

### Scenic Resources Assessment

A primary goal of this master plan is to preserve the natural beauty of Sonoran Desert landscapes in northern Peoria and protect the local desert community character. Identification of scenic resource character themes based upon the visual character of the landscape is an important early step in the planning and design process. It is a goal of this process to ensure development will be context sensitive with the natural and visual environments within the City of Peoria.

The main purpose of a scenic resources assessment is to determine the character, quality and visual sensitivity of lands contained within the planning area. Results of the assessment assist in analyzing opportunities and constraints for conservation, preservation or acquisition.

The U.S. Forest Service, BLM, U.S. Corps of Engineers, and the Flood Control District of Maricopa County (FCDMC) all use a variant of visual resource assessment in the design and planning process. Landscape character assessment addresses scale, landform grading, plant material selection/arrangement, plus use of form, color and texture.

In one sense, because a large percentage of the open space lands fall under the jurisdiction of the BLM, it would be appropriate to consider the use of the BLM's Visual Resource Management system (VRM) as a classification system within the Master Plan Area. The VRM was developed to maintain the scenic values of public lands. Different levels of scenic values require different levels of management, and the management of an area classified as having high scenic value might focus on preserving the existing character of the landscape. By contrast, the management of areas with little scenic value might allow for major modifications. Determining how an area should be managed necessitates an assessment of the area's scenic values.

Scenic value and defining visual impact can be a subjective process. Objectivity and consistency can have greater weight if basic design elements (form, line, color, and texture) are used to describe and define the landscape. Typically development that makes deliberate use of these design elements are successfully more in harmony with their surroundings. Visual impacts can be minimized by adjusting project designs to appropriately incorporate form, line, color, and texture.

BLM's VRM system consists of two stages:

**Inventory (Visual Resource Inventory)**

**Analysis (Visual Resource Contrast Rating)**



The **inventory** stage identifies visual resources of an area and assigns them to inventory classes. The process involves rating the visual appeal of a tract of land, measuring public concern for scenic quality. The process is described in detail in *BLM Handbook H-8410-1, Visual Resource Inventory*. Once mapped, the tracts are assigned to landscape character classes:

**Class I:** The existing character of the landscape should be preserved. Changes must not attract attention.

**Class II:** The existing character of the landscape should be retained. Changes should be very minor.

**Class III:** The existing character of the landscape should be partially retained. Moderate changes can be made.

**Class IV:** Major modifications of the existing character of the landscape are anticipated. Higher levels of change are acceptable.

The **analysis** stage involves determining whether the potential visual impacts from proposed surface-disturbing activities or developments will meet the management objectives or whether design adjustments will be required. This process is appropriate once specific lands or parcels have been identified and more detailed information is required.

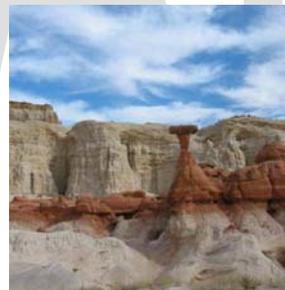
The Analysis process involves comparing proposed development plans and features with the existing landscape character features using the same design elements of form, line, color, and texture. This process is described in detail in *BLM Handbook H-8431-1, Visual Resource Contrast Rating*. This analysis can then be used as a guide for resolving visual impacts and prediction of scenic value.



*Form*



*Line*



*Color*



*Texture*

**Form.** Contrast results from the shape and mass of landforms or structures. The degree of change depends on how dissimilar the introduced forms are to those existing in the landscape.

**Line.** Contrast results from edge types and the interruption or introduction of edges, bands, and silhouette lines. Introduced lines may differ in sub elements (boldness, complexity, and orientation) from existing lines.

**Color.** Changes in value and hue create the greatest contrast. Other factors such as chroma, reflectivity, color temperature, also increase the contrast.

