due to vegetation management, fuels reduction, administrative sites, developed and dispersed recreation, and other forest management activities and has an ESI of moderate. Moderate ESI was assigned to those lands on the Gila NF not designated as very high, high, low or very low existing scenic integrity.

Vegetation management activities rated moderate include selection harvest prescriptions, intermediate harvest prescriptions, fuels reduction, and tree encroachment control. Vegetation management activities were queried from Forest activity codes (FACTS) to show selection harvest prescriptions (i.e., single tree selection, group selection), intermediate timber harvest prescriptions (i.e., commercial thinning, shelterwood, salvage and sanitation cuts, individual selection cuts, and pre-commercial thinning) fuels reduction activities (i.e., thinning for hazardous fuels reduction, piling and chipping of fuels, and

yarding) and timber stand improvements (i.e., release and weeding and precommercial thinning). These activities were displayed over NAIP imagery. If the activity caused a noticeable change in the forest canopy, it was rated moderate. Regeneration harvest prescriptions which would generally be low ESI may have been rated moderate if the activity blended with other moderate ESI areas or the harvest unit boundaries were not a noticeable contrast with surrounding forested lands.

Figure 37 Photo of Sapillo Campground- Moderate ESI

Figure 38 Photo of Dispersed Camping near Apache Creek on the Reserve Ranger District- Moderate ESI

Figure 39 Photo of Ponderosa Pine Thinning- Moderate ESI

Low Existing Scenic Integrity

Low (Moderately Altered) scenic integrity refers to landscapes where the valued scenic character "appears moderately altered." Deviations begin to dominate the valued scenic character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within (USDA FS 1995).

Vegetation management determined to meet low ESI are more recent vegetation management, vegetation management with noticeable unit boundaries, activities which tend to have more slash present, and those activities that remove more vegetation creating shape and texture changes in the vegetation. NAIP imagery was reviewed to determine if openings or unit edges were noticeable. Vegetation management activities were queried from Forest activity codes (FACTS) to show regeneration harvest prescriptions (i.e., clear cuts, seed cuts, removal cuts). Vegetation management with noticeable openings or unit edges were mapped as low ESI. The deviations present by these activities begin to dominate the scenic character when viewed due to noticeable form, line, and texture changes in the forest canopy. However, these harvest types also borrow from valued landscape attributes such as size and shape of natural openings common to the scenic character being viewed.

Utility lines and transmission lines where vegetation clearing is not noticeable from aerial views, were rated low ESI since the on the ground observation would have a noticeable deviation from the natural scenic character.

Other areas rated as low ESI (i.e. cinder pits) were identified and rated in GIS using 2016 NAIP imagery then manually digitized by tracing a mouse over the features in ArcMap. About 1 percent of the Forest has low ESI.

Figure 40 Photo of Salvage Harvest after the 2006 Bear Fire- Low ESI

Very Low Existing Scenic Integrity

Very low (Heavily Altered) scenic integrity refers to landscapes where the valued scenic character "appears heavily altered." Deviations may strongly dominate the valued scenic character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition (USDA FS 1995).

Vegetation management activities with unnaturally appearing edges, geometric shapes and/or an extensive network of roads were assigned very low existing scenic integrity.

Utility corridors, gravel pits and other surface mining activities, and communications sites were also mapped as very low. Utility corridors with larger noticeable right-of-way clearing were digitized and buffered with a 300 foot buffer. Mining activities, including existing, active or abandoned mines or gravel pits, were identified using 2016 NAIP imagery and Secondary Base Series Maps. The identified mining activities were heads up digitized in ArcMap and buffered with a 300 foot buffer and rated very low if they did not meet criteria discussed for low ESI. Communications sites, radio sites, and microwave facilities were heads up digitized and buffered with a 300 foot buffer and mapped very low due to color and height of most facilities present.

The activities mentioned above strongly dominate the valued scenic character and borrow little from valued attributes, such as size, shape, edge effect and pattern of natural openings and vegetative type changes within or outside the landscape being viewed. Less than one percent of the Forest was rated as very low.

Vegetation management activities with unnaturally appearing edges, geometric shapes and/or an extensive network of roads were assigned very low existing scenic integrity.

Figure 41 Photo of Large Powerline near Bishop Canyon- Very Low ESI

Figure 42 Photo of the Radar Brushy FAA Site- Very Low ESI

Unacceptably Low Existing Scenic Integrity

Unacceptably low scenic integrity refers to landscapes where the valued scenic character being viewed appears extremely altered. Deviations are extremely dominant and borrow little if any form, line, color, texture, pattern or scale from the scenic character. Landscapes at this level of integrity need rehabilitation. This level should only be used to inventory existing integrity. It must not be used as a management objective (USDA FS 1995). No lands were rated as unacceptably low for the Gila NF.

Existing Scenic Integrity Summary

The following table summarizes acres in each existing scenic integrity level.

Table 9. Existing Scenic Integrity Levels Acres

Existing Scenic Integrity Level	Acres	Percent of Forest
Very High	1,454,455	44
High	1,190,976	36
Moderate	604,370	18
Low	16,034	1
Very Low	6305	< 1
Unacceptably Low	0	0

Note: The acres calculations only include National Forest System lands.

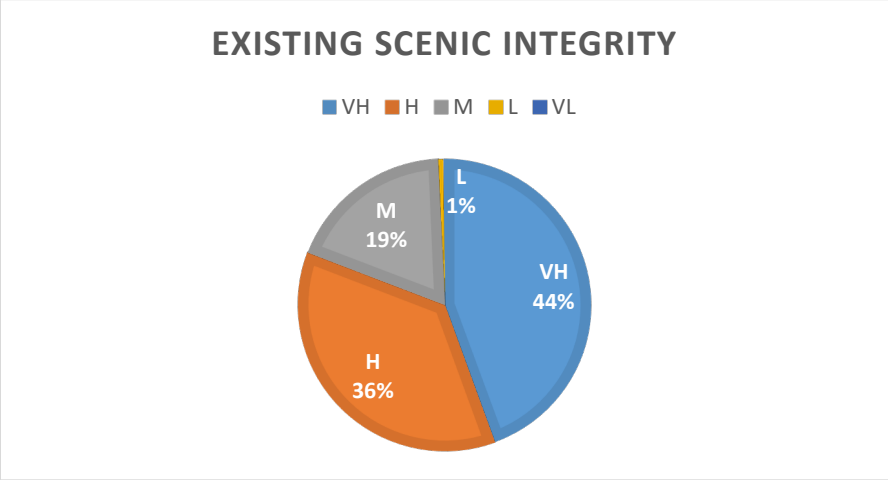

Figure 43 Existing Scenic Integrity Acres Chart

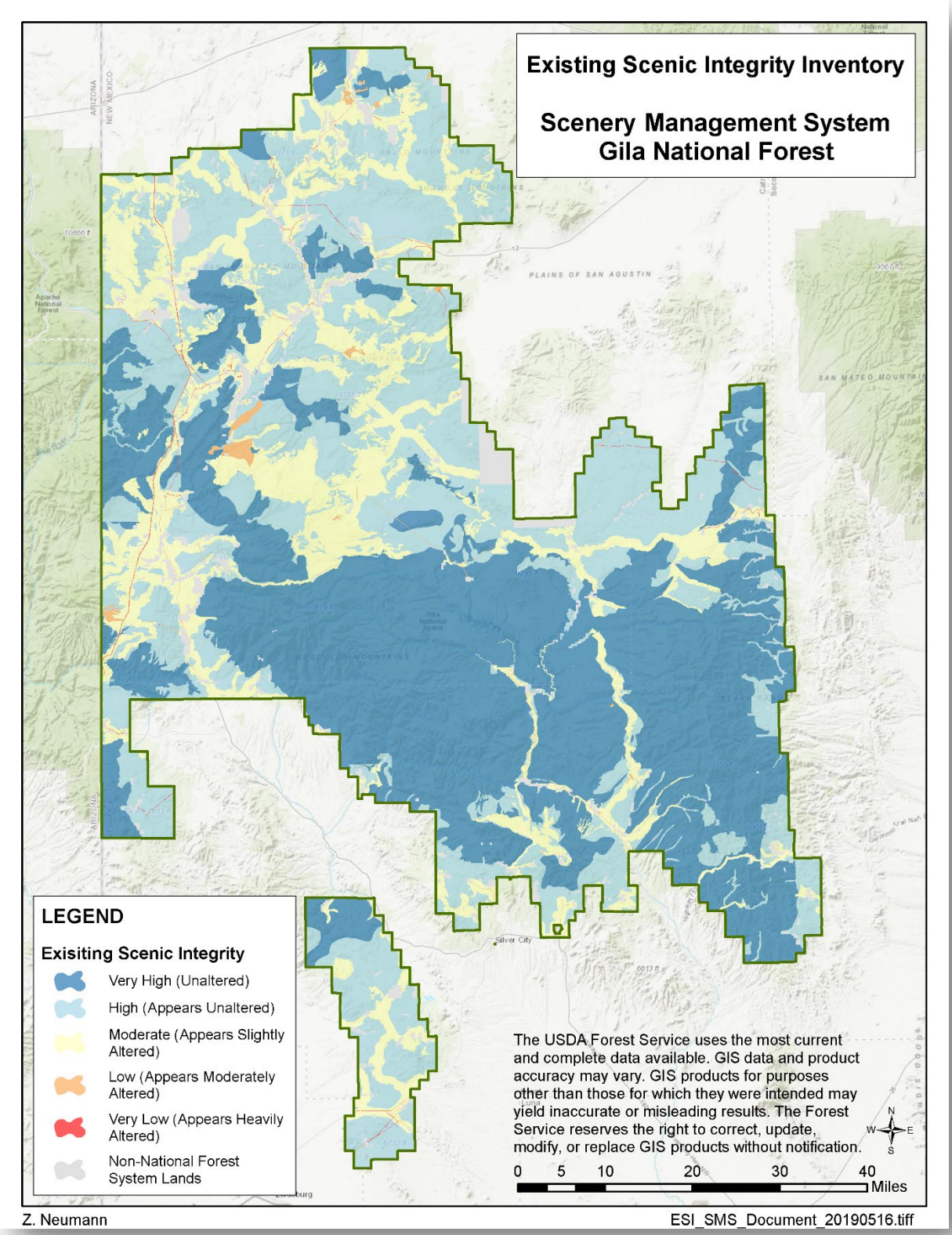

Figure 44 Existing Scenic Integrity Map Gila National Forest

Scenic Integrity Level/Objective Development

GIS Workflow

Final Outputs Desired

One feature class of base desired Scenic Integrity Levels (base SIL feature class, prior to any recommended designated area or alternative adjustments) with scen_integ_level attribute.

Step 1 – Assigning Scenic Integrity Levels to Scenic Classes

Table 10 displays the potential scenic integrity levels for each scenic class.