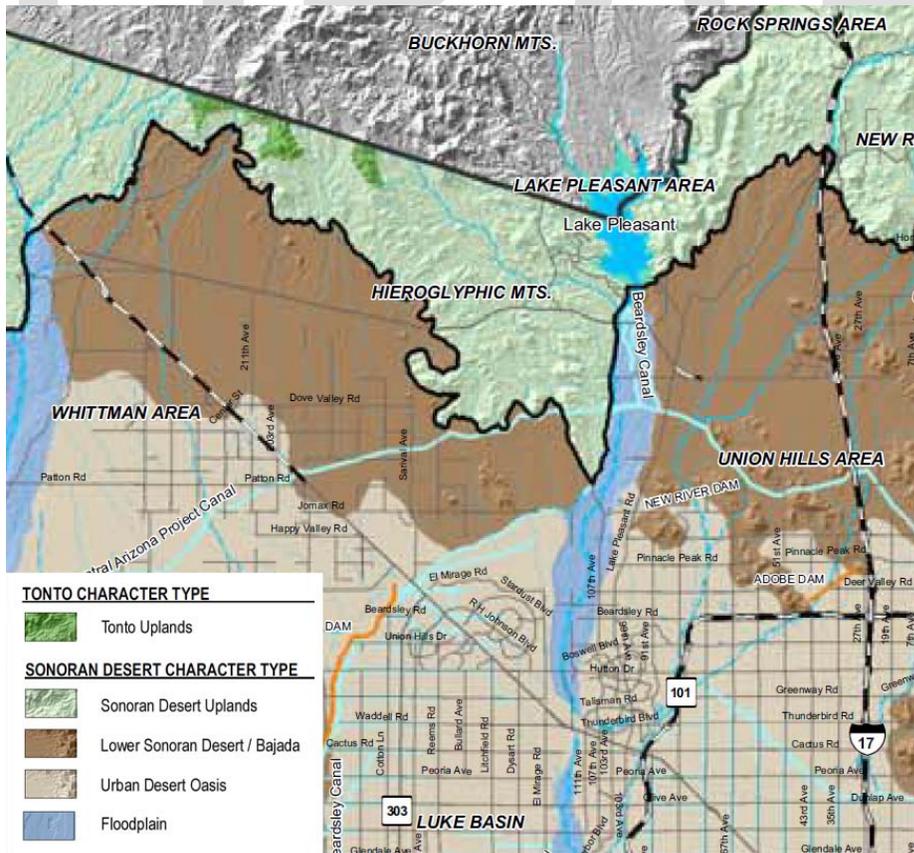
**Texture.** Contrast stems from differences in the grain, density, and internal contrast. Other factors such as irregularity and directional patterns of texture may affect the rating.

The Flood Control District of Maricopa County (FCDMC) has also developed a Landscape Character Analysis process. Infrastructure, recreational requirements, wildlife, cultural, and other multiple-use program requirements may strongly influence or dictate the design and development of certain types of flood control projects. The landscape character themes serve as a framework and starting point for development of a more refined, context specific landscape design during project planning.

FCDMC defines *landscape character* as the physical appearance and cultural context of a landscape that gives it an identity and “sense of place.” The valued character of the landscape is derived from the positive visual attributes or characteristics that are predominant in each landscape. These attributes may be defined by natural (naturally occurring) or developed (culturally modified) features.

Natural settings include landform, vegetation, rock form, and water that reveals few man-made modifications or disturbance. Developed settings include those areas in which rural or metropolitan uses have been established, and the character is influenced by development and circulation patterns, building types, and open space. Furthermore, these settings may be characterized based on dominant visual elements including form, line, color, texture, scale, and landscape composition.

Landscape Character types identified within the Peoria Open Space Master Plan area have been derived from FCDMC’s *Landscape Character Assessment for Maricopa County*. Landscape Character Types are defined as land having similar distinguishing visual characteristics of landform, rock form, water, and vegetative communities and patterns. Northern Peoria is home to several dominant landscape character types. The FCDMC has mapped these character units, and they are shown on the figure below.