Table 10. Scenic Classes to potential Scenic Integrity Levels Crosswalk

Scenic Class	Potential Scenic Integrity Level
1 - High Public Value	High
2 - High Public Value	Moderate
3 - Moderate Public Value	Moderate
4 - Moderate Public Value	Low
5 - Moderate Public Value	Low
7 - Low Public Value	Low

Note- The following GIS process was applied: (Copied the "scen_classes" feature classes provided by Cass Klee and added the field, "scen_integ_level," to the copied "scen_classes." Assigned "scen_integ_level" based on the crosswalk table.)

Because there had been a couple of land purchases, as well as, a major surface ownership revision to Gila data, the next step was to perform the Identity function on Gila NF surface ownership with the base scenic integrity levels derived from scenic classes. After that polygons not covered by Forest Service ownership and polygons in FS ownership without a scenic integrity level were given a NoData value. After that the Multipart to Singlepart tool was run followed by a Dissolve (do not create multipart polygons), to get the base scenic integrity level and identify areas that needed manual data entry to have 100% coverage of Gila NFS lands. After that, each polygon with a NoData value was manually assigned a scenic integrity level. These polygons (with the exception of areas where land was purchased) were mainly small slivers were private land had shifted. Many of the polygons had to be split up to match the values of adjacent features. After performing the exercise of populating NoData values, the Multipart to Singlepart then Dissolve functions were ran to get discrete, singlepart scenic integrity polygons.

Next, was to run the Eliminate tool twice to impose a minimum map size of at least 100 acres, merging polygons less than 100 acres into neighboring polygons, for the base scenic integrity polygons derived from scenic classes (Data Management Tools > Generalization > Eliminate – Eliminating polygon by border (optional): Checked).

Step 2 – Adjustments Needed for Potential Scenic Integrity Levels

The next step was to assemble data from management areas and existing infrastructure to create polygons to impose on and override the base values derived from the scenic classes.

1. Very High Scenic Integrity Factors
    a. Designated Wilderness (Aldo Leopold, Blue Range and Gila)
    b. Wilderness Study Areas (Hells Hole & Lower San Francisco)
    c. Research Natural Area Designated (Gila River)
    d. Research Natural Area Proposed (Rabbit Trap & Turkey Creek)
    e. Wild classification – Eligible Wild & Scenic Rivers – 300-foot buffer
2. High Scenic Integrity Factors
    a. Inventoried Roadless Areas (IRAs)Scenic & Recreation – Eligible Wild & Scenic Rivers – 300-foot buffer
    b. Continental Divide NST – Half-mile buffer
    c. National Recreation Trails (NRTs – Catwalk, Wood Haul and Sawmill Wagon Trails) – Half-mile buffer
    d. National Scenic Byways (Geronimo Trail & Trail of the Mountain Spirits) – Half-mile buffer
3. Low Scenic Integrity Factors
    a. Transmission utility corridors (TEP, EPE and parts of PNM & Navopache) – buffered 100-feet
    b. Communication sites (Radar Brushy, Glenwood Brushy, Jacks Peak & San Francisco Divide) – Hand digitized using 2013 1-foot aerial imagery

A feature class for was created to store all the different elements for each scenic integrity class to make future edits to the draft scenic integrity objectives easier: VeryHighScenic, HighScenic and LowScenic.

Next, the Erase tool was used to assign precedence of one scenic class over another when there was overlap. HighScenic was Erased by VeryHighScenic so that features with Very High scenic integrity retained that class. Both HighScenic and VeryHighScenic were Erased by the LowScenic class that was generated from transmission utility corridors and large communication sites. When this was finished, all 3 classes (Very High, High and Low) were combined into a feature class and then the Multipart to Singlepart and Dissolve tools were run to create discrete, singlepart features for each class. The final feature class resulting from this process was named "ScenicIntegrityfromMgmtArea_Infrastructure_20190509."

Step 3 – Combining Scenic Integrity Units from Scenic Classes and from Management Areas & Infrastructure

The final step was to combine the potential scenic integrity objective polygons derived from scenic classes with polygons based on management areas and infrastructure with the polygons based on management areas and infrastructure taking precedence over those derived from scenic classes. The Identity tool was used to stamp the scenic class derived polygons with the mgmt. area/infrastructure polygons and then Field Calculator was used to update scenic class derived values when there was overlap with mgmt. area/infrastructure polygons. After the Multipart to Singlepart then Dissolve tools combination was performed and polygon acreages were calculated. Once again, there was around 1,000 new polygons with areas less than 100 acres. The majority had areas less than an acre – mainly from small gaps between Inventoried Roadless Area (IRA) polygons and Wilderness Areas. The Eliminate tool was used to resolve most of this problem, but it could only be run on polygons with Moderate scenic integrity level because Very High and many of the High and Low features were based on discrete features that shouldn't be altered without supervision. Also, when running the Eliminate tool, the option of using an Exclusion Expression instructing the tool not to alter Very High or Low scenic integrity level polygons was used.

After all the automated removal of small polygons was completed, the remaining small polygons were manually reviewed and merged with the appropriate adjacent polygon or left as an exception, even though the area was less than 100 acres, because of examples like small islands of USFS surface ownership, High scenic integrity between the Gila Wilderness (Very High) and Cliff Dwellings National Monument, part of a transmission line buffer or communication site, etc…
Finally, the Multipart to Singlepart and Dissolve tools were run one last time. The polygons were imported into the "scen_integ_ob" schema from the eGIS GIS Data Dictionary and renamed "draft_scen_integ_ob". Topology was also verified checking for overlap and gaps between polygons.

Table 11. Potential Scenic Integrity Objectives

Potential Scenic Integrity Level	Acres	Percent of Forest
Very High	821,331	25
High	1,184,467	36
Moderate	1,250,122	38
Low	16,219	< 1
Very Low	0	0

Note: The acres calculations only include National Forest System lands.

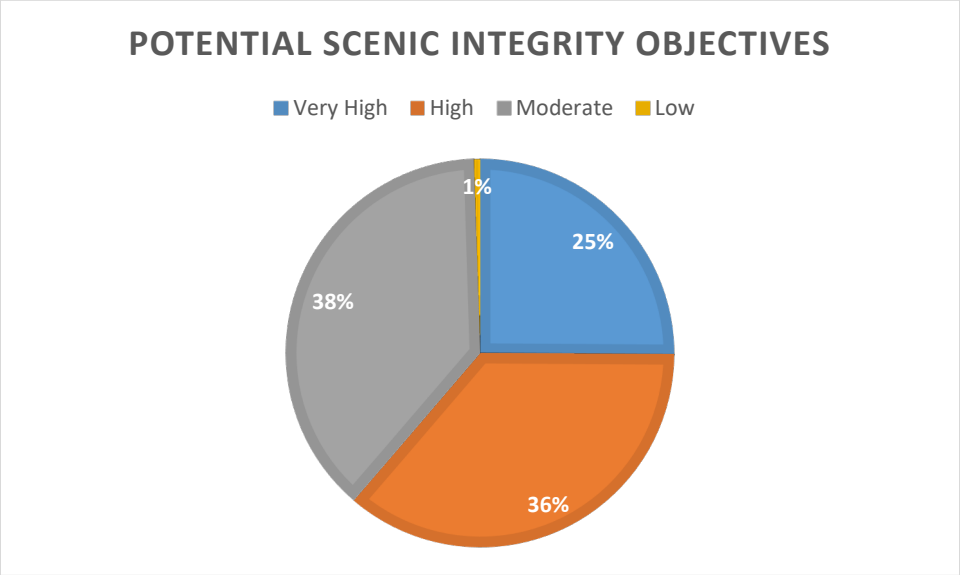

Figure 45. Potential Scenic Integrity Objectives Chart

Once the scenic integrity objectives are finalized, they will serve as a guide for design and implementation of management activities.

The very high, high, and moderate scenic integrity objectives result in a relatively natural-appearing landscape. It is important for National Forests to manage scenery at this level. "Research has shown that high-quality scenery, especially that related to natural-appearing forests, enhances people's lives and benefits society" (USDA FS 1995, 17). It should also be noted that according to "Floyd Newby's findings that "people expect to see natural or natural-appearing scenery,"" (quoted in USDA FS 1995, 2-3). Furthermore, "research shows that there is a high degree of public agreement regarding scenic preferences. This research indicates that people value most highly the more visually attractive and natural-appearing landscapes" (USDA FS 1995, 30).

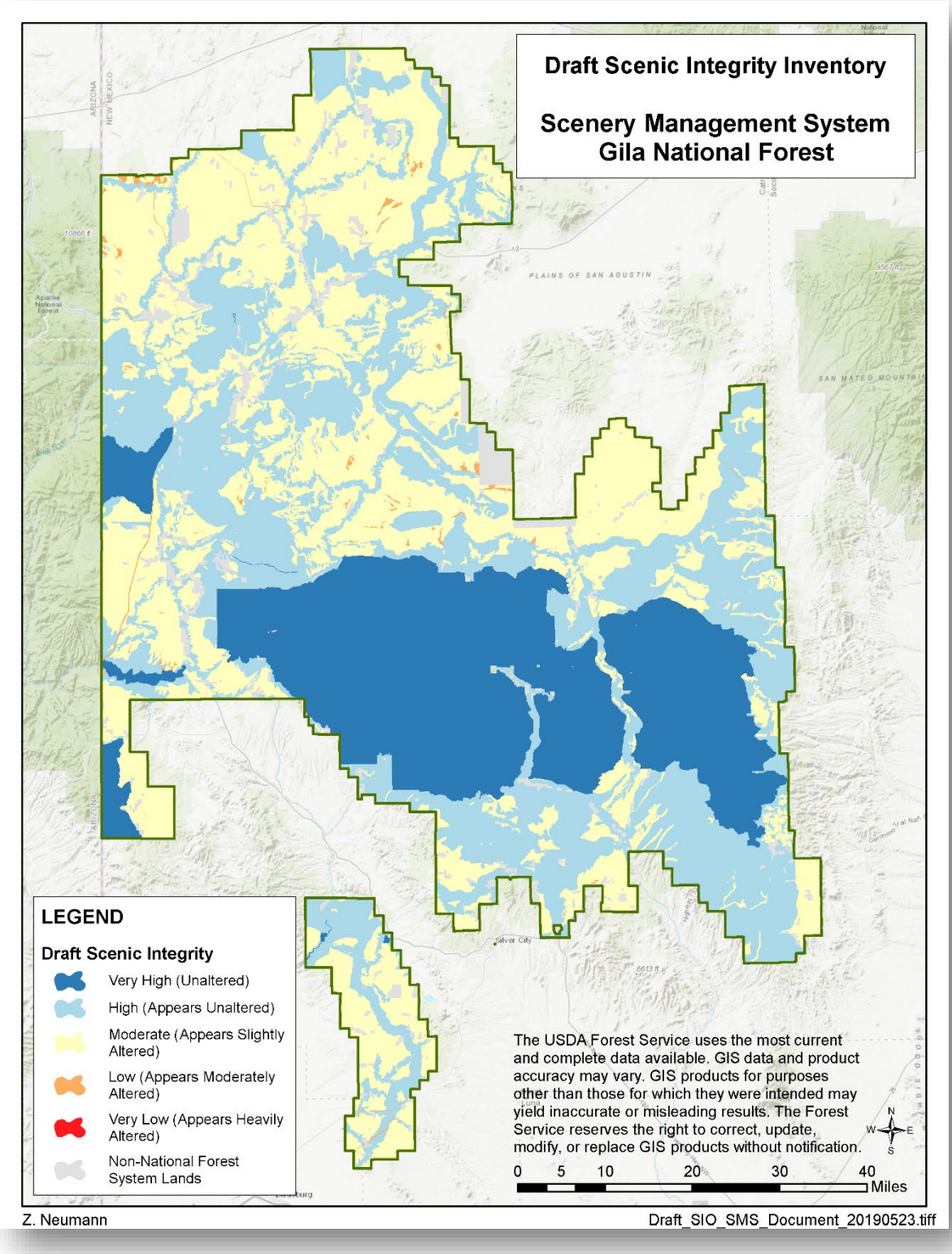

Figure 46 Map of Draft Scenic Integrity Objectives

Note: No areas are identified as Very Low Scenic Integrity although it is shown in the Legend.

References

Cleland, D.T.; Avers, P.E.; McNab, W.H.; Jensen, M.E.; Bailey, R.G., King, T.; Russell, W.E. 1997. National Hierarchical Framework of Ecological Units. Published in, Boyce, M. S.; Haney, A., ed. 1997. Ecosystem Management Applications for Sustainable Forest and Wildlife Resources. Yale University Press, New Haven, CT. pp. 181-200.

Cordell, H. Ken. 2008. The latest on trends in nature-based outdoor recreation. Forest History Today, Spring 2008, 4-10.

Cordell, H. Ken. 2012. Outdoor recreation trends and futures: a technical document supporting the Forest Service 2010 RPA Assessment. Gen. Tech. Rep. SRS-150. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station, 167 p.

Dahms, Cathy W.; Geils, Brian W., tech. eds. 1997. An assessment of forest ecosystem health in the Southwest. General Technical Report RM-GTR-295. Fort Collins, CO. U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 97 p. [Online]. http://www.rmrs.nau.edu/publications/rm_gtr_295/ [2013, May 20].

McNab, H. W. and Avers, P. E. 1994. Ecological Subregions of the United States. Introduction. U.S. Department of Agriculture, Forest Service. WO-WSA-5. (1996, October 30—last update). [Online]. Available: http://www.fs.fed.us/land/pubs/ecoregions/intro.html [2008, April 1].

President's Commission on Americans Outdoors. 1987. Americans Outdoors: the Legacy, the Challenge, With Case Studies: the Report of the President's Commission. (U.S.). Washington, DC: Island Press.

U.S. Department of Agriculture, Forest Service.1974. The visual management system. Agricultural Handbook. National forest landscape management, Volume 2. Washington, DC: U.S. Government Printing Office: 462.

U.S. Department of Agriculture, Forest Service. 1985. Gila National Forest Land and Resource Management Plan. Gila National Forest. Southwestern Region.

U.S. Department of Agriculture, Forest Service. 1991. General Ecosystem Survey. U.S. Department of Agriculture Forest Service, Southwestern Region.

U.S. Department of Agriculture, Forest Service. 1995. Landscape Aesthetics: A handbook for scenery management. Agriculture Handbook 701.

U.S. Department of Agriculture, Forest Service. 2015. Scenic Character Descriptions: Gila National Forest. Jan Spencer unpublished.

U. S. Department of Agriculture, http://www.fs.usda.gov/main/gila/about-forest; accessed April 5, 2016.

http://www.wildernessvolunteers.org/project/201516/Continental+Divide+Trail%2C+Gila+National+Forest.html accessed on March 2, 2016

Viva New Mexico: A Statewide Plan for Outdoor Adventure; State of New Mexico SCORP Report 2016-2020 Statewide Comprehensive Outdoor Recreation Plan

Appendix A – Gila National Forest Concern Levels

Concern Levels Overview

Concern levels are part of the Scenery Management System (SMS) Inventory and will be used in the Seen Area, Distance Zone and Visibility Inventory. In other words, landscapes seen from concern level routes and points will be mapped. Concern levels were reviewed by forest and district recreation staff and the District Rangers. Once the review of concern levels is complete, any changes will be incorporated and approval by the District Rangers documented. The concern levels will then be considered final and used in other SMS inventories.

Sites, travel ways (i.e., roads, trails and water ways), and special places are assigned a concern level value of 1, 2, or 3 to reflect the relative high, medium or low importance. This includes routes or points located off-Forest with potential views of the Forest. The SMS Handbook provides guidance on determining concern levels. That guidance is summarized below. For more detailed information see pages 4-8 to 4-10 of Landscape Aesthetics, A Handbook for Scenery Management, Agriculture Handbook 701: 1995).

Concern level 1 generally includes all seen areas from primary travel routes, use areas, and water bodies where the forest visitors have a high interest in scenic qualities. Concern level 1 areas also include all seen areas from secondary travel routes, use areas, and water bodies where the forest visitors have a high interest in scenic qualities.

Concern Level 2 generally includes all seen areas from primary travel routes, use areas, and water bodies where the forest visitors have a moderate interest in scenic qualities or low interest in scenic qualities if the area receives moderate to high use.

Concern Level 3 areas apply to all other open travel routes and use areas not listed above.

Table 12. Hierarchy for determining Concern Levels (Landscape Aesthetics Handbook, page 4-8)

	Interest in Scenery		
	High	**Moderate**	**Low**
Primary Travel way/Use Area – High Use	1	2	2
Primary Travel way/Use Area – Moderate Use	1	2	2
Primary Travel way/Use Area – Low Use	1	2	3
Secondary Travel way/Use Area – High Use	1	2	2
Secondary Travel way/Use Area – Moderate Use	1	2	3
Secondary Travel way/Use Area – Low Use	1	2	3

Concern Level Process for the Gila National Forest

The road and trail systems of the Forest were rated as Concern Level 1 or 2. Roads or trails on other ownerships with potential views of the Forest were also rated Concern Level 1 or 2. Use areas, such as recreation sites, vistas, communities, and lookouts were also assigned concern level 1 or 2. Waterways should also be considered. Eligible Wild and Scenic Rivers have been listed. Please provide guidance on how to rate these or other water ways.

Base information useful to determine draft concern levels:

- Recreation Facility Analysis Recreation Niche
- Research of current Forest Plan, popular or recommended recreation activities, the Forest website, etc.
- National Visitor Use Monitoring data

Assumptions for Determining Concern Levels:

- Routes or areas not identified as sensitive in the Visual Management System inventory may have an increased concern for scenery and now have Concern Level assigned
- All developed campgrounds are Concern Level 1,
- All vistas or viewing areas are Concern Level 1
- Trailheads or Picnic Areas (on RecreationSitePoint) may be Concern Level 1 or 2, depending on the road accessing them.
- Roads or trails recommended to recreationists on the Forest website or in brochures would have, at the minimum, Concern Level 2
- A road accessing a Concern Level 1 or 2 point will be, at a minimum, Concern Level 2 ---Concern for scenery doesn't change during the trip to get to the destination
- Access to perennial water was a consideration in rating system trails a Concern Level 1 or 2- the stream contributes to the overall setting and recreation experience
- Any roads open to the public or trails not identified Concern Level 1 or 2 will be assumed to have a Concern Level .

Concern Levels

Travel ways-Roads

District(s)	Description	Concern Level	Justification or Reasons for rating
	Roads		
Quemado RD	NM 32	1	Outcrops @ Castle Rock; open vista into Quemado; Apache Creek Canyon
Quemado RD	FR 93	1	Overlooks to south; dramatic drop-off to mesa
Quemado RD	FR103	1	Route to Quemado Lake Rec Area; grasslands unique
Quemado RD	FR 13 to Junction with 93	1	fall foliage
Quemado RD	County Road B12	1	Grasslands → scenic view sheds (open); well travelled; riparian areas
Quemado RD	County Road 007	1	Riparian; rock outcropping; Datil soils; well travelled; historic buildings
Quemado RD	County Road B024	1	View sheds; wildlife; "Sunday drive"
Quemado RD	US 180	1	From State line to junction NM 12; geology; mountains, windy, views, highly travelled
Quemado RD	FR 209	1	Caves; fall foliage (Glenwood RD put this as a 1 - added for consistency)
Quemado RD	Highway 12	1	Wildlife (elk); Tularosa River; valleys with cliffs; CDT access to interpretive trails on significant travel routes
Quemado RD	FR 770	1	road to Fox Mountain Lookout
Quemado RD	FR 214	1	route to Mangas Mountain Lookout
Quemado RD	FR 220/County 080/385	2	Jenkins Loop Road - some use; fall colors from fire
Quemado RD	County 002	1	Road to Dry Blue to trailhead - use; fall foliage; some views to valley (changed to Concern Level 1 since trail was rated Concern Level 1)

District(s)	Description	Concern Level	Justification or Reasons for rating
Quemado RD	County 029	2	wildflowers; some open vistas; "view driven"
Quemado RD	FR13/FR214	2	Route to Mangas Mountain Lookout; views to Sawtooth Mountains
Quemado RD	FR 130	2	"People go up there to look" →vistas
Quemado RD	County Road 021	2	Route to Armijo Springs Campground
Reserve RD	Highway 180	1	Saliz to Luna Divide; primary travel way
Reserve RD	Highway 12	1	Through District; primary travel way
Reserve RD	Highway 32	1	Primary Travel way
Reserve RD	Highway 435	1	Primary (But thru private)
Reserve RD	FSR 141	1	ML5; Reserve to FSR 28
Reserve RD	State 159	1	Primary
Reserve RD	FSR 28	1	Primary; State 159 to Collins Park
Reserve RD	FSR 94	1	Primary: Collins Park to Hwy 12
Reserve RD	County Road CAT B - 054	1	Primary
Reserve RD	FSR 153 S	1	Primary (Bearwallow)
Reserve RD	County Road CAT - C021	1	Grasslands; scenic to wilderness
Reserve RD	FSR 49	1	Badlands; Toriette Lakes; views of surrounding areas
Reserve RD	FSR 233	1	Primary to Eagle Peak Lookout
Reserve RD	FSR 30	1	Primary; views of Elk Mountain
Reserve RD	County Road 13	1	to SF Box trail
Reserve RD	FR 4033R	1	Leads to Apache Creek Interpretive Trail & petroglyphs
Reserve RD	4090 E	1	Big Oak
Reserve RD	Willow Creek Overlook	1	wilderness views; Willow Creek; landscape
Reserve RD	FSR 3070	2	Access Leads to CL #1