Source: Flood Control District of Maricopa County

In the extreme north of the Peoria Open Space Master Plan area is the **Tonto Character type**. This association is characterized by the Hieroglyphic Mountains and their associated uplands. They display the dramatic landform of the mountains themselves with dissected arroyos and rolling hills. Vegetation in this association is similar to the Sonoran Desert Landscape Character Type but with greater densities. The area is typified by saguaro forests, small cacti, desert grass on the mountains, plus plant communities in the larger arroyos that include cottonwoods, oak species, and sumac intermixed with mesquite, palo verde, and ironwood. Junipers and pines are signature tree species of the Tonto Landscape Character type but are notably absent within the boundaries of the open space master plan study area. Visible water on-site is generally limited to storm events in arroyos and underground springs.



Landforms are typically rugged, with jagged peaks dissected by V-shaped ravines and u-shaped arroyos creating a distinctive skyline. Arroyos are typically flat with a sandy bottom intersected by smaller, braided channels. The embankment of the arroyos produces a typically steep to moderately sloped form leading to the serpentine form of the arroyo bottom.

Rock form is a major feature in the Tonto Uplands with jagged outcrops and boulders of varying form and size being evident throughout. The line type is visually jagged, diagonal and disrupted. Few straight lines are evident in the landscape with the exception of the short vertical lines created by saguaro spears that punctuate the slopes and peaks of the landform silhouette. The peaks and visible slope of the land create the irregular, jagged trapezoidal form predominant in the Tonto Uplands. The color of the Tonto Uplands is predominantly the browns and reds of the rocks and soil contrasted by the subdued greens of the vegetation. The seasonal wildflowers add orange, yellow, red, and tan in the summer.

The color of the riparian areas are generally more vivid in hue than the surrounding landscape, with the darker greens of the vegetation contrasting with the surrounding subdued reds to browns of the rock and soil. The coarse texture of the rock forms is contrasted by the smooth texture of the sandy bottoms in the arroyo. Scattered patterns provided by the vegetative species provide a medium to coarse texture that contrasts with the bottom of the Arroyo.

The **Sonoran Desert Character type** located south of the Tonto Character type, is the dominate landform and is characterized by long, broad alluvium (bajada) with flat valley plains and washes. Vegetative character varies both in diversity and density. Dominant species include palo verde and saguaro cacti. Water within the study boundary is limited and found usually with association to man-made facilities such as the Central Arizona Project (CAP) canal.

The *Sonoran Desert Uplands* sub-association comprises rolling hills, knolls, U-shaped arroyos and V-shaped ravines. It is a transitional sloping landscape with occasional flat “tables” or benches of land where vegetative communities of single species of grasses or cholla occur. The predominant landforms within the study area are the slopes of rolling hills and low mountains dissected by the arroyos of various scales.



The Sonoran Desert Uplands include a number of braided channels. These arroyos vary in size, scale, and volume. None seem to be perennial, though there is a potential that some may be fed by springs originating in the Tonto Uplands at the higher elevations of the study area.

Water is limited and seems to be primarily associated with storm events, typically not sustaining a water flow except during and immediately after heavy rain events. The embankment of the arroyos produces a steep to shallow concave form leading to the two-dimensional serpentine form of the arroyo bottom. The landform in this unit is typically rugged to concave, with escarped banks of arroyos that form the primary water channels into the valley below. The bottoms of these arroyos are flat with a sandy bottom dissected with smaller, braided channels.

The predominant rock form is characterized by the hardened sandy bottoms of the arroyo that may include small islands and gravel bars. Other rock form may consist of jagged outcrops along the banks and scattered boulders of varying scale and size. The coarse texture of the rock forms is contrasted by the smooth texture of the sandy bottoms in the arroyo. Scattered patterns of the vegetation provide a medium to coarse texture that contrasts with the fine texture found in the bottom of the Arroyo.

The density and species diversity tends to be greater in the Sonoran Arizona Uplands than that found in lower desert landscape due to the greater precipitation received at the higher elevations of this unit. Common species include small cacti such as barrel and cholla cactus, xeroriparian tree and shrub species, grasses, and saguaro cactus. Water on the site is limited and typically associated with seasonal storm events that drain into the V-shaped ravines and U-shaped arroyos. Palo Verde, Ironwood and Willow are signature species. Plant materials are combined and arranged to form bosques and other patterns that are typically associated with drainage features in the subtype.