District(s)	Description	Concern Level	Justification or Reasons for rating
	Roads *continued*		
Reserve RD	John Kerr DR 4037 S	2	Access Leads to CL #1
Reserve RD	FSR 512	2	Negrito Mountain & Lookout; views
Reserve RD	FSR 119	2	Bearwallow to 28; Quaking Aspen Canyon
Reserve RD	FSR 180	2	Junction 119 to 141 Rd
Reserve RD	FSR 651	2	to FSR 148 to Cty 021 - T Bar Grasslands
Reserve RD	FSR 654	2	Loop goes around T-Bar grasslands
Reserve RD	FSR 4033P	2	(Green Gate) Access to Tularosa; picnic
Reserve RD	141	2	Elk Mts & T Bar Grasslands
Reserve RD	4040M	2	to 4040L - Leggett Loop
Reserve RD	County Road CAT B-001	2	to Negrito Creek Access
Reserve RD	509	2	Goes to Negrito Airstrip
Reserve RD	165 14045B	2	Eckleberger - Loop Road to 28
Reserve RD	County Road CAT B006	2	to Mail Trail
Glenwood RD	C013	1	Access to Wilderness - Arizona - Cliff Dwellings - Petroglyphs
Glenwood RD	FR 209	1	Scenic Drive
Glenwood RD	US 180 South	1	Scenic Drive
Glenwood RD	C04, C03, C015	1	Scenic Drive
Glenwood RD	State Highway 159	1	Scenic
Glenwood RD	Grant Co. 2-1	1	Scenic from US 180 to 293

District(s)	Description	Concern Level	Justification or Reasons for rating

	Roads *continued*		
Glenwood RD	C-010, 119, 153, 159	1	Scenic - Copper Creek to Bear Wallow to 159
Glenwood RD	State Road 174 to Catwalk	1	Scenic
Glenwood RD	C-042 to Mineral Creek	1	Scenic
Glenwood RD	C-054 to Sheridan	1	Scenic
Glenwood RD	FR 196 to Little Dry	1	Scenic
Glenwood RD	C-048 to Little Whitewater	1	Scenic
Glenwood RD	Grant Co 5-12, 5-17	1	Scenic
Glenwood RD	State Rd 78 to Mule Creek	2	Scenic
Glenwood RD	Grant Co 5-18 - 111 - Loop	2	Scenic
Glenwood RD	Grant Co 2 6 to 74 Mountain	2	
Glenwood RD	4077W off of 2-1	2	Rain Creek
Glenwood RD	4096 off of 2-1	2	Ditch Road
Glenwood RD	4077G off of Hwy 180	2	Scenic - Going to Aldo Leopold
Glenwood RD	FR 68 off of Hwy 180	2	Scenic - Estes well to San Francisco River
Glenwood RD	4231Z off of Hwy 180	2	Scenic - to trail head
Glenwood RD	C004 off of Hwy 180	2	Scenic
Glenwood RD	C053, C008, C033	2	Scenic, Loop off 180 to C053
Black Range RD	Hwy 152: Emory Pass to Kingston	1	National Scenic Byway - Geronimo Trail, Primary Travelway
Black Range RD	FR 150 North Star Mesa Road	1	Scenic – main travel route Beaverhead to Mimbres
Black Range RD	NM 59	1	Part of National Scenic Byway - Geronimo Trail; Primary Travelway
Black Range RD	CO21	1	
Black Range RD	FR226	1	Scenic – route to Lookout Mtn, Lookout Tower & scenic view within Chloride Canyon
District(s)	**Description**	**Concern Level**	**Justification or Reasons for rating**
	Roads *continued*		

Black Range RD	FR226A	1	Route to Lookout Mountain & Lookout tower
Black Range RD	FR 157	1	Scenic with views of Black Range Mtns
Black Range RD	FR 4053N	1	Scenic views of Wahoo Mtns
Black Range RD	Berenda Rd FR 888/889/4146J	2	Scenic views of Black Range Mtn
Black Range RD	Royal John Mine FR 886	2	Need to match to D7)
Black Range RD	Tierra Blanca Rd FR 522/4088E	2	Scenic views of canyon & Black Range Mtns
Black Range RD	FR 4088N	2	
Black Range RD	FR 4065U	2	Access to Corduroy Canyon
Black Range RD	FR 231/4066F	2	Scenic in Corduroy Canyon
Black Range RD	FR 698/FR 18	2	Scenic in Beaver Creek with water access
Black Range RD	FR 500	2	Scenic – Access to CDT
Black Range RD	NM 163	2	Scenic through Railroad Canyon
Black Range RD	NM 27	1	Scenic Highway
Black Range RD	NM 52	1	Scenic Main Access
Black Range RD	County Road B013	2	Scenic Access
Black Range RD	County Road B004	2	Scenic Access
Silver City RD	Forest Ridge Road – Burros	1	High – CDNST access view of Burro Mtns
Silver City RD	NM Highway 90	1	Views of Burro Mtns, Knight Peak, view of desert to south & mtns of SW NM and SE AZ
Silver City RD	County Road 4-21 (Saddle Rock Road)	1	View of Saddle Rock Mountain & Bullard Peak
Silver City RD	Grant County Road 2-53 (Bird Sanctuary Road)	1	High interest, Gila Riparian Area. Bird Sanctuary attracts many species of birds
Silver City RD	Grant County Road 2-24 (Turkey Creek Road)	1	Scenic views of Gila River & Gila Wilderness, Gila River Basin
Silver City RD	US Highway 180	1	Views to the west of Burro Mtns & north & east of Gila Wilderness
Silver City RD	Gold Gulch Rd to Jack's Peak	1	Scenic Route to Jack's Peak overlook
Silver City RD	Grant County Road 4-15 (C-Bar Ranch Road)	1	Geologic rock formations, cultural sites

Silver City RD	WD Ranch Road - #841	1	Views to south of Lordsburg & SW NM. Route thru canyons that leads to CDNST
Silver City RD	Forest Road 859 – Mill Cyn	1	Views of Knight Peak
Silver City RD	Saddle Rock Road to 118 to 810	1	Views of Saddle Rock Mtn, access to CDNST, views of Bullard Peak
Silver City RD	Grant County Road 4-12 (Gold Gulch Road)	1	Views of Burro Mtns, and access to Jack's Peak
Silver City RD	Red Rock Road (Tyrone Rd) (Grant County 4-24)	2	Moderate interest, views of Jack's Peak
Silver City RD	Thompson Canyon (4-2)	2	Moderate interest, views of Jack's Peak
Silver City RD	Burro Mtn Homestead Rd	2	Views of Burro Pk, Jack's Pk and Ferguson Mtn. (CDNST Access)
Silver City RD	Saddle Rock (118) to Blackhawk (42436)	2	View of Bullard Peak
Silver City RD	Hwy 180 W	1	Views of Burro Mtns to west & Gila Wilderness to N & NE & Silver City District
Silver City RD	Bear Mtn Road – GC # 1-51	1	Views of Bear Mtn, Gila Wilderness to N, Tadpole Ridge, Pinos Altos Range
Silver City RD	Little Walnut Road, GC # 1-53	1	
Silver City RD	Hwy 15	1	Scenic Byway, Views of Signal Peak, Gila Wilderness
Silver City RD	Hwy 35	1	Scenic Byway
Silver City RD	Hwy 152	1	Scenic Byway, Views of Black Range, Cookes Peak, Emory Pass Vista, Rio Grande Valley. Transitions from Pinon Juniper all the way up to mixed conifer.
Silver City RD	Ft. Bayard Road GC #1-152	1	High interest, Primary travel routes, Many areas seen: View of Pinos Altos range, Twin Sister Peaks, and Black Peak. Access to Ft. Bayard trail system. Some of these trails are designated historic and recreational trails.
Silver City RD	Sheep Corral Road # 282 to Wilderness Boundary	1	High Interest, Primary Travel Routes, Many areas seen: Route to Tadpole Ridge, Gila Wilderness access, & views of Gila River. Farm Flat Meadow area & Lookout Point where you can see Mimbres River & Black Range to the east.
Silver City RD	Meadow Creek Road, # 149	1	High Interest, Primary Travel Routes, Many areas seen: View of Signal Peak, CDNST access, dispersed camping area, and historic Boy Scout building. Riparian habitat along creek bottom, ponderosa pine forest
Silver City RD	Georgetown Road (#GC 3-29)	2	Moderate Interest, Primary travel route:
Silver City RD	Royal John Mine Road #866 (GC#3-77)	2	Moderate Interest, Primary travel route: Views of Cookes Peak, Mimbres River Valley & riparian areas, Sawyer Peak and Black Range Mountains

Travel ways-Trails

District(s)	Description	Concern Level	Justification or Reasons for rating
	Trails		
Quemado RD	Dry Blue	1	ATV - motorized trail; local recreation use; ponderosa pines; streams
Quemado RD	CDT NST	1	
Quemado RD	Trail to Mangas Mtn Lookout	1	Views from lookout tower
Quemado RD	Trail around Quemado Lake	1	Lots of visitor use
Quemado and Reserve RD	SF Box Trail (Trail 762)	1	Lots of questions and interest from the public at the front desk
Quemado and Reserve RD	Mail Trail	2	Scenery; fall colors; hiking/horse trail
Reserve RD	Trail 15	2	Negrito to Eagle Peak (Divide Trail) to CDT
Reserve RD	Walk-in Past Trail	1	Scenic; Tularosa; historic cabin; petroglyphs
Reserve RD	CDT	1	NSCDT
Reserve RD	Apache Creek Interp. Trail & petroglyphs	1	Recreation site with cultural resources
Glenwood RD	Mineral Creek to Log Canyon	1	High Use Trails
Glenwood RD	Little Dry to Apache Canyon	1	High Use Trails
Glenwood RD	Crest Trail	1	High Use Trails
Glenwood RD	Holt	1	High Use Trails
Glenwood RD	San Francisco - Whitewater Cyn	1	High Use Trails
Glenwood RD	Gold Dust Trail	2	
Glenwood RD	Red Canyon	2	
Glenwood RD	White tail Canyon	2	

District(s)	Description	Concern Level	Justification or Reasons for rating
Glenwood RD	Golden Link 218	2	Old Mining Site / Rock
Black Range RD	Scenic Trail parallel to 152 (Tr 796)	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands
Black Range RD	Railroad Canyon (Tr 128)	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands
Black Range RD	Tr 79 Black Range Crest Trail between Sawyer Peak and intersection with CDT	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands Alternate route for CDT; high volume
Black Range RD	Animas Creek (Tr 114)	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands
Black Range RD	Water Canyon (Tr 120)	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands
Black Range RD	CDT (North to Forest Boundary); Tr 74	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands; National Scenic Trail
Black Range RD	Hermosa Trail (Tr 307)	1	Popular trails; Scenic vistas; Often on crest with panorama views w/ aspen stands Popular Trail (this may need to match FR 4088N, concern level 2)
Silver City RD	Continental Divide National Scenic Trail – District-wide	1	National Scenic Trail, Runs from southern boundary of Silver City RD to northern boundary of Silver City RD
Silver City RD	Turkey Creek Trail	1	Riparian area, Gila River, Access to Gila Wilderness
Silver City RD	Signal Peak Trail	1	Access to Signal Peak
Silver City RD	Allie Canyon Trail #100	1	Arterial trail on Silver City RD, Many views can be seen from this trail
Silver City RD	Tadpole Ridge Trail #232	1	Arterial trail, views of Gila Wilderness to North, Views to Southern NM
Silver City RD	Black Range Crest Trail #79 boundary with Black Range RD	1	Aerial Trail, access to Sawyers Peak, Views of Rio Grande River Valley and Mimbres Valley. Mixed conifer
Silver City RD	Sheep Corral Canyon Trail #231	1	Access to Gila River & Gila Wilderness, views of Wilderness

District(s)	Description	Concern Level	Justification or Reasons for rating
Silver City RD	Railroad Canyon Trail #128	1	Access to Black Range Crest Trail, mixed conifer, tributary of Gallinas Canyon
Silver City RD	Gallinas Canyon Trail #129	1	Access to Black Range Crest Trail, mixed conifer
Silver City RD	East Railroad Canyon Trail #130	1	Access to Black Range Crest Trail, mixed conifer, tributary of Gallinas Canyon
Silver City RD	Rabb Park Trail #747	2	Moderate interest, views of Hendrick's Peak, Mimbres Mtns, & Black Range
Silver City RD	Sawmill Wagon Rd Trail #243	1	Access to CDNST & Signal Peak area, Ft. Bayard Wildlife Refuge, views of Twin Sisters
Silver City RD	Bear Canyon Trail #104	1	Access to Signal Peak area
Silver City RD	Deadman Canyon Trail #786	1	Access to CDNST near Jack's Peak, Views of Burro Mts
Silver City RD	Goose Lake Trail #238	1	Views of Gila River Valley, Eastern AZ, Bear Mtn, Dorsey Canyon, Gila Wilderness
Silver City RD	Little Cherry Creek #241	1	Riparian area along creek bottom, access to CDT
Silver City RD	Sycamore Canyon #234	1	Scenic views of Tadpole Ridge, Devils Garden, P-J up to mixed conifer
Silver City RD	Woodhaul Wagon Rd. Trail #55	1	Views of Twin Sisters, Black Peak, Bear Mtn, Ft. Bayard Wildlife Refuge
Wilderness	Gila River Trail #724	1	(see "Gila River" under river/streams)

Waterbodies

District(s)	Description	Concern Level	Justification or Reasons for rating
	Water Bodies		
	Lakes & Reservoirs		
Quemado RD	Quemado Lake	1	
Reserve RD	Snow Lake	1	Water, fishing; grasslands; fall colors; remoteness; wildlife view
Reserve RD	Gwynn Tank	1	Scenic; rock outcrops; water; unique
Wilderness RD	Lake Roberts	1	high interest; high use; birdwatching etc.
	Rivers & Streams		
Reserve RD	Willow Creek	1	Water; veg; riparian; fishing; gateway to Wilderness; rock outcrop
Silver City RD	Gila River	1	Scenic views of Gila Wilderness & Gila Valley at Turkey Creek ***[Note: Gila River Trail 724 follows the Gila River, so trail has been assigned a concern level versus the river itself]***.

Developed Recreation Sites

District(s)	Description	Concern Level	Justification or Reasons for rating
	Points		
	Developed Recreation Sites		
Quemado RD	Head of Ditch Campground	1	
Quemado RD	Valle Tio Vinces Campground	1	
Quemado RD	Armijo Springs Campground	2	
Quemado RD	US 180 Scenic Overlook between Luna and Reserve	1	
Reserve RD	Dipping Vat Campground	1	Water, fishing; grasslands; fall colors; remoteness; wildlife view
Reserve RD	Willow Creek Recreation Area (Polygon)	1	Water; veg; riparian; fishing; gateway to Wilderness; rock outcrop
Reserve RD	Walk-in-the-Past Trailhead	1	
Reserve RD	Tularosa Cabin	1	Historic ranger station cabin
Glenwood RD	Pueblo Park Campground	1	
Glenwood RD	Cottonwood Campground	1	
Glenwood RD	Cosmic Campground	1	
Glenwood RD	Big Horn Campground	1	
Glenwood RD	Aldo Leopold Vista	1	Scenic View / Picnic Area
Glenwood RD	Catwalk Trail	1	
Black Range RD	Boundary Kiosk	1	Open grassy plain where can see long distances in all directions; views across the Rio Grande Valley and to the mountains on the Forest
Black Range RD	Emory Pass	1	Scenic vista of Black Range and Rio Grande Valley
Silver City RD	McMillan Campground	1	Riparian habitat along Cherry Creek off of Scenic Byway (Hwy 15)

District(s)	Description	Concern Level	Justification or Reasons for rating
	Points		
	Developed Recreation Sites		
Silver City RD	Cherry Creek Campground	1	Riparian habitat along Cherry Creek off of Scenic Byway (Hwy 15)
Silver City RD	Iron Creek Campground	1	Riparian habitat along Iron Creek off of Scenic Byway (Hwy 152)
Silver City RD	Upper Gallinas Campground	1	Along riparian habitat of Gallinas Canyon – Hwy 152 Scenic Byway
Silver City RD	Lower Gallinas Campground	1	Along riparian habitat of Gallinas Canyon – Hwy 152 Scenic Byway
Silver City RD	Railroad Canyon	1	Riparian habitat along canyon bottom off Hwy 152 Scenic Byway
Wilderness RD	Gila Visitor Center	1	
Wilderness RD	The Forks Campground	1	
Wilderness RD	Grapevine Campground	1	
Wilderness RD	Sapillo Creek Group Campground	1	
Wilderness RD	Upper End Campground	1	
Wilderness RD	Mesa Campground	1	
Wilderness RD	Upper Black Canyon	1	
Wilderness RD	Lower Black Canyon	1	
Wilderness RD	Rocky Point	1	
Wilderness RD	Sen. C.P. Anderson Scenic Overlook	1	

Dispersed Recreation Sites

District(s)	Description	Concern Level	Justification or Reasons for rating
	Dispersed Recreation Sites		
Silver City	Mogollon Box	1	Access to Mogollon Creek trail, Junction of Gila River & Mogollon Creek. Views of Gila Wilderness. Riparian habitat. Scenic views of Watson Mtn @ Mogollon Box.

Special Places/Areas

District(s)	Description	Concern Level	Justification or Reasons for rating
	Special Places/Areas		
Reserve RD	T-Bar Grasslands (Polygon)	1	Views; grassland; Canyon Creek Mountains; Elk Mountain views
Reserve RD	San Francisco Box (Polygon)	1	Water; cliffs
Reserve RD	Willow Creek Overlook	1	Wilderness views; Willow Creek; landscape
Quemado RD	Fox Mountain Lookout	1	
Quemado RD	Mangas Mountain Lookout	1	
Reserve RD	Eagle Peak Lookout	1	Views; aspen; "See the World"
Glenwood RD	Bearwallow Lookout	1	Views
Glenwood RD	Mogollon Baldy Lookout	1	
Glenwood RD	Sheep Basin Cliff Dwellings	2	Rd 232
Glenwood RD	San Francisco Hot Springs	1	
Glenwood RD	Cooneys Tomb	1	
Black Range RD	Hillsboro Lookout	1	
Black Range RD	Lookout Mountain	1	

Silver City RD	Gila River Bird Area	1	Major birding attraction; major water route of Gila NF; Riparian habitat.
Silver City RD	Signal Peak Lookout	1	360 degree views: Gila Wilderness to north, Mimbres Valley and Black Range to the East. Silver City and SW NM to Mexico looking south and Eastern AZ, Bear Mtn, & Gila Wilderness to the West.
Silver City RD	Saddle Rock	1	
National Park Service	Gila Cliff Dwelling National Monument (Polygon)	1	

Appendix B. Scenic Attractiveness Rating Protocol

Table 13. Table summarizing the scenic attractiveness mapping protocol by landscape attribute type.

	Scenic Attractiveness Classes		
Attribute	**Class A- Distinctive**	**Class B- Common**	**Class C- Indistinctive**
Streams	Eligible Scenic Rivers with Scenery Outstanding Remarkable Value Riparian areas using RMAP		
	DATA USED: T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.Water\S_R03_GIL.NHDFlowline Perennial- CFF 402, Intermittent- CFF 405 T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.Water\S_R03_GIL.ONRW_Stream- (Eligible Scenic Rivers with Scenery Outstanding Remarkable Value) T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_default_as_myself.sde\S_R03.Vegetation\S_R03.Riparian_Vegetation T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.Water\S_R03_GIL.ONRW_Stream- apply ¼ mile buffer to be consistent with the WSR process. (Eligible Scenic Rivers with Scenery Outstanding Remarkable Value)		
Waterbodies (Includes stock tanks)	6 acres or larger. Those smaller than 6 acres with one or more of the following: Unusual or outstanding shoreline characteristics, strong reflective quality, or class A shoreline vegetation or rock forms. Shore Zone (1/4 mile)	2-6 acres Some shoreline irregularity with Class B vegetation or rock formation. Minor reflective quality. Shore Zone (1/4 mile)	Less than 2 acres No shoreline irregularity or reflective quality.
	Data Used: T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.Water\S_R03_GIL.NHDWaterbody		
Topography	Over 60 percent slopes with a lot of dissection, unevenness and sharply exposed ridges, or other outstanding features.	30-59 percent slopes which are moderately dissected with rolling landforms.	0-29 percent slopes, areas with little variety, insignificant dissection, and no dominant features.
	Data Used: T:\FS\Reference\GeoTool\agency\DatabaseConnection\multiuse_sde_default_as_myself.sde\S_R03_GIL.SLOPE_PERCENT		
Geology/ Landform	Distinctive landscape features, unique or outstanding rock outcrops in size, shape and location. Rock outcrops were identified from the GTES units.	Features are common to the natural landscape. Refer to TEUI values below	Small to non-existent features.

	Data Used: Source data for GTES, Gila NF Enterprise geodatabase: T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.General_Ecosystem_Survey\S_R03_GIL.General_Ecosystem_Survey This forest level feature class, General Ecosystem Survey, was used rather than the regional GTES (General Terrestrial Ecosystem Survey) layer, because the GTES map units were updated by the forest to match the extent of the forest's administrative boundary. This forest level feature class includes the GTES map units, but does not include the vegetation description attribute from the regional layer from which landform scenic attractiveness classes were derived. For this inventory, the vegetation description was appended to the forest level feature class based on the GTES map unit and scenic attractiveness classes were assigned accordingly.		
Vegetation	High degree of diversity in type, size, color and texture. Unique or outstanding vegetative species or combinations of species. Typically use species mix. Refer to vegetation values below.	Moderate degree of species diversity in type, size, color and texture. Common vegetative species or combination of species. Refer to specific vegetation values below.	Low degree of vegetative diversity, single coniferous species or brush types. Refer to specific vegetation values below.
	Data used: T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.FireBurnSeverity\S_R03_GIL.PostFireMidscaleVegDomType T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_default_as_myself.sde\S_R03.Vegetation\S_R03.Riparian_Vegetation		

Vegetation

Vegetation Source: S_R03_GIL.PostFireMidscaleVegDomType >dominance_type_mu

Factors- uniqueness or occurrence of species, seasonal colors, mix of species vs single species. Riparian vegetation was rated Class A using RMAP data.