Rock form within the Sonoran Desert Uplands transitions from the rugged forms of boulders and outcrops typical of the Upper Tonto to the finer scale typical of the Sonoran Desert. The overall form is composed of moderately varied rounded forms with intermittent flat areas formed by the tables of land bordered by the jagged slopes of the arroyos. This results in a flattened trapezoidal form. The coarse texture of the rock forms is matched by the coarse, scattered pattern provided by the vegetative species evident in the Uplands landscape.

Lines of the Uplands are slightly sloping diagonals at the lower elevation to the visually jagged, diagonal and disrupted lines where the Sonoran Desert Uplands meet the Tonto Uplands. Other straight lines enter the landscape in the form of the flat tables, while the many braided arroyos add continuous to broken curved lines through the unit.



The color of the landscape is predominantly reds to browns of the bare soil, desert pavement, and barren rocks common to the area which are mixed with the subdued to vivid green pattern associated with the vegetation throughout the unit. Occasional large yellow patches can be found on the tables where monocultures of grass complement the color scheme.



The *Lower Sonoran Desert* sub-association is formed by large, relatively flat lands. These consist of a slightly sloping plain composed of compressed sediment thousands of feet deep. Surface veneer varies across the landscape including sand, desert pavement, caliche, and loose gravel. Likewise, vegetation varies across the landscape depending on elevation, soil conditions, and adjacent landscape types. The natural valley plains landscape unit consists of a slightly sloping, flat broad surface with shallow surface undulations where the land has not been disturbed. The landscape unit typically starts at the edge of the bajada sloping downward towards the river terrace.



The arroyos and washes vary in width, depth, vegetation, and bank character. Most are typically dry washes that originate in the uplands of the Tonto Character Type and vary in character as they descend towards the Agua Fria River. Typically, the rivers and washes start out as wide channels punctuated with large boulders and surfaced with large river rock. As they head towards the Agua Fria River they become rather narrow and slightly more incised. The surface tends to be composed of sand rather than rocks and boulders. The washes exhibit similar character to the river channel including vegetation types and the surface materials found in the channels (i.e., sand and gravel).



The Lower Sonoran Desert unit also contains major rivers and washes (i.e., the Agua Fria, New River, and Morgan City Wash). Most are (to some degree) wet year round although in some areas, the water is below surface. The only time the washes flow with water is during and/or after summertime thunderstorms associated with the monsoon season. When flow does occur it is extremely violent, carrying soil, broken pieces of vegetation, and rocks of various sizes. The flow dissipates as quickly as it began, depositing all the materials it picked up during peak flow.



Bottom areas represent a variety of physical conditions and flow characteristics found within the rivers of the subtype and typically will include a natural appearing low flow feature along with a variety of sand, gravel, cobble, boulders, bars and terraces. The surface tends to be composed of sand and gravel rather than rocks and boulders. The plant palette along rivers and major washes include Cottonwood and Willow galleries that are a signature feature.

Undisturbed drainages allow saguaro and a variety of other plant species that typically occur in upper elevations of this unit to occur in the lower elevations. Xeroriparian vegetation, which includes catclaw acacia, blue palo verde, desert hackberry, ironwood, and saguaro, occur throughout this landscape unit.



The landforms are subtle yet varied. The washes vary in width and depth depending on the adjacent soil compositions and proximity to the Tonto Uplands. Most of the washes that occur towards the middle of the Lower Sonoran Desert unit are narrow and shallow in character. Conversely, the washes with broad and deeper character tend to occur close to the uplands because of the associated higher annual precipitation amounts and higher erosion potentials. During the summer, moist air condenses over the highlands of the Tonto landscape character unit resulting in large thunderstorms with tremendous downpours. The massive volume of water and associated detritus created during the downpours are all channeled into the valley rivers and washes, resulting in erosion. Because of this, most washes tend to have shallow flat channels edged with broken soil or rock.



The form of this landscape character unit is primarily horizontal with little topographic relief. Line is predominantly linear and associated with the horizon. Curvilinear lines that do occur are associated with small shallow drainages, and sometimes are not discernable in the landscape because of the inferior views associated with this landscape unit. Vertical lines are usually expressed by vegetation.