Table 14. Existing Midscale Vegetation scenic attractiveness , Distance Zones, and Concern Level Acres

Scenic Attractiveness Class	DT_MU_CODE	DT_MU_DESC
A	ASPE_06	Aspen
A	DETM_06	Deciduous-evergreen tree mix
A	DSM_06	Deciduous shrub mix
A	GAMB_06	Gambel oak
A	GOETM_06	Gambel oak – evergreen tree mix
A	WHITEFRM_03	White fir mix
B	ONESJM_06	One-seed juniper mix
B	DOUGF_06	Douglas-fir
B	CFES_06	Corkbark fir – Englemann spruce
B	PONDO_06	Ponderosa pine-evergreen oak mix
B	POND_06	Ponderosa pine mix

B	ALLIJU_06	Alligator juniper
B	EOM_06	Evergreen oak mix
B	ESM_06	Evergreen shrub mix
B	PAJEO_06	Pinyon, alligator juniper, evergreen oak mix
B	UEFTM_06	Upper evergreen forest tree mix
C	GM_06	Grass mix
C	SVG_06	Sparsely vegetated

Note: Riparian vegetation was rated Class A using RMAP data.

Geology/ Landform

General Terrestrial Ecosystem Survey

Tabular data: http://www.fs.usda.gov/detail/r3/landmanagement/gis/?cid=stelprdb5212078

NRT_MAPC_CLASS_GEOM_VM (GEOM_CODE), NRT_MAPC_CLASS_SOIL_VM (MAP_UNIT_S)

Source: T:\FS\Reference\GeoTool\agency\DatabaseConnection\r03_gil_default_as_myself.sde\S_R03_GIL.General_Ecosystem_Survey\S_R03_GIL.General_Ecosystem_Survey

Table 15. GTES Units with Rock Outcrops and Badlands for Gila National Forest GTES Units

GTES		**Scenic Attractiveness Rating**	
MapUnit	**VEGSYM**	**A**	**B**
168	QUGR3, PSMEG, ROCK OUTCROP	X	
192	PSMEG, PIEN, ROCK OUTCROP	X	
390	QUGR3, PSMEG, BADLANDS		X
427	PRGL2, QUGR3, BADLANDS		X
452	PSMEG, PEN, ROCK OUTCROP	X	
475	FOSP2, QUEM, Rock outcrop	X	
479	QUGR3, PSMEG, ROCK OUTCROP	X	

Project Level Scenic Attractiveness Maps

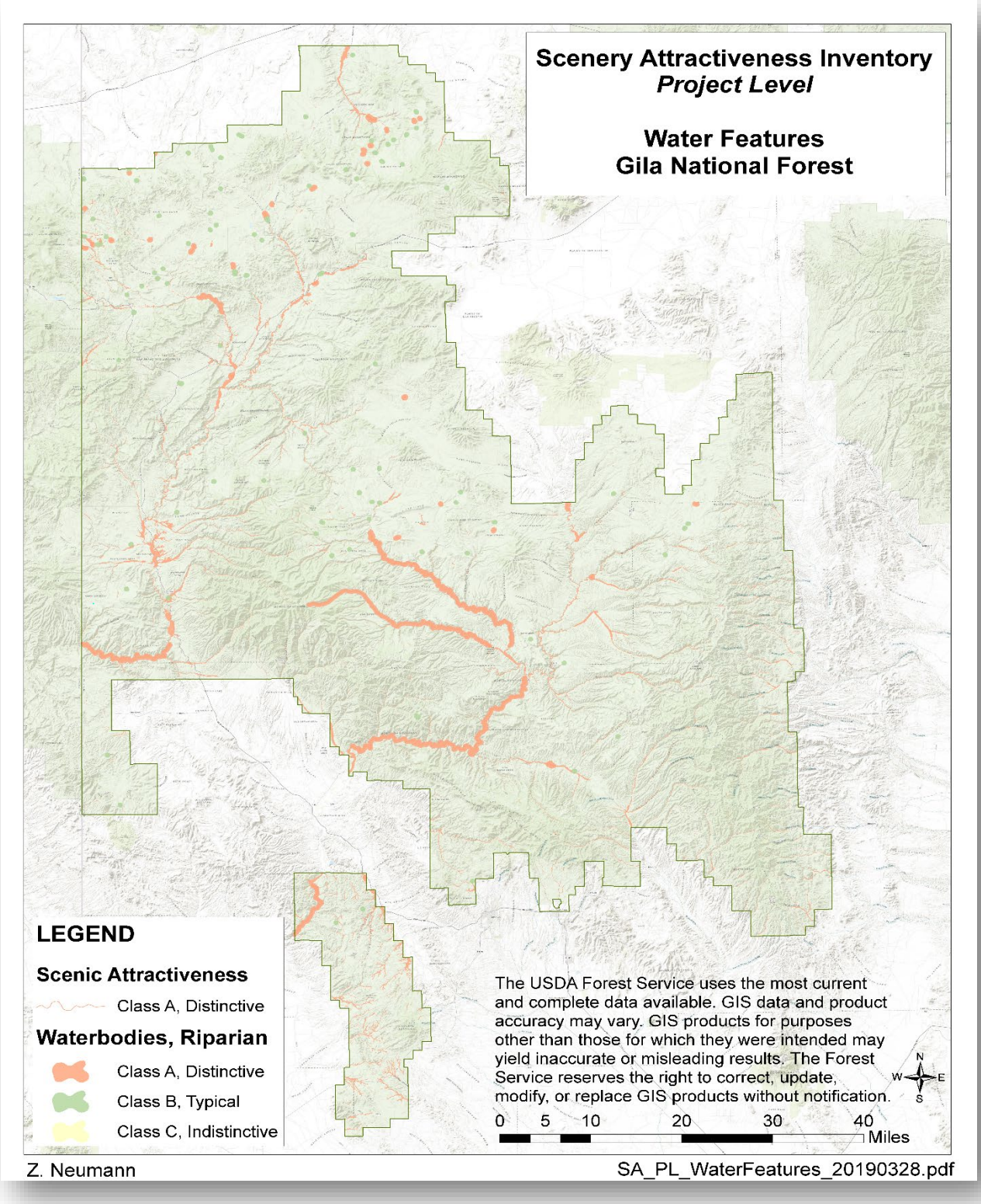

Figure 47 Water Features map for scenic attractiveness project level scale inventory

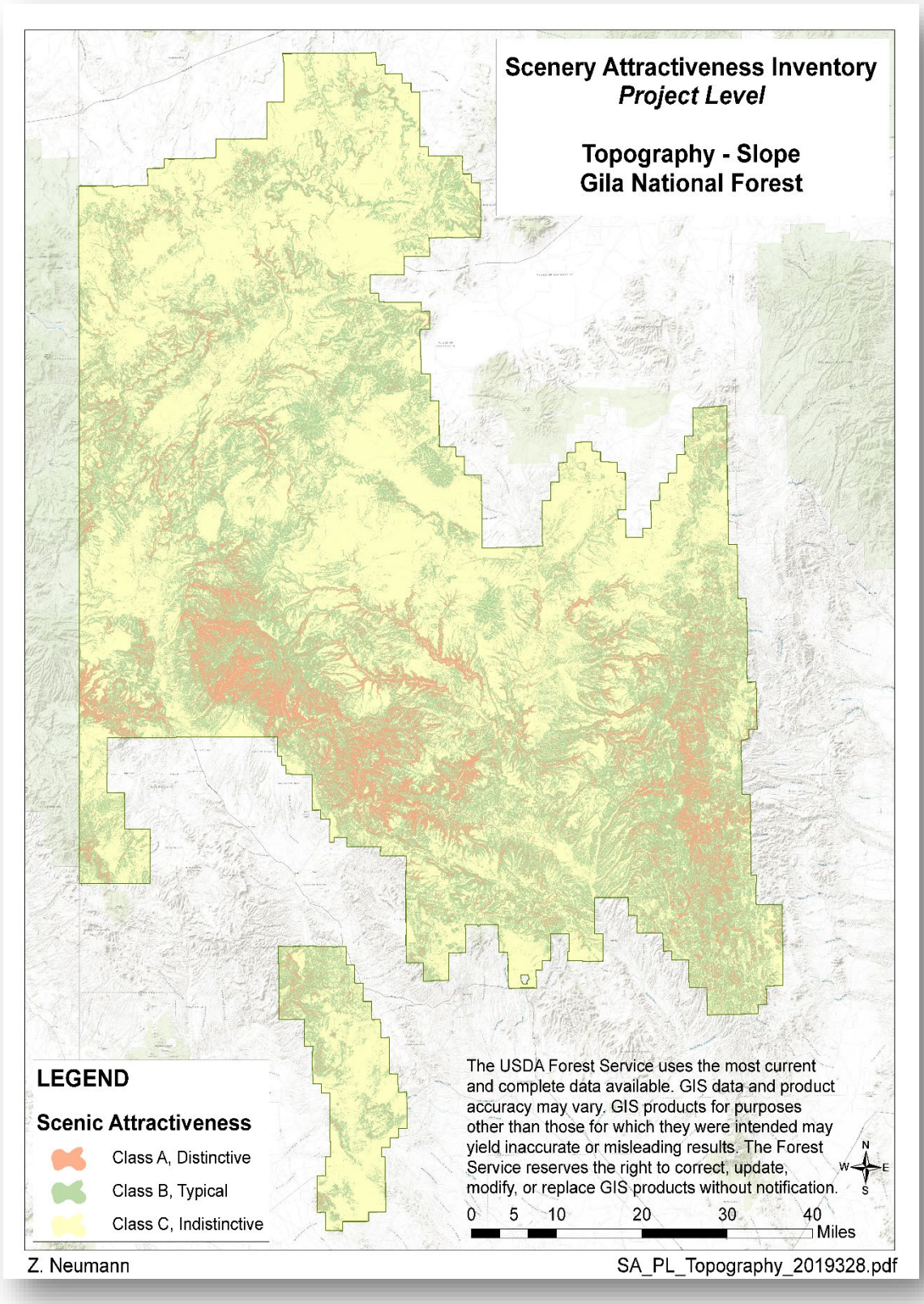

Figure 48 Slope and topography for scenic attractiveness project level scale inventory

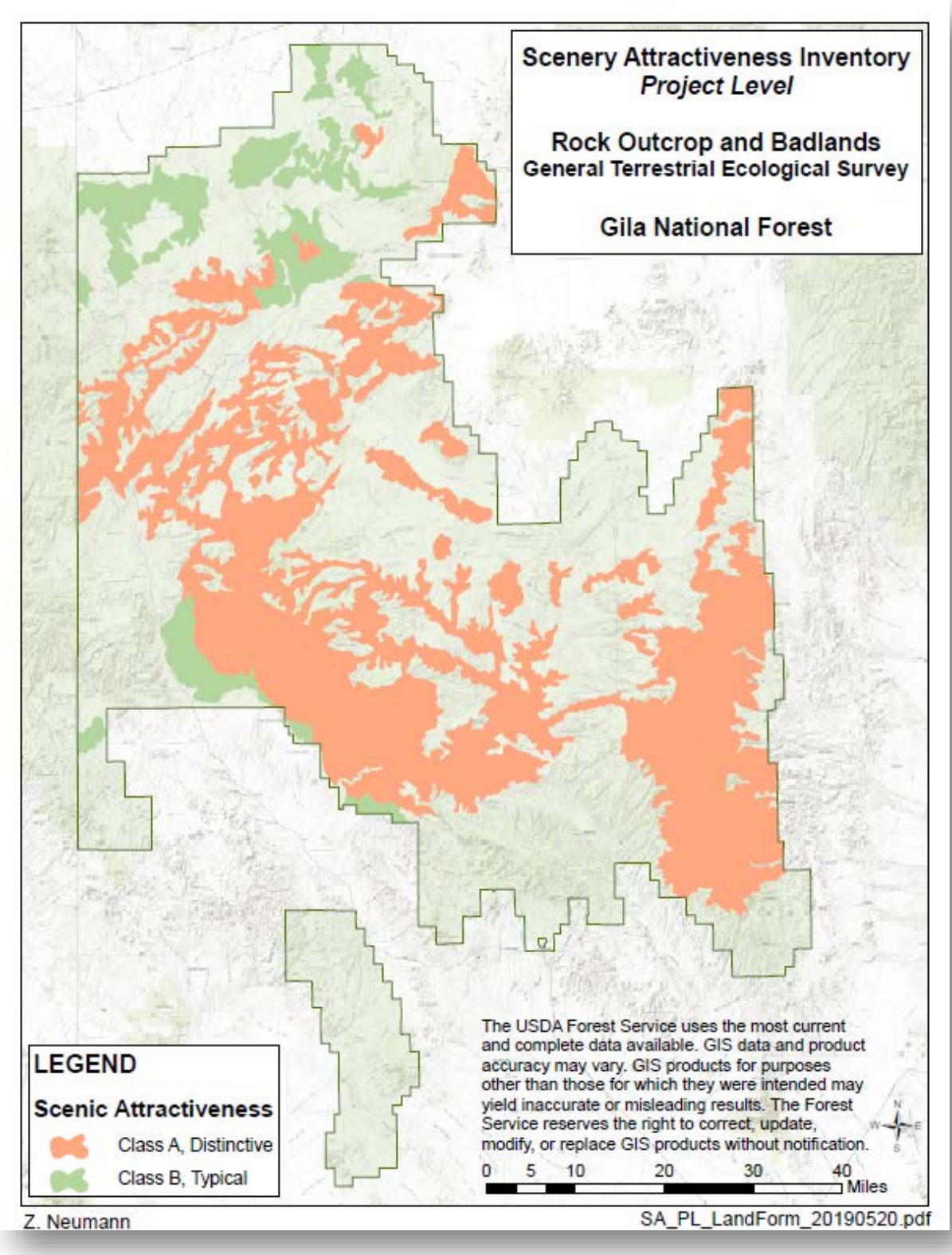

Figure 49 Landform (Rock Outcrops and Badlands) using General Terrestrial Ecological System for scenic attractiveness project level scale inventory

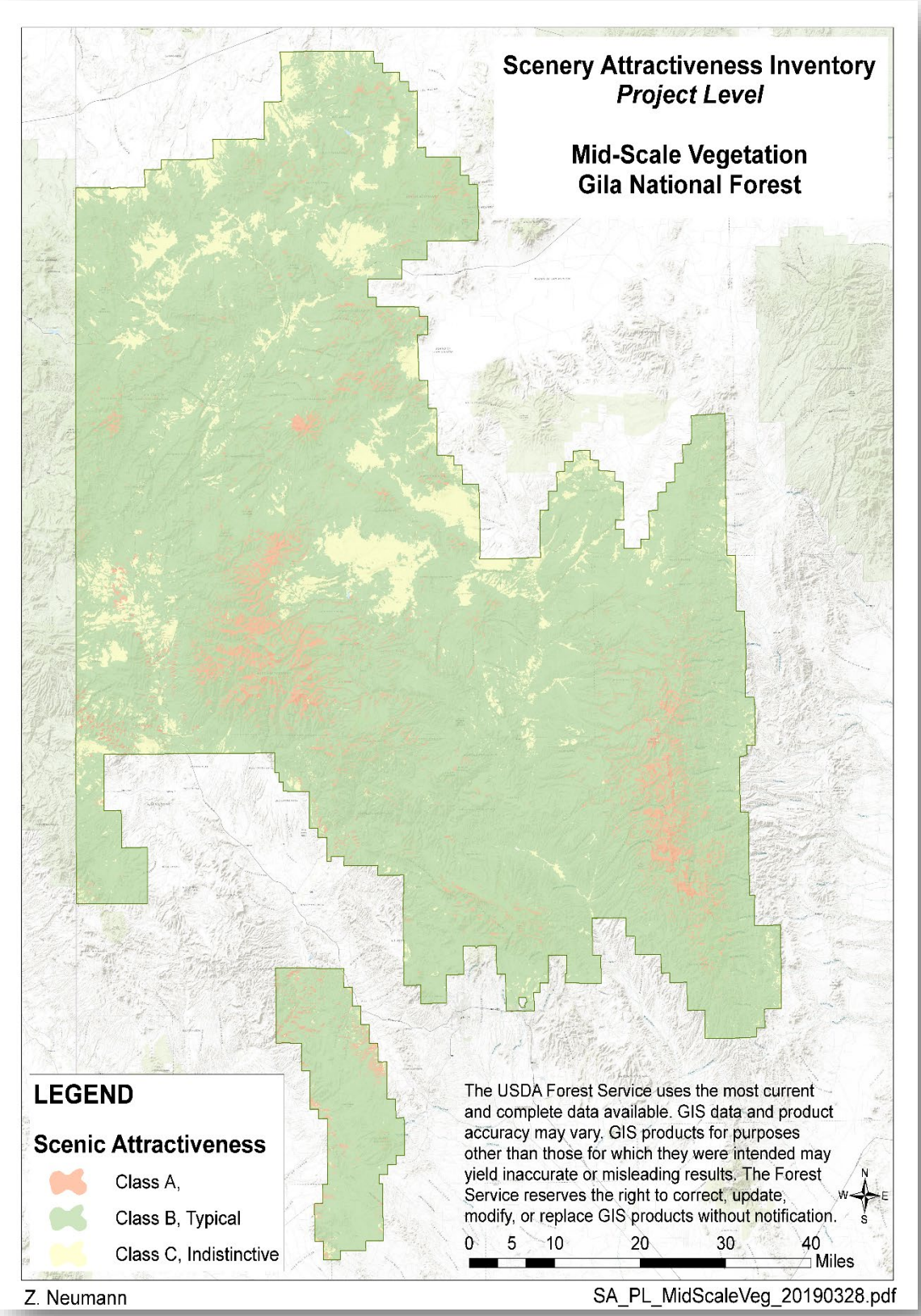

Figure 50 Vegetation for scenic attractiveness project level scale inventory

Appendix C Existing Scenic Integrity Levels Protocol

Gila National Forest
Scenery Management System Inventories
Enterprise Team – Components for determining Existing Scenic Integrity
Sent for review: 3/19/2019
Reviewed by Matthew Schultz (03/22/2019)
Updated: (4/11/2019)

Existing Scenic Integrity (ESI) is the current state of the landscape, considering previous human alterations. It indicates the intactness and wholeness of the Scenic Character. Previous human alterations often disrupt the character of landscape, and Existing Scenic Integrity measures the degree of that visible disruption. A landscape with very minimal disruption is considered to have high ESI. Landscapes with more noticeable disruption in the scenic attributes have lower ESI. Existing Scenic Integrity is expressed and mapped in terms of Very High, High, Moderate, Low, Very Low, and Unacceptably Low. ESI level definitions are given on the end of this document.

Outlined in this document is a protocol for determining Existing Scenic Integrity Levels at a forest-wide scale for the Gila NF. The protocol is based on land use designations, past activities, and ecological factors. Existing Scenic Integrity Levels will be verified using NAIP imagery (at a general scale of 1:24,000) and will be rated from an aerial view unless otherwise stated. Site specific mitigation for past projects was not considered when rating vegetation management activities. Activities and lands in other ownerships will not be reviewed or rated in detail, but will generally be rated the same as the adjacent Forest lands.

Data references:

- Authoritative/Corporate Data Source Activity layer and FACTS record set derived from the Geospatial Interface on 20180914 (IWEB ActivityView 160 Report) FACTSJoinActivitiesACTV160RSW
- Authoritative/Corporate Data Sources for all other management activities are listed below.

Image Server references:

- Imagery\1_Meter\Region_3\New_Mexico_NAIP_2016
- Maps\eTOPO\24k_Only_48_States
- Maps\Secondary_Base\Region_3\Gila_NF

Review of FACTS data:

- Individually pulled activity codes and feature classes can be found in geodatabase to be developed
- Activities separated in case it is helpful to display what activity has occurred and if it should be assigned an ESI level. The Excel table includes pivot tables sorted by activity code and date.

Notes: Eligible Wild and Scenic Rivers are not included in this mapping protocol. There are eight Eligible Wild and Scenic Rivers on the Gila NF and most of the eight segments are contained within

wilderness and accounted for within the wilderness management activity. Eligible Scenic and Recreation Rivers are also covered under other management activities.

Very High ESI

- Designated Wilderness Areas & Wilderness Study Areas [S_R03_GIL.Derived_ALP_Land.WildernessStatus] – there may be areas dominated by human use and trails identified using NAIP imagery that do not meet Very High. These areas would need to be digitized and assigned the appropriate ESI level. Those areas dominated by human use and trails should be assigned the appropriate ESI level which may vary from High to Low.
  - Gila Wilderness
  - Aldo Leopold Wilderness
  - Blue Range Wilderness
  - Lower San Francisco Wilderness Study Area
  - Hell Hole Wilderness Study Area
- Inventoried Roadless Areas [S_USA.RoadlessArea.RoadlessArea_2001]
  - 1B = Inventoried Roadless Areas where road construction and reconstruction is prohibited.
- Research Natural Areas [S_R03_GIL.Land.Other_National_Designation]
  - Gila River RNA
- Primitive ROS Class [S_R03_GIL.Recreation.RecreationOpportSpectrum] – When adjacent to IRAs or other Very High ESI areas. Current ROS layer, result of implementing the current Forest Plan.