Rock form exists in this landscape unit and is associated with volcanic regions. Water erodes away surface materials on the banks of the washes exposing either bedrock or boulder outcrops. The highest occurrences of rock form within this unit are associated with the washes immediately adjacent to the Tonto Upland unit.

Color primarily comes from soil and vegetation. Soils vary from sand to beige with black gravel volcanic gravel occurring throughout the unit. Vegetation, although relatively sparse in the region, results in subtle gray-greens with seasonal colors of yellows, purples, and whites. The vegetation exhibits a color palette of bright-greens to grays and splashes of pastels during the spring blooming season. The surface of the channel varies from beige of sand to the gray and brown of decomposing organic matter.



The *Desert Oasis sub-association* represents a variant of the natural themes and emphasizes extensive use of inert gravel materials and an open arrangement of plant materials with a managed appearance. The number and density of signature plant species is significantly increased to create an enhanced and more prominent natural appearance. Exotic and ornamental landscape species may be introduced in association with the residential development, providing a range of plant community types. Driveways to residential lots add curved, continuous lines to the landscape, while rural structures can add hard, architectonic lines to the subtle, rolling lines of the natural foothills. Cultural modifications also introduce a range of color palettes. Structures associated with the suburban setting, primarily residential, are organized adjacent to the modified grid pattern. The result is a landscape where both the cultural and natural landscapes are visually predominant.

Line is typically curvilinear in this landscape unit because of the physical constraints imposed by the foothills. Drainages are usually taken into account in the design of the suburban development because of their high flash flooding potential and aesthetic values. Therefore, drainages are typically left intact requiring access to either go around or over them, further articulating the curvilinear nature of this landscape unit. Vegetation, specifically the saguaro, adds small vertical lines when compared to the foothills. The residential structures associated with this type of development add small horizontal and vertical lines.



Colors that occur throughout this landscape unit include the reds to terra cottas associated with tile rooftops. Reds, greens, and blues associated with introduced vegetation and the whites to beiges associated with the stucco commonly used on structures in the suburban setting are all common colors exhibited by this landscape unit.

The Desert Oasis landscape character unit generally consists of large rural or suburban properties with exotic and ornamental landscape species, providing a range of plant community types. Some of these ornamental plant species are introduced in the natural vegetation surrounding the development.

Within Desert Oasis unit master planned communities represent the transformation from the natural texture of the creosote flats and wide open views to the hard angular lines associated with grading of the land to accommodate development and commercial structures.

Vegetation is typically associated with a non-native mass planting used in suburban development. There are also additions of large non-native trees, along transportation routes and open spaces which can eventually grow to form the skyline, adding a non-native medium density



and texture to the landscape.

This Sub-unit consists of a visually dominant desert palette planting found interspersed in the large open space areas within the low to medium residential neighborhood. The character of the neighborhood is influenced by the desert planting in an informal pattern which is usually a medium density of the desert species that complement the surrounding natural landscape.

The cubic to rectangular forms associated with the suburban setting dominate this landscape unit at a coarse scale. The dominant lines associated with this landscape unit are those of the suburban setting. The terra cotta reds, and beiges associated with the suburban setting are the dominant colors of this landscape unit. These colors contrast with the characteristic dark colors associated with the surrounding mountain landscape. The medium to coarse textures associated with vegetation that occurs within the mountain arroyos result in some landscape contrast, but not enough to offset the visual impact of the suburban setting.

Desert Oasis landscape character areas often emphasize a park-like appearance with an emphasis on turf and canopy trees. Surface treatments typically include a combination of turf and gravel pavements with both native and desert adapted canopy trees and palms that has a more lush and green appearance than the previously described themes. Plant materials and inert materials are arranged to create interesting variety in forms, patterns and spaces, accentuate the topographic forms of the structure, reinforce gateways, frame views, provide shade and to screen discordant features from view.



### Scenic Quality Assessment

The Scenic Quality Assessment helps determine the relative scenic *value* of the landscape character units found within the Peoria Planning area. This process involves classifying areas of high scenic quality that should be preserved and protected as well as areas of low scenic quality that may be considered for enhancement or improvement.