High ESI

- Inventoried Roadless Areas [S_USA.RoadlessArea.RoadlessArea_2001] – could also be Very High if no activities have occurred
  - 1C = Inventoried roadless area where road construction or reconstruction is allowed.
- Semi-Primitive Non-Motorized ROS Class [S_R03_GIL.Recreation.RecreationOpportSpectrum] – When adjacent to IRAs or other High ESI areas. Current ROS layer, result of implementing the current Forest Plan.
- Semi-Primitive Motorized ROS Class [S_R03_GIL.Recreation.RecreationOpportSpectrum]– where the road or trail is the only noticeable activity. Where the road or trail is the platform for viewing scenery. Current ROS layer, result of implementing the current Forest Plan.

Moderate ESI

- Developed Recreation [S_R03_GIL.Recreation.RecreationSitePoint]
- Other Forest lands not identified as Very High, High, Low or Very Low ESI primarily because of fuels reduction, developed and dispersed recreation, special uses, grazing activities, and other forest management activities not identified as Low or Very Low.
- Some Vegetation Management Activities that generally meet Moderate ESI; covered in first bullet statement for Moderate ESI, but specifics include:
  - 4121 – Shelterwood Preparatory Cut
  - 4151 – Single Tree Selection

- 4152 – Group Selection Cut
- 4210 Improvement Cut
- 4220 – Commercial Thinning
- 4232 – Sanitation (salvage)
- 4231 – Salvage Cut (intermediate treatment, not regeneration)
- 4241 – Special Products Removal
- 4511 – Tree Release and Weed
- 4521 - Pre-commercial Thinning
- Some harvest polygons picked up in Low ESI may need to be changed to Moderate after review with NAIP imagery.
- Depending on typical regeneration time of the forest types on the unit, harvests older than 25 years meet the Forest Matrix, therefore all FACTS codes older than 25 years shall be identified as Moderate.

- Generally fuels reduction projects meet Moderate ESI (covered in first bullet statement for Moderate ESI if Forest matrix is Moderate)
  - 1120 – Yarding – Removal of Fuels by Carrying or Dragging
  - 1153 – Piling of Fuels, Hand or Machine
  - 1154 – Chipping of Fuels
  - 1160 - Thinning for Hazardous Fuels Reduction

Low Integrity

- Vegetation Management Activities that generally meet Low ESI (generally those accomplished with the last 25 years depending on the typical regeneration time of forest types on the unit. Verify whether any of these activities would meet Moderate or Very Low using NAIP imagery)
  - 1180 – Fuel Break
  - 2400 – Tree Encroachment Control
  - 4111 – Patch Clearcut
  - 4113 – Stand Clearcut
  - 4131 – Shelterwood Establishment Cut (with or without leave trees)
  - 4141 – Shelterwood Removal Cut
  - 4143 – Overstory Removal Cut
  - 4270 – Permanent Land Clearing
  - 6104 – Wildlife Habitat Regeneration Cut
  - 6107 – Wildlife Habitat Mechanical Treatment
  - All facts codes older than 25 years shall be identified as Moderate.

Very Low Integrity

- Vegetation Management – Any areas where units have unnatural and geometrically shaped boundaries and/or an extensive road network (open, closed, or temporary). Identify using NAIP imagery.
- Utility corridors [S.R03.GIL.Constructed_Features.Constructed_Feature_pt] typically do not borrow from natural shapes, patterns, or edge effect.
- Oil & Gas Activities – Not Applicable – none currently occur on Gila Forest Service Land
- Mining Activities – Existing, active or abandoned mines (Could be Low or Very Low, exceptions for culturally valued mining areas). There is not much large scale mining activity on Forest, but there is outside FS Land. Typically identified on Secondary Base or eTOPO maps.
- Gravel pits – Typically identified with mining activities or on Secondary Base or eTOPO maps.
- Communications sites [S.R03.GIL.Constructed_Features.Constructed_Feature_pt] - (Could be Low or Very Low) These could be digitized or buffered.

Unacceptably Low Integrity

- Areas that are extremely altered which need rehabilitation – If necessary, identify using NAIP imagery. None identified.

Table 16 Possible Range of Existing Scenic Integrity Levels by Management Activity

Management Activity	Existing Scenic Integrity Levels				
	Very High	High	Moderate	Low	Very Low
Designated Wilderness Areas and Wilderness Study Areas	X				
Primitive ROS	X				
Inventoried Roadless Areas	X	X			
Semi-Primitive Non-motorized and Semi-primitive Motorized ROS class where management activities are not evident.		X			
Research Natural Areas		X			
Culturally Valued Areas		X	X	X	X
Timber Management: Dependent on typical regeneration time of forest types. Harvest activities meeting a certain timeframe (i.e. harvests older than 30, 40, 50 years) may meet a higher ESI level. Some harvest polygons picked up in general queries may need to be changed after review with NAIP imagery.		X	X	X	X
Yarding			X		

Management Activity	Existing Scenic Integrity Levels				
	Very High	High	Moderate	Low	Very Low
Piling of Fuels			X		
Chipping of Fuels			X		
Thinning of Hazardous Fuels Reduction			X		
Shelterwood Preparatory Cut			X		
Single Tree Selection			X		
Group Selection			X		
Improvement Cut			X		
Commercial thinning			X		
Sanitation and Salvage			X		
Special Product Removal			X		
Tree Release and Weed			X		
Pre-commercial Thinning			X		
Tree Encroachment Control			X	X	
Wildlife Habitat Regeneration Cut			X	X	
Wildlife habitat Mechanical Treatment			X	X	
Fuel Break				X	X
Patch Clearcut				X	X
Stand Clearcut				X	X
Shelterwood Establishment Cut				X	X
Shelterwood Removal Cut				X	X
Overstory Removal Cut				X	X
Permanent Land Clearing				X	X
Chaining or Hydroax				X	X
Timber Harvest areas where units have unnatural and geometrically shaped boundaries and/or an extensive road network. Identify using NAIP imagery.					X
Mining Activities		X	X	X	X
Developed Recreation			X		
Livestock Grazing			X	X	
Oil and Gas Activities			X	X	
Communication Sites				X	X
Utility Corridors				X	X

Management Activity	Existing Scenic Integrity Levels				
	Very High	High	Moderate	Low	Very Low
Gravel Pits				X	X

The scenic integrity levels are shown below. (USDA 1995)

VERY HIGH (Unaltered)…..... preservation

VERY HIGH scenic integrity refers to landscapes where the valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.

HIGH (Appears Unaltered). ..... retention

HIGH scenic integrity refers to landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

MODERATE (Slightly Altered) ..... partial retention

MODERATE scenic integrity refers to landscapes where the valued landscape character

"appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.

LOW (Moderately Altered) ..... modification

LOW scenic integrity refers to landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

VERY LOW (Heavily Altered). ..... maximum modification

VERY LOW scenic integrity refers to landscapes where the valued landscape character "appears heavily altered." Deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

UNACCEPTABLY LOW scenic integrity refers to landscapes where the valued landscape character being viewed appears extremely altered. Deviations are extremely dominant and borrow little if any form, line, color, texture, pattern or scale from the landscape character. Landscapes at this level of integrity need rehabilitation. This level should only be used to inventory existing integrity. It must not be used as a management objective.

Appendix D Legal and Administrative Framework

The National Environmental Policy Act of 1969 (NEPA) – NEPA states that it is the "continuing responsibility of the Federal Government to use all practicable means to assure for all Americans, aesthetically and culturally pleasing surroundings." Therefore, NEPA mandates agencies to develop methodologies for scenery management of "aesthetically and culturally pleasing surroundings" that are capable of being put into practice, even if they are not currently in use. NEPA also requires "a systematic and interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts into planning and decision-making which may have an impact on man's environment." To accomplish this, numerous federal laws require all Federal land management agencies to consider scenery and aesthetic resources in land management planning, resource planning, project design, implementation, and monitoring. These Federal laws include the following:

The **Wilderness Act** (1964) – The act dictates that Wilderness is an area of Federal land managed to retain its primeval character and untrammeled setting. It is protected and managed to preserve its natural condition, and the imprint of man's work must be substantially unnoticeable.

The **Wild and Scenic Rivers Act** (1968) – The outstandingly remarkable scenic values of rivers eligible or suitable to be included in the system must be carefully managed. Any management activities that could negatively impact the scenic resources, where they are an identified outstandingly remarkable value, should not be conducted or mitigated according the river's comprehensive management plan.

The **National Trails System Act** (1968) – This act states that trails should be established within scenic areas and along historic travel routes of the Nation, which are often more remotely located.

The **Environmental Quality Act** (1970) – This act sets forth a national policy for the environment which provides for the enhancement of environmental quality.

The **Forest and Rangeland Renewable Resources Planning Act** (1974) – This act provides direction to conduct aesthetic analysis and assess the impacts on aesthetics for timber harvesting. It also provides the framework for natural resource conservation.

The **National Forest Management Act** (1976) – This act provides direction that the preservation of aesthetic values is analyzed at all planning levels. Part 219.21 requires that the visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the forest planning process, addressing both the landscape's visual attractiveness and the public's visual expectation.

The **Surface Mining Control and Reclamation Act** (1977) – The act states that "a surface area may be designated unsuitable for certain types of surface coal mining operations if such operations will result in significant damage to important aesthetic values and natural systems."

The **Public Rangelands Improvement Act** (1978) – This act declares that "unsatisfactory conditions on public rangelands reduce the value of such lands for recreational and aesthetic purposes."

In addition the Forest Service has routinely included both scenery and recreation as part of the 1960 Multiple Use-Sustained Yield Act. The following USDA handbooks establish a framework for management of scenic resources. These handbooks were written when the Visual Management System was in place. The Visual Management System (VMS) has now been replaced by the Scenery Management System. However, the handbooks still apply to management of scenic resources.

-National Forest Landscape Management Volume 1. Agriculture Handbook 434: 1973
-Utilities, Chapter 2, Agriculture Handbook 478: 1975
-Range, Chapter 3, Agriculture Handbook 484: 1977
-Roads, Chapter 4, Agriculture Handbook 483: 1977

-Timber, Chapter 5, Agriculture Handbook 559: 1980
-Fire, Chapter 6, Agriculture Handbook 608: 1985
-Ski Areas, Chapter 7, Agriculture Handbook 617: 1984
-Recreation, Chapter 8, Agriculture Handbook 666: 1987
-Landscape Aesthetics, A Handbook for Scenery Management, Agriculture Handbook 701: 1995

FSH 1909.23.22g States that the scenery management system (SMS) should be used when developing plan components related to scenic character. Scenic character information, scenic classes, and constituent preferences all help determine scenic integrity and sustainability. Refer to FSM 2380 and Landscape Aesthetics - A Handbook for Scenery Management (Agriculture Handbook 701) for more information on SMS. Plan components for scenic character may be developed to include the concepts of scenic integrity, stability, and sustainability at multiple scales.