Considering once again the BLM VRM classifications, we can measure the scenic quality, attractiveness and importance of landscapes found within Peoria. While all landscapes have some scenic value, those with the most distinctive variety have the greatest potential for high scenic appeal and value.

**Class I:** The existing character of the landscape should be preserved. Changes must not attract attention.

**Class II:** The existing character of the landscape should be retained. Changes should be very minor.

**Class III:** The existing character of the landscape should be partially retained. Moderate changes can be made.

**Class IV:** Major modifications of the existing character of the landscape are anticipated. Higher levels of change are acceptable.

**Class I - Distinctive** landscape variety classes include areas with unique landforms, vegetation, rock formations, water features, cultural features or combinations thereof. These are features not typically common within the general area Landscape Character Units that comprise northern Peoria.



Class I Distinctive may include features that are recognized nationally or internationally and are protected under Arizona State laws or local ordinances. These areas are described as distinctive regions 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, harmony, pattern and balance.

Class I Distinctive areas within the Peoria Open Space Master Plan area are characterized by dense vegetation which typically includes Mesquite, Hackberry, Catclaw Acacia, Ironwood and Palo Verde trees. These areas are rated as Distinctive since they also provide habitats and refuge to a wide variety of wildlife. Since these areas are visually intact and lack discordant features, all efforts should be made to preserve their unique scenic qualities.

**Class II – Common** landscape variety classes include areas which tend to be common features throughout the Landscape Character Unit but are not particularly outstanding in scenic quality. These areas are described as landscapes that reflect the characteristics of the natural desert area native plants, open views, and rolling topography.



These are areas where projects that endeavor to preserve the character of the natural landscape would restore damaged landscapes, enhance natural beauty and preserve visual variety by emulating the natural color, form and texture of the surrounding desert landscape.

The vegetation would be used to soften, screen and blend. Slopes, stormwater control structures, basins or channels would be constructed with earthen materials and natural vegetation that blend. Graded areas would be graded with soft edges and take on the appearance of rolling topography with visual variety.

**Class III - Minimal** landscape variety classes include areas with features that exhibit little change or visual interest in form, line, color and texture, and includes all undeveloped areas not found under Classes I and II.

These areas are described as landscapes that have low scenic quality and they have either little or missing attributes of variety, unity, pattern and balance. Not only are water or rock form of any consequence is missing, but they may also be scarred and need repair to restore it to some visually appealing form.

Within the Peoria Open Space Master Plan area, low scenic integrity areas are generally found where traces of disturbed lands on account of off-terrain vehicles are evident and they visually disrupt the existing landscape character of the Sonoran desert.

Other scattered areas may be blighted due to mining (for sand and gravel) operations. These areas show disturbance and deviation from the immediately surrounding landscape, hence, they are categorized as areas with low scenic integrity, because they negatively impact the visual beauty of the landscape.



**Class IV - Urbanized** landscape variety classes include areas that have been developed. Developed desert landscapes are focused on using native vegetation with accent plantings for areas that have been disturbed and are located in a natural landscape setting.

Developed landscapes typically use natural construction materials including boulders, river rock and gravel surface treatment in combination with vegetation for pathways, trails, seating erosion control, and dust control. Structural components typically blend into the topography and have soft edges providing a natural look structures as opposed to geometric or block designs.



Often, developed landscapes match the desert along their edges but incorporate oasis type plantings for multi-use areas such as greenbelts, parks, or golf course greens. Urban landscapes may incorporate large pockets of native shade trees, passive recreational features and free flowing landforms which complement the surrounding Sonoran landscape. Lush accent plantings, selective use of turf and a variety of materials such as concrete, brick and masonry that match the adjacent properties may be present.

These areas may also include agriculture and grazing, especially where landforms are fairly flat or gently undulating. Vegetation in these areas may be more formal and grid like or rectilinear pattern, creating a unique landscape by exhibiting uniform textures and patchwork patterns. Native plants and accents may be found bordering the development to transition and to add variety.